Effect of Financial Risk on Financial Performance of Large Scale Supermarkets in Nairobi County, Kenya

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Abstract: **The purpose of this study was to determine the effect of financial risk on financial performance of Supermarkets in Nairobi County. The specific objectives of the study will included; To examine the effect of credit risk, liquidity risk, operational risk and market risk on financial performance of supermarkets in Nairobi county, Kenya. The study adopted the finance distress theory, Firm value maximization theory and extreme value theory. The study used a descriptive research design with a quantitative approach. The target population for this study was 13 large-scale supermarkets licensed by county government of Nairobi. Study employed sampling as a census of entire large-scale supermarkets in Nairobi County. Secondary data for this study was collected using data collection sheets filled by accountants of various super markets Nairobi County. Multi regression analysis was used to establish the effect of financial risk on financial performance of supermarkets in Nairobi County. The findings of the study showed that out of the four financial risks studied, three including liquidity, operational and market risks had statistically significant effect on financial performance of large-scale supermarkets in Kenya liquidity risk. Credit risk did not have a significant effect on financial performance of the supermarkets studied.**

Keywords: **Credit Risk, Operational Risk, Market risk, liquidity risk and financial performance.**

I. INTRODUCTION

Financial risks are only one category of a broad field of risks. Furthermore financial risks can be classified into three subclasses credit risk, liquidity risk, and market risk. For financial risk management there are many different kinds of definitions. Financial risk or the risk of losing money is real and fundamental in the modern society; unlike for individual loss of income, for corporations, financial risk can affect the value of business investments and financial assets (Shah, 2014). Financial risk refers to the danger likely to be caused by an event or a loss that could impair the value of member's savings or substantially affect assets, hence its delivery and earning capacity (Maina, 2011). It is the possibility that a business will not have adequate liquidity to meet its ongoing financial obligation like debt repayment, payroll requirements, dividend payments, government licenses and taxes (Chisholm, 2010). In order to minimize the effects of financial risks on an organization, managers have to develop appropriate measures of managing risks. Risk management is the process to manage the potential risks by identifying, analyzing and addressing them. The process can help to reduce the negative impact and emerging opportunities. The outcome may help to mitigate the likelihood of risk occurring and the negative impact when it happens. Shafiq and Nasr (2010) defines risk management as a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives. Anderson and Terp (2006) defines risk management as a process that seeks to eliminate, reduce and control risks, enhance benefits, and avoid detriments from speculative exposures. The objective of risk management is to maximize the potential of success and minimize the probability of future losses because risk that becomes problematic can negatively affect cost, time, quality and system performance.

1. Statement of the Problem

Supermarkets in Kenya just like other businesses are facing a number of financial risks in their daily operations. There are a number of large scale supermarkets in Kenya that have been scaling down there operations due to poor performance.

The poor performance has been partly associated financial risks. Uchumi Supermarket, has been declining; with the business making losses, and faced with governance issues. In early 2000, Uchumi started to experience financial and operational difficulties. As a consequence, the Capital Markets Authority suspended the trading of Uchumi shares in June 2006 (NSE, 2006). It was latter re-admitted back to Nairobi securities exchange market in 2011, but even with this re-listing of shares it has never recovered from its initial profitability. Despite the fact that Nakumatt Holdings was making huge profits and enjoying the market leadership in the recent past, the Supermarket has been of late closing some of its branches as a result of consistent loss making. The dizzying fall of East Africa's largest retailer has been blamed on a combination of bad management, misguided expansion plans and increased competition. Studies have been carried out globally and locally on relationship between financial management practices and financial performance of firms. Gongera, Ouma, and Were (2013), Lagat, Mugo and Otuya (2013), Amambia, Kalio and Kwasira (2013) and Ogol (2011), Priya (2014). Even with these studies done, most of them have been done in financial firms and they have concentrated on listed firms. There exist few studies on the effect of financial risk on financial performance of retail industry specifically targeting supermarkets in Nairobi. The current study therefore sought to examine the effect of financial risk on financial performance of supermarkets in Nairobi County, Kenya.

2. Objective of the Study

To determine the effect of financial risk on financial performance of Supermarkets in Nairobi County. Specific objectives included the following.

i. To examine the effect of credit risk on financial performance of supermarkets in Nairobi county, Kenya

ii. To establish the effect of liquidity risk on financial performance of supermarkets in Nairobi county, Kenya

iii. To examine the effect of operational risk on financial performance of supermarkets in Nairobi county, Kenya

iv. To examine the effect of market risk on financial performance of supermarkets in Nairobi county, Kenya

3. Research Hypotheses

In conducting the study the following hypothesis were tested

H_01: credit risk has no significant effect on financial performance of supermarkets in Nairobi County, Kenya.

H_02: liquidity risk has no significant effect on financial performance of supermarkets in Nairobi County, Kenya.

H_03: operational risk has no significant effect on financial performance of supermarkets in Nairobi County, Kenya.

H_04: market risk has no significant effect on financial performance of supermarkets in Nairobi County, Kenya.

