

# EFFECT OF LEVERAGE ON STOCK RETURNS AT NAIROBI SECURITIES EXCHANGE: CASE OF MANUFACTURING AND ALLIED FIRMS

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**Abstract:** This research paper examined the effect of leverage on stock returns. All manufacturing and allied firms listed at the NSE as at 2015 were considered for this research. Kenya has a huge manufacturing sector that serves both the local market and exports mostly to the East African region. A number of NSE listed companies in Kenya, including those in the manufacturing and allied sector such as Mumias Sugar Limited have over the last few years been struggling to remain in business despite having taken up huge debts from financial institutions. As a result, shareholders including the government have tried to intervene by injecting new capital from time to time in a bid to boost their productivity and financial performance and prolong their going concern. Some firms have persistently shown worsening trends of their annual losses when huge capital is invested from external sources. These challenges have incidentally led to loss of investors' wealth and confidence in the stock market. Investment managers thus need to protect interests of the stakeholders by ensuring optimum levels of leverage are maintained. This study thus seeks to satisfy the following general research objective: Examine the effect of leverage on Stock return. It narrowed down further to analyze the impact of financial leverage on stock returns; examine how operating leverage affects stock returns; how composite leverage affects stock return at both firm and industry level. This study used secondary data collected from the Nairobi Securities Exchange and published financial statements of the listed firms for the period (2011-2015). Multiple regression methods was used to model the relationship between the two variables. The study established a significant relationship between leverage and stock return. Financial Leverage had positive effect, Operating Leverage had positive effect, and Composite leverage had negative effect.

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## 1. INTRODUCTION

### Background of the study

Any investment in business requires some kind of return. Investors provide capital to help businesses thrive and achieve strategic goals. However, funding decisions arise when managers and business owners cannot adequately fund the operations of the firm. Credit market which exist in the financial markets sector provide business with funds at a cost/interest. Borrowing firm thus determines the exact mix of optimal capital structure and operational capacity which always have a significant effect on the stock return. Optimal levels of leverage are achieved by balancing the benefits from interest payments and costs of issuing debt and focusing on operational capacities and costs. Based on finance theory, the capital sources of risk are determined by the operating risk and by the financing risk represented by leverage. Investors invest for anticipated future returns, but those returns can rarely be predicted precisely as there will almost always be risk associated with investments. Actual or realized returns will, almost; always deviate from expected returns anticipated in the beginning of the investment period, Acheampong (2013). Bodie, Kane & Marcus (2008) assumed that investors will prefer investments with the highest expected return suitable to their risk aversion. Financial risks of any company are mostly associated with the kind of financing it applies in its operation.

This introduces the concept of financial leverage which refers to the financing mix of a firm and need to plan for the operating cost levels. Given the importance of sources of funding, the capital structure of a firm is viewed as its financial gearing muscle and its flexibility can enable firms to conveniently recourse to external fund financing. Debt raises the riskiness of the stocks and hence equity shareholders will demand a higher pay off on their stocks. However, the use of debt in capital structure is not inherently considered bad as it increases the available financing that can be used to support expansion and growth.

The formative work of Modigliani-Miller (1958) introduced the proposition that the expected return on equity should rise with the amount of debt in a firm's capital structure in a friction market. Corporate and theoretical finance considers financial leverage as key source of risk for firm but arguing that the higher levered a firm is, the higher the risk for equity holders. However, high financial leverage does not always translate into high risk, especially when firms have adequate coverage from business productivity and cash flow, Mirza et al. (2016), who also argues that there is no optimal debt to equity proportion, the key is that the firm should hold as much debt as it can honor and which does not adversely impact its financial flexibility.

### **Statement of the problem**

Today's competitive environment has made the managers extreme cautious and more aware about how to finance their business activities and manage leverage levels at the same time maximizing shareholders returns. This evolution encourages managers to plan on how to maximize the firm's overall value. Financially, debt is considered beneficial because of the debt-tax-shields that help to minimize expected tax bills and maximize the after-tax cash flows (Modigliani & Miller, 1958). Kraus & Litzenberger, (2013) Investment managers acting as agents of the shareholders must constantly try to set firm's leverage levels so they can reduce costs therefore consequently stock returns and profitability can be maximized. Leverage decisions are critical as a shift in leverage could increase or decrease the financial strains on companies, Cai & Zhang, (2011), Islam & Khandaker (2015).

