FINANCIAL LEVERAGE AND MARKET RETURN OF MANUFACTURING FIRMS LISTED AT NAIROBI SECURITIES EXCHANGE, KENYA

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ABSTRACT

The study's objective was to establish the financial leverage effect on Market Returns of manufacturing companies listed at the Nairobi Securities Exchange. The study employed a descriptive design. The study targeted 8 listed manufacturing firms at the NSE. The sample size was 8 listed manufacturing firms listed at the NSE hence there was no sampling. Secondary data was collected for duration of 5 years (2018 to 2022) annually. In data analysis, both descriptive and inferential statistics was conducted. STATA 15 was employed for the data analysis purposes. The results were presented using charts, figures and tables as well as models. The results indicated that debt intensity level, interest obligation and asset tangibility have significant negative effect on market returns of listed manufacturing firms. However, equity structure has significant positive effect on market returns of listed manufacturing firms. The study concluded that financial leverage have mixed significant effect on market return of listed manufacturing firms at NSE. The study therefore recommended that firms should use debt financing especially when the funds would be used to increase asset utilization. That is, firms should only borrow funds if the funds would be used to increase utilization of existing assets. This study recommended that management of listed manufacturing firms should control the amount of interest expense since an increase in interest expense has an effect in that it reduces the market returns. A firm should aim at increasing shareholders wealth through increasing percentage of retained earnings as compared to percentage of dividends payout.

Key Words: *Debt Intensity Level, Asset Tangibility, Interest Obligation, Equity Structure, NSE*

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INTRODUCTION

One of critical decisions that business owners must make is choose not to use debt and equity. According to Sodeyfi (2018), debt financing is a vital part of a corporation. Higher returns could be leveraging level resultant. As a result, an optimal level of debt can improve an organization's performance. Financial leverage has to do with the magnitude to which an organization depends on debt to fund its activities (Akinyomi, Omokehinde & Olurin, 2018). According to Abubakar (2015), managers in business must determine what percentage of debt and equity should be maintained. Abubakar (2015) also mentions Velnampy and Niresh (2022), who posits that performance is substantially impacted by the composition of a firm's sources of funds. To enhance Market Returns, company management must make important investments and, above all, agree on the optimal debt-to-capital ratio. Financial leverage is frequently used by business leaders to improve performance (Mukaria, Mugenda, Akenga, 2015).

Financial services considerations are ongoing in character, according to Chadha and Sharma (2015), because corporate managers must constantly obtain money to fund infrastructure investments. Internal cash, stock, debt, and preference shares can all be used to fund a project. Firms, on the other hand, face a substantial issue in selecting the correct amounts of these sources of funding (Christina, 2019). Firm managers desire a properly leveraged financial position that balances risk and reward, the leverage assessment is a crucial component of a company's financial success, hence it is important for company executives are attentive to it.

Financial leverage level adopted by various firms all over the world differs considerably (Gambacorta, Yang & Tsatsaronis, 2014). The relative importance of financial leverage as indicated by Alcock, Baum, Colley and Steiner (2018) of firms ranges from 20% in the United States to over 60% in Austria, Hungary and New Zealand. Firms can choose among many alternative financial leverages. For example, firms can arrange lease financing, short term debt, long term debt financing, retained earnings or share capital. In Iran, Alipour and Pejman (2019) revealed that both short term and long- term debt had significant but negative effects on Market Returns and growth of the pharmaceutical firms. Moreover, the study determined that pharmaceutical firms in Iran followed the pecking order theory where they preferred financing their activities using in-house generated funds rather than using external funds and preferred using debt rather than issuing stock.

The financial leverage of firms in most of Sub-Saharan Africa (SSA) countries is fairly developed with some markets under-developed (Khémiri & Noubbigh, 2018). In Nigeria, Salawu and Agboola(2018) revealed that Market Returns, tangibility and company size are positively related to total debt and long-term debt. The empirical results indicated that financial leverage of large firms in Nigeria can be explained by the determinants suggested by trade-off theory. Oladele, Omotosho and Adeniyi (2017) revealed that financial leverage has a significant effect on return of assets, earnings per share and sales growth of listed manufacturing firms in Nigeria impacting aggregate financial growth of the firm over time. In Egypt, Ebaid (2019) revealed that share capital and long-term debt has a significant relationship with return on assets but insignificant relationship with return on equity. The financial leverage changes do affect the performance and hence the aggregate financial growth of the firm over time.

Financing choice is vital to every firm as the optimal financial leverage between debt and equity impacts on the firm’s valuation and its stock prices in the securities market. Bitok, Cheboi and Kemboi (2021))

indicated that short term debt equity ratio significantly affects return on assets (ROA), return on equity (ROE) and return on capital employed (ROCE). Equity has a positive and significant relationship with ROE and ROCE. Ater (2017) indicated there is a statistically significant relationship between the financial leverage and value of non-financial firms listed at NSE. Karugu, Muturi and Muathe (2021) showed that equity and long-term debt have a positive and significant effect on financial performance. Muchiri, Muturi and Ngumi (2016) established that financial leverage has a significant positive effect on return on equity.

The Nairobi Securities Exchange (formerly Nairobi Stock Exchange) is the listing company in Kenya. It was established in 1954 as an overseas stock exchange while Kenya was still a British colony with permission of the London Stock Exchange. The NSE is a member of the African Stock Exchanges Association. It is Africa's fourth largest securities exchange in terms of trading volumes, and fifth in terms of Market Returns as a percentage of Gross Domestic Product. The Exchange works in cooperation with the Uganda Securities Exchange and the Dar-es-Salaam Stock Exchange, including the cross listing of various equities. Trading is done through the Electronic Trading System which was commissioned in 2006. A Wide Area Network platform was implemented in 2007 and this eradicated the need for brokers to send their staff (dealers) to the trading floor to conduct business. Trading is now mainly conducted from the brokers' offices through the WAN. In order to provide investors with a comprehensive measure of the performance of the stock market, the Nairobi Security Exchange introduced the NSE All-Share Index in 2008. In 2009 **t**he Exchange launched its Complaints Handling Unit in a bid to make it easier for investors and the general public to forward any queries and access prompt feedback (NSE, 2022).