II. LITERATURE REVIEW

1. Theoretical Review

Finance Distress Theory: Baldwin and Scott (1983) purported that when a firm's business deteriorates to the point where it cannot meet its financial obligation, the firm is said to have entered the state of financial distress. The first signals of financial distress are violations of debt payments 16 and failure or reduction of dividends payouts. Whitaker (1999) defines entry in financial distress as the first year in which cashflows are less than current maturities' long-term debt. The firm has enough to pay its creditors as long as the cashflows exceeds the current debt obligations. The key factor in identifying firms in financial distress is their inability to meet contractual debt obligations. However, substantial financial distress effects are incurred well prior to default. Wruck (1990) stated that firms enter into financial distress as a result of economic distress, declines in their performance and poor management especially on risks. Boritz (1991) depicts a process of a financial distress that begins with an incubation period characterized by a set of bad economic conditions and poor management which commits costly mistakes. In the case of commercial banks, in ability to provide cash to depositors and loans to borrowers as and when the demand may constitute a liquidity crisis. Other creditors also need to be taken into account when firms are putting in place risk management measures. Credit risks in banks also need to be addressed since it may lead to financial distress. Loan portfolio management is an important determinant of the firm's liquidity. The banks should manage the credit and liquidity risk in order to avoid the financial distress. The theory of financial distress emanates from the liquidity and credit risk facing a firm. This theory provides for a non-biased perspective on the relationship between credit risk and financial performance variables employed by the study. By

providing information that the effects of financial distress occurs prior default risk, the theory offers a neutral platform to undertake an incisive empirical analysis of this relationship within the commercial banks.

Firm Value Maximization Theory: Firm value maximization theories states that firms can hedge to reduce certain costs or capital market imperfections related to volatile cash flows. There are typically three lines of explanations. First, hedging can reduce deadweight costs of financial distress (Mayers and Smith (1982), Smith and Stulz (1985)). Second, hedging may also be motivated by tax incentives. When firms face a convex tax function, hedging should help reduce expected taxes (Mayers and Smith (1982), Smith and Stulz (1985)). Hedging can also increase a firms's debt capacity, by generating greater tax advantages from greater leverage (Leland (1998). These two explanations imply that corporate hedging can add value when firms face convex costs such as progressive taxation and bankruptcy costs. Similarly MacKay and Moeller (2007) argue that hedging can add value if revenues are concave in product prices. This theory is based on the fact that, exchange rate exposure has potentially positive or negative impact on the profitability and value of the firm. This is captured in the valuation process in terms of the firm's stock returns. Thus, the approach to modeling the exchange rate exposure has been to regress the exchange rate on firms' returns. Based on research of Smith and Stultz (1985), the tax structure would influence a company's hedging decision. As long as the cost of hedging is not too large, a firm that can reduce the variability of its pre-tax firm value trough hedging would be able to reduce its expected tax liability and increase its expected post-tax firm value. Fisher's (1907) on interest rates made it clear that the value of an investment project is equal to the discounted cash flow that this investment generates to its owner(s). The most simple and intuitive formula illustrating this principle is the investment formula calculating the present value of a single investment project under certainty. The Modigliani-Miller Theorem is a cornerstone of modern corporate finance. At its heart, the theorem is an irrelevance proposition: The Modigliani-Miller Theorem provides conditions under which a firm's financial decisions do not affect its value. Modigliani-Miller (1980) explains that with well-functioning markets (and neutral taxes) and rational investors, who can undo' the corporate financial structure by holding positive or negative amounts of debt, the market value of the firm – debt plus equity depends only on the income stream generated by its assets as shown in equation.

2. Empirical Review

Credit risk and Financial Performance of Firms: Alshatti (2015) defined credit risk as the risk that a party of financial instrument will not to comply with the undertaking, causing the other party a financial loss. Study by Mutua (2016) focused on the credit risk management on financial performance in savings and co-operative societies in Kitui County. The research design used in this study was a descriptive research design. The data collection instruments in this case included self-administered questionnaires which were used to extract valuable primary data from the SACCOs' management. The study used quantitative method to analyze the data and examine the simultaneous impact of the independent variables on the dependent variable. The findings of the study are; there was a very strong positive relationship between credit monitoring and financial performance of SACCOs. Study by Alshatti (2015) analysed the impact of credit risk management on the financial performance of commercial banks and also attempted to establish if there exists any relationship between the credit risk management determinants by use of CAMEL indicators and financial performance of commercial banks in Kenya. A causal research design was undertaken in this study and this was facilitated by the use of secondary data which was obtained from the Central Bank of Kenya publications on banking sector survey. The study used multiple regression analysis in the analysis of data and the findings have been presented in the form of tables and regression equations. The study found out that there is a strong impact between the CAMEL components on the financial performance of commercial banks. The study also established that capital adequacy, asset quality, management efficiency and liquidity had weak relationship with financial performance (ROE) whereas earnings had a strong relationship with financial performance. This study concludes that CAMEL model can be used as a proxy for credit risk management.