A number of NSE listed companies in Kenya, including those in the manufacturing and allied sector such as Eveready East Africa Limited and Mumias Sugar Limited have over the last few years been struggling to remain in business despite having taken up huge debts from financial institutions. As a result, shareholders including the government have tried to intervene by injecting new capital from time to time in a bid to boost their productivity and financial performance and prolong their going concern. However, despite the stated efforts to gear them towards an upward trajectory, some firms have persistently shown worsening trends of their annual losses when huge capital is invested from external sources. More badly, some have collapsed while others declared bankrupt (Kosimbei & Makau, & 2014). These challenges have incidentally led to loss of investors' wealth and confidence in the stock market since the reversed financial performance trends negate the core objective of wealth maximization for the companies.

Despite the foregoing crisis, the manufacturing sector is second after agricultural sector in their contribution to GDP. For example in 2015 the manufacturing sector contributed 10.3%, (Otieno, 2016). High cost of capital, which makes firms look into retained earnings or operating leverage have continued to discourage investment in critical areas in the manufacturing sector, (Wafula, 2015). It is thus clear that the manufacturing sector in Kenya is one of the key pillars of the economy and less research has been done with regard to it (Were 2016). Literature review has also not been consistent in the delivery of results about what exactly affects stock returns in any market segment or individually selected firms. The Kenyan context has limited researches done to relate stock return to leverage effects. This situation has provided limited information to investors and analysts. Barasa, (2012) did a study on the effect of leverage by focusing on a sample drawn from all the listed companies. This study was not conclusive since firms sampled from different sectors experience different industry characteristics and macroeconomic effects thus limiting accurate decision making from various sector analysts and investors.

Researchers have also not been focusing on market based measurements of firm performance such as stock returns. Instead many studies have chosen to focus on book values such as return on investment and assets returns to be their dependent variable. For instance, (Ismail, 2016) study which reported negative relationship between leverage and stock return. Therefore, notwithstanding its principality within finance, other various empirical findings on this subject matter have been mixed and somewhat contradictory. While authors like Dhaliwal et al, (2006), Bhandari (1988), show that returns increase with financial leverage; other authors show that returns decrease with leverage, Muradoglu and Sivaprasad (2008), Korteweg, (2010).

## **Research Objectives**

The main objective of this study is to examine the effect of leverage on stock returns using manufacturing and allied companies listed on the Nairobi Securities exchange.

This study is guided by the following specific objectives:

1. To analyze the effect of financial leverage on stock returns
2. To examine how operating leverage affects stock return of listed manufacturing firms in Kenya
3. To determine the effects of composite leverage on stock returns.

## **2. LITERATURE REVIEW**

### **Empirical review**

Dimitrov & Jain (2005) reports negative correlation between leverage and stock returns. They study changes in leverage levels and indicate that they are negatively correlated to contemporaneous and future adjusted stock returns. They work out contemporaneous and future returns as raw & risk adjusted returns. Their main focus was to scrutinize the change in leverage as a result of the economic performance and not due to growth, mergers, acquisitions or sudden switches in capital structure for some other reasons, and hence they make a distinction between financing for operating performances or for the reasons such as firm's growth.

Efobi & Uremadu (2012) evaluate the impact of capital structure and liquidity on corporate returns by taking a sample of 10 firms in Nigeria over the period 2002 to 2006. In their analysis they deploy OLS including log-linear least squares application. The result shows a negative relationship between return and value of long-term debt, ratios of long-term debt to total liability, and ratios of short-term debt to total liability; and equity capital to total liability. In addition, however, there is a positive relationship between profitability and domestic liquidity rate, ratios of long-term debt to equity capital and value of short-term debt.

Muradoglu & Sivaprasad (2008), performed an empirical test on leverage and stock returns to test the MM II proposition for all companies listed at the London stock exchange from 1980 to 2004. In their overall sample for the non-financial sectors they found out that leverage has a negative relationship with stock returns. However, when the researchers test for linearity using the explicit valuation model of the MM (1958), they find out that a linear relationship exists where results are robust to the level of analysis and other risk factors. The researchers conclude that although leverage has an important role in explaining stock reruns, their relationship is not always positive.