Statement of the problem

The firms listed in the NSE are supposed to serve as investment vehicles for the public and they are supposed to be managed professionally in order to attract investor confidence and safeguard the publics' interest. In Kenya, the contribution of the manufacturing sector to the gross domestic product has been fluctuating with a downward trend (Trading Economics, 2022). KPMG (2021) revealed that real growth in the manufacturing sector averaged 4.1% p.a. during 2010-2017 which is lower than the average annual growth in overall real GDP of 4.6%. It is estimated that manufacturing firms in Kenya have lost 70 per cent of their market share in East Africa due to contingencies (Kihara, Karanja & Ogollah, 2016).

Companies listed in NSE face various challenges such as; keeping in pace with globalizations, government policies and regulation, integrity, client demands, resource management, market and customer loyalty, risk management, business complexity, competition and inadequate capital. Companies such as Eveready (EA) Ltd, Uchumi Supermarkets, Unga Group Ltd, National Bank of Kenya, CMC Holdings Ltd Eveready (K) Ltd and East Africa Industries among many others have in the past have poor company performance indicators (CMA, 2022). Kariuki (2015) and Mwithi (2017) reported that Mumias Sugar had almost doubled its loss to Ksh 4.6 billion in the 12 months as per June 2015 financial results.

The market return has also been not impressive in the last five years up to 2020. The share price of listed manufacturing at the Nairobi Securities Exchange have reduced with an average of 83.76 per share in 2016 as compared to an average of 69.96 per share in 2020. Similarly, share price volatility has also indicated that market return has not been stable between 2017 and 2021. The instability in market return is evident with share price of volatility which has increased from 4.93 in 2016 to 6.08 in 2020. Notable instability in market return is evident in some manufacturing firms such as Eveready, British American Tobacco Kenya Ltd, Unga Group and Mumias Sugar Company (Capital Market Authority, 2022).

Although financial leverage has the ability to have a major impact on performance, Olang (2017) points out that a high level of market returns can put a company at danger of insolvency due to large interest payments. As a result, companies should use the least amount of debt possible.

Recent study in Kenya indicates that the link between financial leverage and performance warrants more investigation. Furthermore, relating to equity organizations, quasi companies have gotten less research attention (Kale, 2018). The findings of the various studies are also inconclusive. Some researchers, such as Shibanda and Okaka (2015), Olang' (2017), Shimenga and Miroga (2019), and Chesang (2017), found a strong association among collateral and efficiency in non-financial firms at NSE, while others, such as Kunga (2015), Aziidah (2017), Irungu, et al. (2018), and Mohamed (2017) found adverse association. These conflicting results necessitate more investigation, with a focus on filling up the gaps in the current studies.

A study of additional research by Shibanda and Okaka (2015), Marete (2015), Enekwe, et al. (2018) and Ilyukhin (2015) demonstrates a methodological disparity in terms of performance and financial leverage. This study builds on previous research by taking into account additional Market Returns and financial leverage metrics that have not been addressed in previous studies.

Research Objectives

The general objective of the study was to determine the effects of financial leverage on Market Returns of manufacturing companies listed at the Nairobi Securities Exchange. The study was guided by the following specific objectives

- To examine the effect of debt Intensity level and Market Returns of manufacturing firms listed at the NSE.
- To evaluate the effect of asset tangibility on Market Returns of manufacturing firms listed at the NSE.
- To ascertain the effect of interest obligation on Market Returns of manufacturing firms listed at the NSE.
- To determine the effect of equity structure on Market Returns of manufacturing firms listed at the NSE.

LITERATURE REVIEW

Theoretical Review

Modigliani and Miller (MM) Proposition II

The second proposition for the real-world condition states that the cost of equity has a directly proportional relationship with the leverage level. Modigliani and Miller (1958) are regarded as pioneers in the topic of leverage's significance in business (Banafa, 2016). The authors cite that in conducive environments the interests of leveraged and unhedged enterprises are identical because there is no taxes and businesses have the same investment incentives available. The notion was that a company's strength is useless. However, in response to criticism of their assumptions, the two Nobel Laureates devised the Modigliani and Miller proposal II (MM II), which factored in the impact of taxes.

The initial argument was revised to MM II in 1963 through the elimination of the assumption on zero-tax. This was understood because without taxes, there is no competition. Because leverage functions as a fiscal shield, a larger leverage ratio in the company capital system decreases the weighted average capital cost (WACC). Other issues like as lawsuit losses and servicing expenses will be recorded when the corporation benefits from debt tax deductibility. Since MM II with a leverage increase, Alifani and Nugroho (2013) determined that the expected equity return (ROE) was rising.

The MM II hypothesis aims to establish a link between financial leverage, debt intensity, asset tangibility, interest obligation, equity structure and corporate results as ROE proxied. The study backed up MM II's argument that the predicted return on capital would rise as the market price rose. Banafa

(2016), Maina and Kondongo (2013), Olang (2017), Shibanda and Okaka (2015), Mohamed (2016), Oketch, Namusonge & Sakwa (2018), and Kunga (2015) based their research on Modigliani and Miller's (1963) theory of financial leverage and performance.