Kithinji (2010) conducted a study on credit risk management and profitability of commercial banks in Kenya using the non-performing loan portfolio (the independent variable) as an indicator of the effectiveness of credit management practices. The intervening variable was the amount of credit as indicated by loans and advances normalized by the total assets. The dependent variable was the profitability measured by the return on total assets. The author concluded that there was no significant relationship between credit risk management (non-performing loan portfolio), amount of credit and profitability. The study by Kithinji (2010) differs from this study in several respects;-the author used secondary data only while this study will use primary data from questionnaires and secondary data from the Oil companies. In addition, the study concentrated on commercial banks while this study is on Oil firms. The study also concentrated on credit risk

only and failed to recognize the role of other financial risk such as market risk and liquidity risk. Gaitho (2010) surveyed on credit risk management practices by SACCOs in Nairobi, findings revealed that majority of SACCOs used credit risk management practices to mitigate risks as a basis for objective credit risk appraisal. She also found out that majority of SACCOs relied heavily on the discretion and ability of portfolio managers for effective credit risk management practices as opposed to a system that standardizes credit and credit risk decisions.

This research aims at examining the effect of credit risk management on financial performance of the Jordanian commercial banks during the period (2005-2013), thirteen commercial banks have been chosen to express on the whole Jordanian commercial banks. Two mathematical models have been designed to measure this relationship, the research revealed that the credit risk management effects on financial performance of the Jordanian commercial banks as measured by ROA and ROE. The research further concludes that the credit risk management indicators considered in this research have a significant effect on financial performance of the Jordanian commercial banks. Based on findings, the researcher recommends banks to improve their credit risk management to achieve more profits, in that banks should take into consideration, the indicators of Non-performing loans/Gross loans, Provision for facilities loss/Net facilities and the leverage ratio that were found significant in determining credit risk management. Also, banks should establish adequate credit risk management policies by imposing strict credit estimation before granting loans to customers, and banks in designing an effective credit risk management system, need to establish a suitable credit risk environment; operating under a sound credit granting process, maintaining an appropriate credit administration that involves monitoring, processing as well as enough controls over credit risk, and banks need to put and devise strategies that will not only limit the banks exposition to credit risk but will develop performance and competitiveness of the banks.

Liquidity Risk and Financial Performance of firms : Liquidity risk is a risk that an entity meets in difficulties in procuring the necessary funds to meet commitments related to financial instruments Githinji (2016). Liquidity risk may result from the inability to quickly sell a financial asset at a value close to its fair value. Study by Sheikhdon & Kavale (2016) conducted a survey of Liquidity management factors affecting in financial performance of the commercial banks in Mogadishu, Somalia. The study design was used is descriptive survey, the target population of the study was 112 employees of commercial banks in Mogadishu. A sample size of 87 respondents was selected using Slog van's formula. The key findings were that liquidity management drivers individually had a positive influence on the financial performance of commercial banks in Mogadishu-Somalia. The overall results indicated that there was a significant linear relationship between account receivable management, account payable and cash management on financial performance of commercial banks in Mogadishu. The results established that liquidity management drivers were found to significantly and positively influence financial performance of commercial banks in Mogadishu, Somalia.

Paper by Githinji (2016) sought to determine the effects of financial risk management on financial performance of commercial banks in Kenya. This study adopted a descriptive research design to test the hypothesis over the five year period (2011 to 2015). The population for this study was the 43 commercial banks in Kenya, as at 31st December 2015 including the one that was put under receivership during that financial year. The findings of the study indicated that all banks were performing well. There were however big variations in their performance with some posting very high ROA compared to others. The study also found that on predictors of financial performance the variables that had significant influence on each other were bank deposits and liquidity risk, Bank deposit and capital management risk, bank deposit and interest rate risk, liquidity risk and capital management risk , Liquidity risk and bank size, capital management risk and Bank size, capital management Risk and interest rate risk. The study however concluded that the credit risk and foreign exchange risk did not have any significant correlation with any of the variable. The objective of the study was to establish the effect of current ratio, cash reserves and debt ratio on financial performance of firms listed at the Nairobi Securities Exchange (NSE). Causal research design was adopted. Purposive sampling technique was used to select 30 firms. The data was analyzed using descriptive and inferential statistics It was found that current ratio and cash reserves have a significant effect on ROA with a p value of less than 0.05.The debt ratio was found to have no significant effect on ROA as it had a significance level of 0.571.