Khan et al (2013) do not find relationship between capital structure and stock return. Khan was investigating the Impact of Capital Structure and Financial Performance on Stock Returns focusing on the Pakistan Textile Industry. This study employs Ordinary Least Square Regressions to analyze data collected from 69 listed companies were taken as a sample from 189 listed companies for the period 2003-2009.

Abdullah (2013) carried out a thesis to find out the impact of leverage on stock return basically conducted on KSE 100 index listed companies both Financial and Non-Financial sector. The research employed a simple regression model and further analysis using correlation analysis and established a no effect when the two variables were correlated.

## **3. METHODOLOGY**

Here the research part deals with which and how the methods are used in the study, it provides a comprehensive discussion by outlining how the data was obtained, validated and verified, the population of the study, sampling frame and sampling techniques, research design strategies. According to Sekaran and Roger (2011), research design is a master plan that specifies the methods and procedures for collecting and analyzing the needed information. ". Quantitative research design was employed by this study. It further narrowed down to a descriptive cross sectional study of all the elements of the population. The study used secondary data. This design methodology describes and explains conditions as they are as noted. This methodology enables the researcher to arrange, summarize and present data, to observe trends and relationships between variables under research.

Osir,(2015) define target population as all members of real or hypothetical set of people, events or objects to which an investigator wishes to generalize the results. This research focuses on all the 9 listed manufacturing and allied companies at the NSE for the period (2011-2015) and whose research resulted can be generalized for all other companies in this sector.

### **Data Processing and analysis**

This study used secondary data obtained from the NSE library and from the published firm's annual reports all of which were publicly and easily available. Market share price data was collected from the NSE Library and website. Financial data that majorly is covering the independent variables was extracted from the audited and published financial statements and annual reports for the specific firms and the industry at large. The researcher customized a data collection template to help in the collection and organization of the data. Panel data was collected by way of document review. A panel data set (also longitudinal data) is one where all cross section units are observed during the whole time period, (Park 2005).

Data analysis was carried out by use of Statistical package for the social Scientists (SPSS) to obtain descriptive statistics, a summary regression and a multiple linear regression model. SPSS software version 20.0 was used to produce frequencies, descriptive and inferential statistics were used to derive conclusions and generalizations regarding the population. The particular descriptive statistics produced frequencies, mean scores and standard deviation. A multiple linear regression model was used to test the significance relationship of independent variables against the dependent variable.

## **4. CONCLUSIONS**

Financial leverage variable was found to have a positive and statistically significant effect on stock returns in Kenya. The study, thus concluded that financial leverage is an important variable in the determination of stock returns in Kenya. The implication was that when the financial leverage or the ratio of debt to equity goes up, the firm amassed more resources to continue with its operations and consequently realized increases in returns.

Secondly, Operating leverage variable was found to have a positive and statistically significant effect on stock returns in Kenya. The study, thus concluded that Operating leverage is an important variable in the determination of stock returns in Kenya. The implication was that when the Operating leverage or the ratio of earnings before interest and tax goes up, the firm amassed more resources to continue with its operations and consequently realized increases in returns.

Finally, Composite leverage variable was found to have a negative and statistically significant effect on stock returns in Kenya. The study, thus concluded that Composite leverage is an important variable in the determination of stock returns in Kenya. The implication was that when the Composite leverage or the ratio of earnings per share goes up, the firm goes into financial constraints and experience reduction in returns.

### **Recommendations of the Study**

This study, has showed that financial leverage, operating leverage and composite leverage have a statistically significant effects on the stocks returns in Kenya. The study thus recommends that the risk managers of the listed companies in the manufacturing and allied segments put in place programs that help them to track the fluctuations in the various leverage levels in the firms. The creditors, investors and the general public should also visit regularly the financial statements of the listed companies to assess the leverage level of the firms thus being prudent in their decision making. This study, has revealed that that the three variables; financial leverage, operating leverage and composite leverage have very high explanatory power on the stock returns of about 79%. The study also recommend the studies to be extended to other market segments since this study was only limited to one sector.

### **Suggestion for further research**

This research was not able to identify all the possible variables with explanation power on stock returns in Kenya. The study was only able to explain about R-squared 0.917210 or 91.7210% and Adjusted R-squared 0.796789 or 79.6789 % of the variations on returns. The study thus recommends that future research should consider other factors that may affect the stocks returns in the market. The other relevant variables would be the macroeconomic variables such as exchange rate, inflation, interest rates among others.

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