Agency Theory

The cost of an agent is spent when managers, investors, and company owners have conflicts of interest. The CEO and the owners may not always share the same goals according to Jensen and Meckling in 1976. In this situation, the company's managers place a greater emphasis on achieving personal ambitions than on increasing shareholder returns. Therefore, shareholders enforce management's discipline by using debt as a means of preventing wasteful spending. Owners tend to use power in terms of management-shareholder business costs, but not executives, according to Harris & Raviv (1991). Shareholders prefer dividend distributions for shareholder-debtor agency payments and excessive dividend payouts, which can choke a company's market returns, whereas debtors desire covenants imposed on credit transactions that protect them from nonpayment.

Jensen and Ruback (1983), instead of focusing on increasing shareholder value, recognized the company's disproportionate cash flow, which favored managers. This schism poses a serious dilemma for shareholders, who must ensure that excess capital flows are not diverted to unprofitable activities rather than shareholder returns. Excessive debt creates agency problems among creditors and owners, according to Fama and French (2000).

The idea establishes a link of a firm's debt and equity levels, as well as its financial performance. Debt intensity of the company can consequently be used as a proxy for the connection that exists between the management of the business and its creditors, as well as between creditors and their debtors. ratio of owners to managers is low in either case, and owners do not feel any pressure to compete (Jensen & Meckling, 1976). As a result, putting the agency costs hypothesis to the test will be helpful in determining the debt intensity's interrelation with business performance. In his research on how financial structure influences the performance of enterprises listed on East African stock markets, Mwangi (2016) applied the agency costs theory. In Kisumu, Kenya, Ongombe and Mungai (2018) used the agency costs theory to determine managers‟ capital decisions influence results of sugar milling businesses.

Trade-off Theory

The trade-off theory is supposition that business uses a combination of earnings and costs to figure out how much debt and equity financing it needs. Insolvency costs, which are a measure of a company's success, are caused by economic theory; debt service benefits on taxpayer firms outweigh obligation costs, which includes the financial weight of debt and foreclosure fees. As a result, with fewer loans, the marginal benefit increases, but as the debt grows, so do the marginal costs. As a result, a company runs the risk of going bankrupt and incurring other marginal costs if it does not maximize the bargain when deciding capital mix.

According to Iqbal et al. (2012), the original formulation of the trade-off principle was drafted after a discussion of the Modigliani-Miller theorem. If the principle of irrelevance were applied to corporate income tax, however, the fiscal benefits that protected huge businesses added to financial debt. According to Abdeljawad (2013), the competitive trade-off hypothesis said that enterprises may stray from the intended capital structure but will eventually return to the planned capital structure. In compared to near-target organizations, Malaysian businesses far from the target show stronger behavioral gains, according to the study. Furthermore, companies that have been over- released show faster improvements than companies that have been under-released. Irungu, Muturi, Nasieku, and Ngumi (2018) lead the thesis on the trade-off hypothesis in Kenya. The research quantified leverage impact on Nairobi bourse

enterprises and found the principle of the tradeoff to be appropriate, since leveraging is fine for a business as long as leverage ratios do not approach maximum levels.

The commercial concept is used to interpret management's property allocation decisions in combination with this research. Executives strive for a balance of debt and equity financing, hoping to increase leverage and profit from debt's future efficiency improvements. The unsolved question is whether the arrangement is successful, that is, whether it produces favorable results. The research will seek to describe this via debt intensity, equity structure, asset tangibility, and interest obligation as measures of financial leverage.

Market Timing Theory

This postulation is salutary and relevant for putting together a solid capital structure. Companies' financial projections, in connection to business situations, led to past movements in their stock values. Managers took advantage of the evidence by manipulating the market to release securities that alleviate debt constraints and increase the possibility of reorganization. Executives actively employ this strategy because two- thirds of business leaders agree that judgments on equity concerns involve the extent to which asset markets are overpriced or undervalued (Miglo 2011).

According to Chen, Chen, Chen, and Huang, (2013) enterprises in Taiwan prefer larger debt over equity when market conditions are bad. The study compared the application of the order principle and the market time concept for trading Taiwanese company stocks. According to the data, Taiwanese enterprises have a profitable market timing theory for the years 1990-2001. Banafa (2016) clarifies the decision of business managers in Kenya to raise debt or equity based on asset costs or debt costs to the market.

The study was able to examine the results‟ consistency with the market timing postulation by demonstrating the link of Debt Intensity and performance. The gist is that increasing leverage will improve performance when corporations use more debt depending on market timing. The findings of this study reveal whether this does, in fact, contribute to improved performance.

Empirical Review

Ehiedu, Onuorah and Mbagwu (2022) unveiled some salient relationship between debt intensity and equity of listed oil and gas firms in Nigeria for the period 2008-2107. More so, short term debt (STD) was found to have negative significant effect on financial performance on ROCE, with a positive relationship on NPM of listed oil and gas firms in Nigeria. The study therefore, concluded that short term debt is one of the strong determinants of the equity of listed oil and gas firms in Nigeria.

Abubakar (2021) assessed the effect of debt intensity on the financial performance, using data from the annual reports of 7 quoted oil and gas firms in Nigeria, as well as from the Nigerian Stock Exchange (NSE) daily official lists over the period 2005- 2018. The regression results from the random effects model (REM) indicate that debt intensity has a negative but significant effect on the financial performance denoted by ROE. The study concludes that higher debt intensity of quoted oil and gas companies in Nigeria attenuates shareholders' wealth.

Susilawati, Shavab and Mustika (2022) assessed how the Debt To Equity Ratio and Current Ratio affect the Return On Assets in pharmaceutical sub-sector manufacturing companies listed on the IDX from 2015 to 2019. Purposive sampling was used to determine the sample size in this study. Verificative and descriptive approaches were used in this study. Based on the results of the partial test, it shows that the Debt To Equity Ratio has a significant negative effect on Return On Assets. Simultaneously, the Debt To Equity Ratio have a significant positive effect on Market Returns (ROA) in Pharmaceutical Sub-Sector Manufacturing Companies Listed on the Indonesia Stock Exchange in 2015-2019.