A study by Osoro & Muturi (2015) examine the effects of liquidity risk management practices on the financial performance of SACCOs in Kisii County. The objectives of the study were to determine the effects of asset quality management, capital adequacy and capital leverage practices on the financial performance of SACCOs in Kisii County. The study was directed by the theoretical concepts of capital adequacy, asset quality management and capital leveraging practices on the financial performance. A descriptive survey design was adopted. The target population was 20 respondents from five licensed SACCOs operating in Kisii County. The study sample size was 20 respondents selected

from the population by census sampling technique. Primary data was collected using structured questionnaires. Secondary data was collected from the financial reports prepared by the SACCOs and SASRA. The study found out that Capital adequacy significantly affected ROA in SACCOs (p value = 0.001). Asset quality and capital leverage did not have a significant impact on saving mobilizations (p value = 0.574 and 0.338 respectively). Paper by Ngira, Oluoch & Kalui (2015) evaluated the effects of liquidity management on the security market performance of companies listed at the Nairobi Securities Exchange; this Census study was carried out on the companies that are listed at the NSE over a 72-month period of January 2008 through December 2013. Using the descriptive research design and the Ordinary Least Squares (OLS) model the study revealed that there is a significant difference between the market performance of liquid companies and that of the illiquid companies, with quick ratio as the measure of liquidity management. Further, the study revealed that liquidity management has an effect on the market return/ performance albeit for the illiquid companies. From the study findings, the liquid portfolio excess return is significantly higher than the illiquid portfolio excess return.

Paper by Salim & Bilal (2016) sought to investigate the liquidity position and its impact on the financial performance of Omani Banks with the eventual objective to advice policies to improve the management of liquidity risk in Omani banks. A sample of 4 local commercial banks has been used to examine the relationship between the Liquidity and Financial performance for the period of five years from 2010-2014. The data has been taken from the Banks annual reports using multiple regression analysis. The study concluded significant relationship between the bank's loans to total assets ratio, illiquid assets to liquid liabilities ratio and bank's ROA; bank's .Liquid assets/deposits; Liquid assets/Short term liabilities and ROE; and bank's Loans/ Total assets, Loans/ Deposits & short term liabilities; Bank's loans – customer deposits/ Total assets and ROAA. However, The study finds no significant relationship between Omani bank liquidity position and NIM.

Market Risk and Financial Performance of firms: Market risk that comprises three types of risk: currency risk it is the risk that the value of a financial instrument will fluctuate because of changes in currency exchange rates; the lowering of exchange rate can lead to a loss of value of assets denominated in foreign currency thus influencing business performance (Okochi, 2008). Fair value interest rate risk - the risk that the value of a financial instrument will fluctuate due to changes in market interest rates. Price risk - the risk that the value of a financial instrument will fluctuate as a result of changing market prices, even if these changes are caused by factors specific to individual instruments or their issuer, or factors affecting all instruments traded in the market. The market risk incorporates not only the potential loss but as well the gain. Panos *et al.* (2009) highlight in their study that commodity risks have become more evident than before. For instance rapidly developing economies like China and India have driven up the global demand and prices. As the risk exposures have increased companies are aiming to manage their exposures better and hence avoiding increased costs or earning volatility (Panos et al., 2009). However, the development of commodity exchanges and emergence of wide availability of forwards and other derivatives allows companies to meet these targets Panos *et al*., (2009). Through the developed markets companies are able to hedge the price and demand uncertainties by using financial contracts as forwards, futures, swaps, and options as discussed earlier. Many commodities like agricultural products (corn, wheat, and soybeans), energy products (crude oil, petroleum products) and metals (aluminium, gold, copper) have their own hedging instruments.

Okochi (2008) points out that commodity risk management is not always very straight forward and has often several challenges. Even defining the commodity price risk exposure which can be considered as a starting point of commodity hedging can be problematic (Okochi, 2008). After the exposures are defined and measured companies need to start analysis whether it is possible or reasonable to hedge the exposure. However, the efficiency of hedging strategy depends highly on the existence of a strong and stable correlation between commodity's spot and futures prices. The efficiency of hedging strategy depends highly on the existence of a strong and stable correlation between commodity's spot and futures prices. If the correlation doesn't hold persistently or the level of correlation changes over time hedging loses its effectiveness. However, commodities futures contracts generally correlate very well with underlying commodity's spot prices (Gaur and Seshadri, 2005). For instance crude oil futures correlate excellently with crude oil spot prices. According to Yakup and Asli (2010) increased risk exposures and increased hedging activity are consequences of internalization in of business environments. Also Yakup and Asli (2010) point out companies that have foreign sales, foreign income, and foreign assets are exposed to exchange rate risk (due to more of foreign currencies) and interest rate risk (due to higher leverage and lower quick ratios). Oil companies are also more likely to be exposed to commodity price risk as their market prices become more volatile (Yakup and Asli, 2010).

Hansen (2009) conducted a study on the strategic foreign exchange risk management practice by Danish medium-sized non-financial, not-listed companies that are involved in international activities. The study showed that interaction between

financial and operational hedges exists in the management of operating exposure and that operational and financial strategies are seen as complements to each other. The empirical results supported the hypothesis that the hedging strategies of the companies depend on their flexibility. Multi-nationality and foreign build exposure were significant explanatory factors for the importance and application of various hedging strategies. On the aggregate level, the risk management objective of the companies and the involvement of both the operational and financial departments in the risk management were significant factors in explaining the importance and application of the operational hedging strategies. The size of the companies exhibited significance in explaining the importance and application of the financial hedging means. The study differs from the current study since it did not link foreign exchange risk management practices to the financial performance of Oil firms. In addition, the study by Hansen (2009) was conducted in a developed economy while the current study is being conducted in a developing economy. Furthermore, the study did not focus on Oil firms.

A study by Githire & Muturi (2015) examined the effect of capital structure on the performance of firms listed at the Nairobi Securities Exchange. The population of interest was the firms listed at the Nairobi Securities Exchange and a census of all firms listed at the Nairobi Securities Exchange from year 2008-2013 was the sample. The study adopted an explanatory nonexperimental research. Secondary data was obtained from the published annual reports and financial statements of the listed companies at the NSE covering the years 2008 to 2013. The collected data was entered into the Statistical Program for Social Sciences (SPSS) and multiple regression analysis method was used to analyze and test the hypotheses. The findings showed that equity and long term debt have a positive and significant effect on financial performance, while short term debt has a negative and significant effect on financial performance. Thus, this study concludes that equity and short debt financing enhances financial performance, while short terms reduces financial performance.

Operational Risk and financial performance of firms : Operational risk summarizes the risks a company undertakes when it attempts to operate within a given field or industry. Operational risk is the risk not inherent in financial, systematic or market-wide risk. It is the risk remaining after determining financing and systematic risk, and includes risks resulting from breakdowns in internal procedures, people and systems Nyagah (2014). Study by Allayannis and Weston (2001) examined the influence of operational risk on the financial performance of deposit taking savings and credit cooperatives in Kakamega County. The specific objective was to find out the influence of financial systems on financial performance of deposit taking savings and credit societies in Kakamega. The study used a descriptive survey design. The population consisted of all the four; Invest and Grow, Weversity, Afya and Sukari deposit taking Saccos operating in Kakamega County. A semi-structured questionnaire was used to collect the data from a sample size of 56 respondents. The study revealed that there was a significant positive linear relationship between financial systems and financial performance of SACCOs in Kakamega County. The study concluded that SACCOs and other financial institutions must focus on the financial systems in minimizing their operational risks.

Study by Ndung'u (2013) sought to determine the effect of financial risk management on financial performance of Oil Companies in Kenya. The study adopted causal research design. The study population consisted of all 85 Oil Companies operating in Kenya. The sample size of the study was comprised of 40 Oil companies in Kenya. The sample was selected based on stratified random selection of the companies listed by PIEA list of the market share of various companies. Semi-structured questionnaires were used to obtain primary data about the population. A linear regression model of financial performance versus financial risk management techniques was applied to examine the relationship between the variables. The study found that most Oil companies had highly adopted financial risk management practices to manage financial risk and as a result the financial risk management practices comprising of; understanding risk, risk identification, risk analysis and assessment & risk monitoring, have a positive correlation to the financial performance of Oil Companies in Kenya. The study recommends that that risk management techniques should be emphasized and utilized more effective by Oil companies in Kenya. Study by Nyagah (2014) sought to determine the level of implementation of enterprise risk management by pension fund management firms in Kenya and to assess the effect of enterprise risk management on the firm's financial performance. This study adopted a descriptive study design. The population for this study was the 19 registered pension fund management firms in Kenya by July 2014. Data was analysed using both descriptive and linear regression analysis. The coefficient results showed that event identification, risk assessment, objective setting, and information communication had negative effects on the financial performance of fund management firms while risk response, internal environment, and control activities had positive effects on the financial performance of pension fund management firms in Kenya. However, the effects of even identification and risk response on financial performance were insignificant at 5% level. Thus, the study concludes that enterprise risk management practices influence the financial performance of pension fund management firms in Kenya to a very large extent.

III. METHODOLOGY

1. Research Design ,Target Population And Sampling

The study employed a descriptive survey as its research design to establish the effect of financial risk on financial performance of supermarkets in Nairobi County. The population of interest comprised of the 13 major retail supermarkets in Nairobi County, Kenya (Kenya Business Directory, 2017). Mugenda and Mugenda (2003) recommended that a sample of 10-30% is adequate if properly selected. Hence, the study will undertake a census of the thirteen major retail supermarkets in Nairobi County, Kenya.

2. Research Instruments and data collection

The study relied on entirely on secondary data hence data collection sheets was used for recording information extracted from supermarket annual financial reports for the study period 2010-2016. Data collection sheet had financial data on the columns and years on the rows for the seven years. The researcher first obtain introduction letter from the postgraduate school. The researcher then sought the help of accountants of the various supermarkets to help in filling the data collection sheet. Secondary data from large-scale super markets annual report collected on the study variable included, Financial Performance of the companies measured using return on Asset (ROA), market risk, credit risk, operational risk and Liquidity risk. The study collected secondary data for the last 7 years starting year 2010 to 2016. The data collected were examined before analysis commences for completeness and consistency .The data was analysed using descriptive statistics, correlation analysis, and multiple regression analysis and chi Squre. Data analysis was aided by Excel 2013 and SPSS version 23. Descriptive statistics used included frequencies distribution, percentages, measures of central tendencies and dispersion. Inferential statistics included correlation, multiple regressions and chi square.