Sivalingam and Kengatharan (2018) examined the relationship between asset tangibility and financial performance of listed licensed commercial banks in Sri Lanka. Panel data were used to conduct the empirical study which were extracted from the annual reports of 10 selected banks for the period from 2007 to 2016. According to the model, asset tangibility was significantly negatively related to ROA, however growth in banks deposit was significantly and positively related to ROA. Size, short-term debt to total assets ratio and long-term debt to total assets ratio did not show any relationship with ROA.

Ibe and Pibowei (2022) investigate the effect of asset tangibility on the corporate financial performance of Lafarge Africa Plc. An expo-facto research design with four objectives and one baseline theory anchored this empirical paper. The study covered a population of thirteen years from 2009 to 2021, and a sample size of ten years covering from 2010 to 2019, using an interval scale of measurement and preceding year basis of sampling. The study used secondary data, obtained from the published annual reports and accounts of Lafarge Africa Plc. The study found that there is no significant relationship between asset tangibility and return on assets, no significant relationship between debt to assets ratio and return on equity.

Chemosit (2021) sought to determine the effect of interest obligation on the financial performance of energy and petroleum sector companies listed in the NSE. The study adopted a descriptive research design. Management of all the 5 energy and petroleum companies listed with the NSE was involved in the study which mainly used secondary data to conclude. The findings indicate that the independent variable interest cover ratio affected the financial performance of the firms in the Energy and petroleum sector. Interest cover ratio had a negative relationship to the firms in the Energy and petroleum sector listed in the NSE.

Kurnia (2022) aims to determine the effect of interest obligation on the stock price of PT Indofood Sukses Makmur Tbk. The research method used is a quantitative method. The type of data used is secondary data from the 2011-2020 annual report published by the company on the official website. The results of this study show that partially Interest Coverage Ratio has a very weak relationship, Basic Earning Power has a weak relationship, Earning Per Share has a moderate relationship and partially has no significant effect on stock price, then simultaneously Interest Coverage Ratio, Basic Earning Power and Earning Per Share has a strong relationship and there is no significant effect on stock price.

Dudycz (2021) examined the impact of share capital on companies' performance as well as the effect of accounting information on companies' market performance and the impact of pre-IPO information on the predictive power of companies' performance after an initial public offering (IPO). The research was conducted on a sample of IPO companies debuting on the Warsaw Stock Exchange. It shows that a large percentage of share capital in equity reduces capital flexibility but can also be a signal to improve companies' market performance. It also shows that after an IPO, the market's information efficiency diminishes, which means, among other things, that pre-IPO accounting information has a negligible impact on the companies' market performance after the IPO.

Kerosi, Mugo and Kalui (2018) investigated the extent to which internally generated equity affected profitability of quoted non-financial firms in Kenya. The study target 37 firms that were actively trading in the stock market in the period January 2009 to December 2014. The study adopted longitudinal research design and used secondary quantitative data that was obtained from the firms 'audited financial statements and NSE handbooks. Findings from the study indicated that profitability, which was proxied by return on capital employed, had

significant and positive correlation with share capital.

METHODOLOGY

This study adopted a descriptive-causal research design. The population of interest (Target population) in this study was manufacturing firms listed at the NSE, whose number stood at 8 as at 30th Dec, 2022. The sample frame of this study was 8 manufacturing firms listed at NSE. This study took the entire population of the eight listed manufacturing firms using census technique. This study used secondary data, which is the data collected from audited financial reports of individual firms, from website of NSE and CMA of selected firms. The data cut across a five-year period, 2018-2022 to ensure a trend can be established across time and reasonable conclusions can be drawn from the analysis. Multiple regression analysis was used to establish the relationship between the variables of study. Multiple linear regression model was used to test the significance of the influence of the independent variables on the dependent variable. This was done with aid of STATA version 15.00. Tables and other graphical presentations as appropriate was used to present the data collected for ease of understanding and analysis. The multiple linear regression model is as shown below;

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \varepsilon$$

Where;

Y =Market Returns for firm (i) in period (t)

β_0 = the regression constant

β_1, β_2, β_3 and β_4 the coefficients of independent variables

$X_{1it}$is debt Intensity level for firm (i) in period (t)

X_{2it} is asset tangibility for firm (i) in period (t)

X_{3it} is interest obligation for firm (i) in period (t)

$X_{4it=}$ is equity structure for firm (i) in period (t)

ε error term of the model (significance level of the model).

FINDINGS

Correlation Analysis

To explore the effect of financial leverage on Market returns, a correlation analysis was conducted. The results of the correlation between financial leverage and market returns pertinent results are summarized in Table 1.

Table 1: Pearson Correlation Analysis

	Market returns	Debt Intensity level	Asset tangibility	Interest obligation
Market returns	1			
	40			
	-0.2942	1		
Debt Intensity level	0.0354			
	40	40		
	-0.3919	0.3167	1	
Asset tangibility	0.000	0.0465		
	40	40	40	
	-0.3519	0.4907	0.3135	1
	0.0098	0.0013	0.0489	
Interest obligation	40	40	40	40
	0.3507	-0.3053	-0.3919	-0.352
	0.0265	0.0554	0.0124	0.0259
Equity Structure	40	40	40	40

The results indicated that the debt intensity level has a significant positive effect on the market returns of listed manufacturing firms at NSE(r = -0.2942, P=0.0354). The findings are in agreement with Susilawati, Shavab and Mustika (2022) who showed that that the debt intensity has a significant effect on Market Returns (ROA) in Pharmaceutical Sub-Sector Manufacturing Companies Listed on the Indonesia Stock Exchange in 2015-2019. However, Orji and Agubata (2021) showed that debt intensity has significant and positive effect on Firms Performance in Nigeria at 5% level of significance. The study concludes that debt intensity improves firm's performance over the years

Asset tangibility has a negative and significant on the market returns of listed manufacturing firms at NSE (r =-0.3919, P=0.000). These findings are in tandem with those by Psillaki and Daskalakis (2018) who investigated asset structure of Greek, French, Italian and Portuguese small and medium-sized enterprises and found a negative relationship between leverage and asset structure.