Statistical Model: The statistical model shows the mathematical relationship between the independent variable financial risk management practices and dependent variable financial performance of supermarkets in Nairobi County, Kenya. The model is shown in equation (1)

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

Where Y is dependent variable financial performance (ROA)

X_1- X_4: are independent variables , X_1: credit risk, X_2: liquidity risk, X_3: operational risk, X_4: market risk, β_1, β_2, β_3 and β_4: are the coefficients of independent variables, β_0: intercept term and e: stochastic error term

Operationalization of Study Variables

This section represents the measurement that were used to operationalize the study variables used for the application of the linear multiple regression as a later process.

Table 1: Operationalization of Study Variables

Variable	Measurement
Financial performance	This is the surplus after the firm pays expenses and taxes. It is measured using ROA= Profit After tax/total assets
Liquidity Risk	Acid Test Ratio= current assets- closing stock /current liability
Credit Risk	Accounts receivables /sales X 365 days
Market risk	Financial leverage = debt equity ratio
Operational risk	Costs to income ratio = total expenses/ NP before interest and tax

IV. RESULTS AND DISCUSSIONS

1. Response Rate

Eight super markets were used in the study after five supermarkets were dropped from the analysis after they lacked all relevant data for analysis. The findings were analysed beginning with descriptive statistical analysis followed by inferential statistical analysis.

2. Descriptive Analysis

This section provides the descriptive statistics as per the objectives of the study. That is the effect of credit risk, market risk, operational risk and liquidity risk on financial performance of large scale supermarkets in Nairobi county as shown in table 2

Table 2: Descriptive Analysis

Variables	Obs	Min	Max	Mean	Std. Deviation
Credit Risk	56	4.57	22.93	12.64	4.024
Liquidity Risk	56	0.24	1.01	.68	.194
Operational Risk	56	2.52	8.17	3.94	1.130
Market risk	56	0.16	1.05	.33	.198
Financial Performance	56	0.06	0.12	.09	.016

Credit Risk: The researcher wanted to establish the central tendency and distribution of credit risk as measured by accounts receivables period .The results are presented in table 2. The mean accounts receivables period was 12.64 suggesting that the average accounts receivables period for the large scale supermarkets studied was about 13 days meaning on average credit sales is collected within a weak. The standard deviation for the accounts receivables was 4.024 demonstrating that the large-scale super markets studied, accounts receivables period was spreads around the mean with about 4 days. The minimum accounts receivables period was 4.57 days and the maximum accounts receivables period was about 23 days.

Liquidity Risk: The researcher sought to establish the central tendency and distribution of Liquidity risk among large-scale super markets in Nairobi County. Liquidity risk was Proxied by Quick ratio .The results are presented in table 2. The mean quick ratio was 0.68 suggesting that the average quick ratio for the large-scale super markets studied was less than unitary. The standard deviation quick ratio was 0.194 demonstrating that large-scale super markets studied, quick ratio was spreads around the mean with about 0.194. The minimum quick ratio was 0.24 and the quick ratio was 1.01

Operational Risk: The research also sought to establish the central tendency and distribution of operational risk level large-scale super markets in Nairobi County. Operational risk was measured ratio of expenses to Net profits before tax and interest. The results are presented in table 2. The mean expense net profit ratio was 3.94 suggesting that the operating expenses were averagely four times the operating profits of the large-scale supermarkets. The standard deviation for the expense to net profit ratio was 1.130 demonstrating that out of the Large-scale super markets in Kenya, expense to income ratio was spreads around the mean with about 1.130 Units. The minimum expense to operating income ratio was 2.52 days and the maximum was 8.17

Market Risk : The study also attempted to examine the central tendency and distribution of market among the large-scale supermarkets in Nairobi County. The results are presented in table 2. Market risk was proxied by financial leverage measured by debt to equity ratio. The average debt equity ratio was 0.33 suggesting that ratio of bowed funds to owners equity was roughly a third meaning most of the activities of the large scale super markets are financed owners equity. The standard deviation for debt equity ratio was 0.198 demonstrating that out of the large-scale super markets in Kenya, debt equity ratio was spreads around the mean with about 0.198. units. The minimum and maximum debt equity ratio was 0.16 and 1.05 points respectively.

Financial Performance Finally, ROA was used as a measure of financial performance .The results are presented in table 2. The mean ROA was 0.09 suggesting that the average ROA for the large super markets studied was about 9 %. Nairobi County, the ROA was spreads around the mean with about 1.6 %. The minimum ROA was 6 % and the maximum ROA was 12 %.

3. Correlation Analysis

The researcher carried out correlations to assist explains the relationship between independent variable financial risk and dependent variable financial performance. The researcher used Pared Pearson Correlation to establish the relationship as shown in table 3

Table 3: bivariate Pearson correlation

Variables		Credit Risk	Liquidity Risk	Operational Risk	Market risk	Financial Performance
Credit Risk	Pearson Correlation	1	.261	-.038	.171	.069
	Sig. (2-tailed)		.052	.782	.207	.612
	N	56	56	56	56	56
Liquidity Risk	Pearson Correlation	.261	1	-.457**	-.723**	.310*
	Sig. (2-tailed)	.052		.000	.000	.020
	N	56	56	56	56	56
Operational Risk	Pearson Correlation	-.038	-.457**	1	.533**	-.782**
	Sig. (2-tailed)	.782	.000		.000	.000
	N	56	56	56	56	56
Market risk	Pearson Correlation	.171	-.723**	.533**	1	-.220
	Sig. (2-tailed)	.207	.000	.000		.103
	N	56	56	56	56	56
Financial Performance	Pearson Correlation	.069	.310*	-.782**	-.220	1
	Sig. (2-tailed)	.612	.020	.000	.103	
	N	56	56	56	56	56

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

*. Correlation is significant at the 0.05 level (2-tailed).

The researcher wanted to establish the Bivariate correlation between variables used in the study. Pearson correlation coefficients were calculated at 0.05 and 0.01 level of significance. There was a statistically insignificant positive correlation between credit risk and ROA (r = .069 * p = .612 and α = 0.05). Liquidity risk was statistically significantly and positively correlated with Financial Performance (r = .310*, p = .020 and α = 0.05).There was negative statistically significant correlation between operational risk and ROA (r = -.782**, p = 0.00 and α = 0.05). The relationship between market risk and ROA was negative and statistically insignificant (r = -.220, p = .103 and α = 0.05). All the coefficients were less than 0.8 implying that there was no problem of multi collinearity among the study variables. Hence, the analysis proceeded without the worry of high correlation among study variables that could distort the coefficient estimates and provide misleading results.

4. Regression Analysis

Regression analysis was multiple in natures as there were four independent variables. The independent variables were credit risk, liquidity risk, operational risk and markets risk. The dependent variable was financial performance measured by ROA .Multiple regression analysis involved calculation of coefficient of determination, Analysis of Variances (ANOVA) and regression coefficients.

Table 4: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831[a]	.690	.666	.00898

a. Predictors: (Constant), Market risk, Credit Risk, Operational Risk, Liquidity Risk

Tables 4 indicate that the model explains only 83.1% of the variations in financial performance (ROA) of large scale super markets in Nairobi County as shown by the coefficient of determination (R^2) value of 0.831 hence 26.9 % Variations in Financial performance (ROA) is explained by other factors not included in the model. It is therefore clear that Financial risk explains only 83.1 % variations in profitability.

Table 5: Analysis of variances (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.009	4	.002	28.392	.000[b]
	Residual	.004	51	.000		
	Total	.013	55			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Market risk, Credit Risk, Operational Risk, Liquidity Risk

Additionally According to table 5 the overall significance of the model was 0.000 with an F value of 28.392.The level of significance was lower than 0.05 and this means that Financial Risk do show statistically significant effect on financial performance (ROA) of large-scale super markets in Nairobi County.

Table 6 : Coefficients of Independents Variables

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.119	.010		12.026	.000
	Credit Risk	.0004739	.0003727	-.123	-1.272	.209
	Liquidity Risk	.022	.011	.278	2.028	.048
	Operational Risk	-.013	.001	-.923	-9.882	.000
	Market risk	.039	.011	.494	3.471	.001

a. Dependent Variable: Financial Performance

Table 6 further shows the coefficients of independent variables (Market risk, Credit Risk, Operational Risk and Liquidity Risk and the values of p and values of t .The model was thus estimated as

ROA = 0.119 + .0004739 Credit risk + .022 liquidity risk - 0.013 operational risk + .039 Market risk

The estimated model above shows the causal effect relationship between the independent variable financial risk and dependent variable financial performance of large scale super markets in Nairobi County. The estimated intercept term 0.119 showing the level of financial performance in terms of ROA when the independent variables are held constant. The coefficients estimates of the model are explained in details in the following discussion. The researcher established that credit risk had a statistically insignificant effect on financial performance measured by ROA ($\beta 1$ = .0004739 , p = .209 > α = 0.05). Liquidity risk had a statistically significant effect on financial performance measured by ROA ($\beta 2$ = 0.022, p = .048< α = 0.05). Operational risk had a statistically significant effect on financial performance measured by ROA ($\beta 3$ = -.013, p = .000 < α = 0.05). Finally, market risk had a statistically significant effect on financial performance measured by ROA ($\beta 4$= . 039, p = .001 < α = 0.05).

5. *Summary of hypotheses Testing*

The table 7 shows the summary of hypotheses test and the decisions on rejection or acceptance of null hypothesis.

Table 7: Summary of Hypotheses Testing

Hypotheses	Level of significance (P)	Decision
H0$_1$: credit risk has no significant effect on financial performance	0.209	P > 0.05 Fail to reject null hypothesis
H0$_2$: liquidity risk has no significant effect on financial performance	0.048	P < 0.05 Reject null hypothesis
H0$_3$: operational risj has no significant effect on financial performance	0.000	P < 0.05 Reject null hypothesis
H0$_4$: Market risk has no significant effect on financial performance	0.001	P <0.05 Reject null hypothesis

The table 7 shows the summary of hypotheses tests where the first null hypothesis was not rejected and the other three null hypothesis was rejected. Generally, financial risk has a significant effect on financial performance of large scale super markets in Nairobi Kenya.