Interest obligation has a negative and significant effect on the market returns of listed manufacturing firms at NSE (r =-0.3519, P-0.0098). The findings are in tandem Ayuba, Bambale, Ibrahim and Sulaiman (2019) who revealed that interest obligation have negative influence on earning per share and are statistically significant in driving the financial performance of agricultural firms in Nigeria. However, Lestari (2021) examined the impact of financial leverage on the financial performance of conventional banks listed on the Indonesia Stock Exchange. The results showed that interest obligation has no effect on return on assets and return on equity, and interest obligation has no effect on return on assets and return on equity.

Equity Structure has a positive and significant effect on the market returns of listed manufacturing firms at NSE (r =0.3507, P=0.0265). This implied that the financial leverage used in this study were all having a significant effect on the market returns of listed manufacturing firms at NSE. The correlation analysis outcomes are consistent with the finding of a research study by Muthui et al. (2017) who located that retained revenues had positive and significant impact on the monetary efficiency of commercial banks in Kenya,

Linear Regression Analysis

Effect of Debt Intensity level on Market returns

The study sought to examine the effect of debt Intensity level and Market Returns of manufacturing firms listed at the NSE. Fixed effect model results are presented in Table 2.

Table 2: Regression Fixed Effect of Debt Intensity level on Market returns

Fixed-effects (within) regression		Number of obs =	40
Group variable: FIRMID		Number of groups =	8
R-sq:		Obs per group:	
within=	0.2481	min =	5
between=	0.0626	avg=	5
overall=	0.0866	max=	5
		F(1,31) =	10.23
corr(u_i, Xb)=-0.261		Prob > chi2 =	0.0032

Market Returns	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
Debt Intensity	-0.517405	0.161797	-3.2	0.003	-0.187417	0.847393
_cons	-1.78141	0.754964	-2.36	0.025	-3.32117	-0.24165

The R^2 is generally a measure of the variation of the dependent variable market Returns that is explained by the variation of the predictors in the model. The result obtained from fixed effect model indicated that debt intensity level accounted for 8.66% (Overall R square=0.0866 of the variation in market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The ANOVA statistics measure the general significance of the model. The F-statistic to the model shows is 10.23 which is greater than 0 implying that the estimated parameters in the model are at least not equal to zero. This infers that debt intensity has an effect on market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya.

The estimated coefficient of debt Intensity level is significantly not equal to zero (β=-0.517405, t= -3.200, p-value= 0.003). The P-value is less than 0.05 which implies that the estimated coefficient is significant at 5% significance level. The estimated coefficient of debt intensity here implies that a unit increase in debt intensity would cause the levels of market returns to decrease by 0.517 units. The p-value of the constant is less than 0.05 which shows a significant constant term. The regression model is as shown below

Market returns= -1.78141-0.517405Debt Intensity

There is significant effect of debt Intensity level on market returns. This implies that increase in debt intensity level would results to decrease in market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. This is consistent to Rehman (2013) who revealed a debt intensity significantly affected ROA of listed sugar companies in Pakistan. Gweyi & Karanja (2014) however reported that debt intensity had weak positive insignificant effect on ROA of deposit taking saccos.

Effect of Asset tangibility on Market returns

The study sought to determine the effect of asset tangibility on market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The results of the fixed effect model are presented in Table 3.

Table 3: Regression Fixed Effect of Asset tangibility on market returns

Fixed-effects (within) regression		Number of obs =	40
Group variable: FIRMID		Number of groups =	8
R-sq:		Obs per group:	
within=	0.3377	min =	5
between=	0.0941	avg=	5
overall=	0.1536	max=	5
		F(1,31) =	15.81
corr(u_i, Xb)=-0.4488		Prob > chi2 =	0.0004

Market Returns	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
Asset Tangibility	-0.72909	0.183385	-3.98	0.000	-1.155074	-0.30316
_cons	0.852177	0.943124	0.9	0.373	-1.07134	2.775691

The analysis shows that the panels were strongly balanced for this bivariate analysis as shown by the number of observations per group. The result obtained from fixed effect model indicated that asset tangibility accounted for 15.36% (Overall R square=0.1536) of the variation in market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The ANOVA statistics measure the general significance of the model. The F-statistic to the model shows is 15.81 which is greater than 0

implying that the estimated parameters in the model are at least not equal to zero. This infers that asset tangibility has an effect on market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The effect is significant at P<0.05.

The estimated coefficient of asset tangibility is significantly not equal to zero (β=--0.72909, t=, p-value= 0.000). The P-value is less than 0.05 which implies that the estimated coefficient is significant at 5% significance level. The estimated coefficient of asset tangibility here implies that a unit increase in asset tangibility would cause the levels of market returns to decrease by 0.72909 units. The p-value of the constant is less than 0.05 which shows a significant constant term. The regression model is as shown below

Market returns = 0.852177-0.72909Asset Tangibility

It is evident that there is an effect of asset tangibility on market returns. This implies that increase in asset tangibility would results to decrease in market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The negative sign is not consistent with the findings of Dey, Hossain & Rahman, (2018) and Mohamed (2016). However, this result is in agreement with studies that documented a negative effect of Asset Coverage Ratio on financial performance (Makanga, (2015); Githaiga, 2015)

Effect of Interest obligation on Market returns

The study sought to determine the effect of interest obligation on market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The results of the fixed effect model are presented in Table 4.