V.   CONCLUSION

Firstly, the study findings showing that there was a statistically insignificant positive correlation between credit risk and financial performance and that credit risk had a statistically insignificant effect on financial performance of large-scale supermarkets in Nairobi County. This lead to failure to reject null hypothesis that credit risk has no significant effect on financial performance of large-scale supermarkets in Nairobi County and to conclude that indeed credit risk has a minor effect on financial performance of large-scale supermarkets in Nairobi County. The insignificant effect of credit risk could be explained by the fact that supermarkets majorly operates on cash basis hence suffer less from credit risk that results

from failure of customers to pay dents to the super markets on time. Secondly, Liquidity risk had statistically significant and positive relationship with Financial Performance. Additionally, Liquidity risk had a statistically significant effect on financial performance measured by ROA. This lead to null hypothesis that liquidity risk has no significant effect on financial performance of large-scale supermarkets in Nairobi County being rejected and the conclusion made that credit risk has a significant effect on financial performance of the said large-scale supermarkets. The study establishes that any increase in liquidity that means reduced liquidity risk translates to increased profitability as the firm can meet its short terms obligation hence would be able to have good relationship with suppliers and financiers. Thirdly, there was negative and statistically significant correlation between operational risk and ROA. Further, Operational risk had a statistically significant effect on financial performance measured by ROA. The hypothesis that operational risk has no significant effect on financial performance of large-scale supermarkets in Nairobi County was thus rejected and conclusion made that indeed operational risk significantly affect financial performance of the said Supermarkets. The effect of operational risk on financial performance of large-scale supermarkets was negative implying that any increase in operational risk translates to reduced financial performance since the firm is inefficient in converting resources into revenues. Finally, the relationship between market risk and ROA was negative and statistically insignificant and market risk had a statistically significant effect on financial performance measured by ROA. The null hypothesis that market risk has no significant effect on financial performance of large-scale supermarkets in Nairobi County was thus rejected and conclusion made that indeed market has a major impact on financial performance of the supermarkets studied. The positive coefficient of market risk means that any increase in markets risk facing supermarkets may lead to improved financial performance if the supermarkets takes appropriate risk.

Based on the findings and conclusions, a number of recommendations can be made regarding the current study. Firstly, given the failure to reject null hypothesis that credit risk has no significant effect on financial performance of large-scale supermarkets in Nairobi County and conclusion that indeed credit risk has a minor effect on financial performance of large-scale supermarkets in Nairobi County. The study wishes to recommend to the management of large-scale supermarkets not to focus much on strategies of reducing credit risk since most of their sales is not based on credit and such they face minimal credit risk in their activities as compared to other types of business risks. Secondly, given the rejection of null hypothesis that liquidity risk has no significant effect on financial performance of large-scale supermarkets in Nairobi County and the conclusion made that credit risk has a significant effect on financial performance of the said large-scale supermarkets. The current study wishes to recommend to management of large-scale super markets in Nairobi County to work on redusing liquidity risk by ensuring they have adequate liquidity. The management of supermarkets in Nairobi County should look for alternative sources of short-term funds to finance deficits. The deficits can be financed through bank over draft and prepayments by customers of the supermarkets.Thirdly, given the rejection of null hypothesis that operational risk has no significant effect on financial performance of large-scale supermarkets in Nairobi County and conclusion that operational risk significantly affect financial performance of the said Supermarkets. The study wishes to recommend to the managements of supermarkets to constantly work on reducing operational risk in the various supermarkets. The operational risks may come from sources such as inefficiencies related to stock management and staff management. The management could reduce operational risk by ensuring efficient inventory management and reducing idle time on employees. The management of supermarkets should also invest in latest technologies that leads to innovation within the supermarkets like just in time philosophy and electronic data interchange.

Finally, given the rejection of null hypothesis that market risk has no significant effect on financial performance of large-scale supermarkets in Nairobi County and conclusion that market risk has a major impact on financial performance of the supermarkets studied. The study recommends to management of large-scale super markets to manage markets risks well. Given the positive effect of market risk on financial performance of large-scale super markets, the supermarkets should have minimal management of markets risk but should take advantage of the markets risk to increase their financial performance. However, strategies for managing markets risks to acceptable levels should be implemented. The current study on the effect of financial risks on financial performance of large-scale super markets in Nairobi County was successfully and exhaustively done. However, it was limited to using secondary data extracted from audited financial statements of the companies. Another study should be carried out that looks at effect of financial risk on financial performance of large-scale super markets in Nairobi County using both secondary and primary methods of data collection to see if results hold. Given the many risk facing super markets in Kenya, Another study should be carried out that includes all super markets in Kenya.

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