Table 4: Regression Fixed Effect of Interest obligation on Market returns

Fixed-effects (within) regression		Number of obs =	40
Group variable: FIRMID		Number of groups =	8
R-sq:		Obs per group:	
within=	0.0695	min =	5
between=	0.1788	avg=	5
overall=	0.1239	max=	5
		F(1,31) =	2.31
corr(u_i, Xb)=0.1338		Prob > chi2 =	0.013

Market Return					**[95% Conf. Interval]**	
	Coef.	**Std. Err.**	**T**	**P>t**		
Interest Obligation	-0.169116	0.067100	-2.52	0.013	-0.05762	0.395855
_cons	3.758269	0.554212	6.78	0.000	2.627947	4.888591

The result obtained from fixed effect model revealed that interest obligation accounted for 12.39% (Overall R square=0.1239) of the variation in market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The ANOVA statistics measure the general significance of the model. The F-statistic to the model is 2.31 which is greater than 0 implying that the estimated parameters in the model are at least not equal to zero. This postulates that interest obligation has an effect on market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. This effect is significant at P<0.05.

The estimated coefficient of interest obligation is significantly not equal to zero (β=-0.169116, t= 2.52,

p-value= 0.013). The P-value is less than 0.05 which implies that the estimated coefficient is significant at 5% significance level. The estimated coefficient of interest obligation here implies that a unit increase in interest obligation would trigger the levels of market returns to decrease by 0.169116 units. The p-value of the constant is less than 0.05 which shows a significant constant term. The regression model is as shown below

Market return =3.758269-0.169116Interest Obligation

The study therefore rejected the third null hypothesis that interest obligation does not effect market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya and concluded that there is an effect of interest obligation on market returns. This implies that increase in interest obligation would results to decrease in market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The negative and significant effect is not in agreement with the findings of Enekwe et al. (2014) and Kirimi et al (2017). This positive effect of Degree of Interest Coverage as measured by Interest Coverage Ratio on financial performance could stem from the theory that a firm with high interest coverage ratio has more earnings available hence better financial health. Such a firm is also not susceptible to increases in interest rate due to its risk profile.

Effect of Equity Structure on market returns

The study sought to determine the effect of Equity Structure on market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The results of the fixed effect model are presented in Table5.

Table 5: Regression Fixed Effect of Equity Structure on Market returns

Fixed-effects (within) regression		Number of obs =	40
Group variable: FIRMID		Number of groups =	8
R-sq:		Obs per group:	
within=	0.0239	min =	5
between=	0.3432	avg=	5
overall=	0.1230	max=	5
		F(1,31) =	3.76
corr(u_i, Xb)=-0.478		Prob > chi2 =	0.039

Market Returns	Coef.	Std. Err.	T	P>t	[95% Conf.	Interval]
Equity Structure	0.12335	0.06157	2.003	0.039	-0.16538	0.412085
_cons	0.061912	0.652563	0.09	0.925	-1.269	1.392823

The analysis shows that the panels were strongly balanced for this bivariate analysis as shown by the number of observations per group. There were a total of 40 observations used in this analysis considering 8 groups of entities implying strongly balance panels. The minimum, maximum and average numbers of observations per groups were all equal to 5. The result obtained from fixed effect model indicated that Equity Structure accounted for 12.3% (Overall R square=0.123) of the variation in market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The F-statistic to the model shows is 3.76 which is greater than 0 implying that the estimated parameters in the model are at least not equal to zero. This implies that Equity Structure has an effect on market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. However, the effect is significant (P=0.039).

The estimated coefficient of Equity Structure is significantly not equal to zero (β=-0.12335, t= 2.003,

p-value= 0.039). The P-value is less than 0.05 which implies that the estimated coefficient is significant at 5% significance level. The estimated coefficient of Equity Structure here implies that a unit increase in Equity Structure would initiate the levels of market returns to increase by 00.12335 units. The regression model is as shown below

Market returns= 0.0619+0.12335Equity Structure

The study therefore rejected the null hypothesis that Equity Structure does not affect market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya and concluded that there is an effect of Equity Structure on market returns. This implies that increase in Equity Structure would results to increase in market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The results are not in agreement with Mbuvi and Gekara (2015) who investigated the influence of retained earnings on shareholder value creation of listed companies in Kenya. Findings of the study indicated a positive and significant relationship between retained earnings and value creation of shareholders of firms listed in the Nairobi Securities Exchange in Kenya. Boujjat and Rachid (2016) investigated the relationship that existed between retained earnings and firm performance of Morocco's listed firms. Finding of the study indicated a positive and significant relationship between retained earnings and firm performance. Ofori-Sasu, Abor and Osei (2017) examined the effect of retained earnings on financial performance on firms listed at the country's securities market. Results from the study indicated a positive and significant relationship between retained earnings and shareholders value. Kariuki, Jagongo and Muniu (2019) sought to find out if any relationship existed between retained earnings and shareholders value creation of quoted firms in Kenya. Results from the study indicated a positive and statistically significant relationship between retained earnings and shareholder value creation.

Multiple Linear Regression

The study sought to examine the effect of financial leverage on market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. Hypothesis testing and conclusions of the study objectives were based on the multivariate analysis results rather than the bivariate analysis. In this regression, the four independent variables were entered as a block. Both fixed and random effect model were fitted and the Table 6 below shows the model summary of the adopted fixed effect model.

Table 6: Regression Fixed Effect of Financial leverage on Market returns

Fixed-effects (within) regression				Number of obs =		40
Group variable: FIRMID				Number of groups =		8
R-sq:				Obs per group:		
within = 0.3604				min=		5
between = 0.4574				avg=		5
overall = 0.3709				max=		5
corr(u_i, Xb) =	0.5277 (assumed)			F(4,28)=		8.17
				Prob > F=		0.0169
Market Returns	**Coef.**	**Std. Err.**	**T**	**P>t**	**[95% Conf. Interval]**	
Debt Intensity	-0.616051	0.173115	-3.56	0.001	-0.261442	1.970661
Asset Tangibility	-0.17475	0.081372	-2.15	0.014	-0.56881	0.219306
Interest Obligation	-0.03031	0.015090	-2.01	0.027	-0.20666	0.146032
Equity Structure	0.318763	0.155514	2.05	0.024	-0.02028	0.657803
_cons	-2.65845	1.146580	-2.32	0.028	-5.00712	-0.30979

The analysis shows that the panels were strongly balanced for this multivariate analysis as shown by the number of observations per group. There was a total of 40 observations used in this analysis considering 8 groups of entities implying strongly balance panels. The minimum, maximum and average numbers of observations per groups were all equal to 5. The result obtained from fixed effect model indicated that the determinants accounted for 37.09% (Overall R square=0.3709) of the variation in market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The F-statistic to the model shows is 8.17 which is greater than 0 implying that the estimated parameters in the model are at least not equal to zero. This implies that four financial leverages have an effect on market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. This effect is significant (P=0.0169). The study regression model as obtained from table above is as shown below.

Market returns =-2.65845-0.616051Debt Intensity--0.17475Asset Tangibility--0.03031CC+0.318763Equity Structure

From the findings, debt Intensity level had a regression co-efficient (β_1) of -0.616051, p=0.001 implying that when asset tangibility, interest obligation and Equity Structure are controlled, a unit increase in debt Intensity level across time and among listed financial firms at NSE would result in a significant decrease of 0.616051 units in market returns. Since the t value is greater than 1.96 and P value is greater than 0, debt Intensity level does significantly affect market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The results confirms with Abubakar (2021) who indicated that debt intensity has a negative but significant effect on the financial performance denoted by ROE. The study concludes that higher debt intensity of quoted oil and gas companies in Nigeria attenuates shareholders' wealth. Susilawati, Shavab and Mustika (2022) showed that that the debt intensity has a significant effect on Market Returns (ROA) in Pharmaceutical Sub-Sector Manufacturing Companies Listed on the Indonesia Stock Exchange in 2015-2019. However, Orji and Agubata (2021) showed that debt intensit has significant and positive effect on Firms Performance in Nigeria at 5% level of significance. The study concludes that debt intensity improves firm's performance over the years.

The study established that Asset tangibility had a regression co-efficient (β_2) of -0.17475, p=0.014 implying that when interest obligation, debt Intensity level and Equity Structure are controlled, a unit increase in asset tangibility across time and among listed manufacturing firms at NSE in Kenya would result to significant decrease of 0.1748 units in market returns. The t value is greater than 1.96 and P value is greater than 0, asset tangibility does significantly affect market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. These findings are in tandem with those by Psillaki and Daskalakis (2018) who investigated asset structure of Greek, French, Italian and Portuguese small and medium-sized enterprises and found a negative relationship between leverage and asset structure. The results contradict those by Koksal, Orman, and Oduncu (2013), who investigated asset tangibility choices of firms and depicted mixed findings. The results also contradict those by Campello and Giambina (2021) who examined the relation between corporate asset structure and capital structure by exploiting variation in the saleability of tangible assets of firms listed on the NYSE and who found a positive significant effect of asset tangibility on financial performance of firms.

From the findings, interest obligation had a regression co-efficient (β_3) of -0.03031, p=0.027 implying that when debt Intensity level, Asset tangibility and Equity Structure are controlled, a unit increase in interest obligation across time and among listed manufacturing firms at NSE in Kenya would result in a significant decrease of 0.03031 units in market returns. The t value is greater than 1.96 and P value is greater than 0, interest obligation does significantly affect market returns

of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The results are supported by Chemosit (2021) who indicated that the independent variable interest cover ratio affected the financial performance of the firms in the Energy and petroleum sector. Interest cover ratio had a negative relationship to the firms in the Energy and petroleum sector listed in the NSE. Kurnia (2022) showed that partially Interest Coverage Ratio has a very weak relationship, Basic Earning Power has a weak relationship, Earning Per Share has a moderate relationship and partially has no significant effect on stock price, then simultaneously Interest Coverage Ratio, Basic Earning Power and Earning Per Share has a strong relationship and there is no significant effect on stock price. Ayuba, Bambale, Ibrahim and Sulaiman (2019) revealed that interest obligation have negative influence on earning per share and are statistically significant in driving the financial performance of agricultural firms in Nigeria. However, Lestari (2021) examined the impact of financial leverage on the financial performance of conventional banks listed on the Indonesia Stock Exchange. The results showed that interest obligation has no effect on return on assets and return on equity, and interest obligation has no effect on return on assets and return on equity.

Lastly, the results revealed that Equity Structure had a regression co-efficient (β_4) of 0.318763, p=0.028 implying that when debt Intensity level, Asset tangibility and interest obligation are controlled, a unit increase in Equity Structure across time and among listed manufacturing firms at NSE in Kenya would result in significant increase of 0.31876 units in market returns. The t value is less than 1.96 and P value is greater than 0, therefore equity structure does significantly affect market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The results are in agreement with Dudycz (2021) who examined the impact of equity structure on companies' performance as well as the effect of accounting information on companies' market performance. Similarly, Kerosi, Mugo and Kalui (2018) investigated the extent to which internally generated equity affected profitability of quoted non-financial firms in Kenya. Findings from the study indicated that profitability, which was proxied by return on capital employed, had significant and positive correlation with equity structure. The findings of this study are supported by a study carried out by Bulle and Omagwa (2017) which indicated that capital structure had a significant impact on financial performance of firms listed under manufacturing and Allied sector at NSE. However, Musila (2015) sought to establish the relationship between equity structure and financial performance for firms in the energy and petroleum sector listed at the Nairobi Securities Exchange. The study showed an insignificant but positive relationship between equity structure and financial performance.

SUMMARY

The first objective of the study was to examine the effect of debt Intensity level and Market Returns of manufacturing firms listed at the NSE. debt intensity level was calculated by taking the ratio of total debts to total sales. Total debt represents 27.8% of the total sales between 2018 and 2022. Panel data Pearson correlation results show a strong significant negative relationship between debt Intensity level and market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. Fixed effect simple regression analysis indicated that debt intensity level has significant negative effect on market returns of listed manufacturing firms. Fixed effect multiple regression analysis revealed that when other variables are controlled in the model, a unit change in debt intensity level would results to a significant change in market returns in the opposite direction. hence, debt Intensity level has got significant negative effect on market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya.

The second objective of the study was to evaluate the effect of asset tangibility on Market Returns of

manufacturing firms listed at the NSE. Asset tangibility was calculated this as the ratio of non-current assets to total assets. Non-current assets represent 64.7% of the total assets between 2018 and 2022. Panel data Pearson correlation results revealed a moderate significant negative relationship between asset tangibility and market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. Fixed effect linear regression analysis indicated that asset tangibility significantly accounts for change in market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. Fixed effect multiple regression analysis revealed that when other variables are controlled in the model, a unit change in asset tangibility would results to a significant change in market returns in the opposite direction. Thus, asset tangibility has got significant negative effect on market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya.

The third objective of the study was to ascertain the effect of interest obligation on Market Returns of manufacturing firms listed at the NSE. Interest obligation was calculated as ratio of Earnings Before Interest and Taxes (EBIT) to Interest expense. Interest expense represents 21.6% of the Earnings Before Interest and Taxes between 2018 and 2022 Panel data Pearson correlation results revealed a moderate and significant negative relationship between interest obligation and market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. Fixed effect linear regression analysis revealed that interest obligation significantly accounts for variation in market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. Fixed effect multiple regression analysis revealed that when other variables are controlled in the model, a unit change in interest obligation would results to significant change in market returns by in the opposite direction. Hence, interest obligation has got significant negative effect on market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya.

The fourth objective of the study was to determine the effect of equity structure on Market Returns of manufacturing firms listed at the NSE. Equity Structure was calculated this as the ratio of retained earning which is internal equity to share capital which is external equity. Retained retaining earnings was more than 98.7% of share capital between 2018 and 2022. Panel data Pearson correlation results indicated a moderate significant positive relationship between Equity Structure and market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. Fixed effect linear regression analysis indicated that Equity Structure significantly accounts for variance in market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. Fixed effect multiple regression analysis revealed that when other variables are controlled in the model, a unit change in Equity Structure would results to a significant change in market returns in the same direction. Thus, Equity Structure has a significant effect of market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya.

CONCLUSION

Basedontheempiricalevidence,anumberoflogicalconclusionscanbemade as follows and presented in terms of study objectives so as to answer the corresponding research questions:

In line with the first objective, the study sought to answer, what are the effects of debt intensity level on Market Returns of manufacturing firms listed at the Nairobi Securities Exchange. The study concluded that debt intensity level has significant negative effect on market returns. An increase in debt intensity level would results to significant decrease in market returns. Therefore, the study concluded that list manufacturing firms are able to increase their market returns when they reduce their debt intensity level.

The second objective of the study sought to answer how does the asset tangibility affect Market Returns of manufacturing firms listed at the NSE? From the linear and multiple regression results, the

study concluded that asset tangibility significantly affected market returns negatively. An increase in asset tangibility would results to significant decrease in market returns. Therefore, asset tangibility has a significant negative effect of market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya. The study concluded that increase in non-current asset in regards to total asset affects market returns negatively.

The third objective of the study was to answer to what extent do interest obligation affect Market Returns of manufacturing firms listed at the NSE. From the linear and multiple regression results, the study concluded that interest obligation has significant negative effect on market returns. An increase in interest obligation would results to significant decrease in market returns. Therefore, interest obligation has a significant effect of market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya.

The fourth objective of the study sought to answer to what extent do equity structure affect Market Returns of manufacturing firms listed at the NSE? The study concluded that equity structure has significant positive effect on market returns as indicated by multiple linear regressions. An increase in retained earnings relative to share capital would results to significant decrease in market returns. Hence, Equity Structure has significant predicator of market returns of manufacturing firms listed at Nairobi Securities Exchange, Kenya.

RECOMMENDATIONS

The following recommendations have been made based on the study conclusions as explained below:

Increase in debt intensity level negative affects market returns, the study therefore recommends that management of listed firms should regularly monitor their total debt relative to total sales. In this regard, firm should come up with optimum level of debt that would not affect market returns negatively.

Firms should use debt financing especially when the funds will be used to increase asset utilization. That is, firms should only borrow funds if the funds will be used to increase utilization of existing assets. In summary firms should strike a balance between the borrowing need and asset utilization.

This study recommended that management of listed manufacturing firms should control the amount of interest expense since an increase in interest expense has an effect in that it reduces the market returns. This can be achieved by either negotiating for favorable interest rate terms on borrowed funds or using borrowed funds prudently to enhance returns.

The study recommended that a firm should aim at increasing shareholders wealth through increasing percentage of retained earnings as compared to percentage of dividends payout. The retained earnings would then be reinvested into the business hence increasing shareholders wealth. Use of retained earnings reduces the need for financial leverage which is associated with high risks. Therefore, a firm should strike a balance between dividend payments and retained earnings.

Suggestion for Further Studies

The study sought to determine the effects of financial leverage on Market Returns of manufacturing companies listed at the Nairobi Securities Exchange. In this connection, this study did not consider non-listed manufacturing firm, therefore, future studies should consider all manufacturing firms in Kenya.

Second, cyclical study is suggested to fit the various short-term variations into the model. This will be of help in developing a comprehensive market returns surveillance tool to aid manufacturing firms and other non-manufacturing firms in evaluating the extent to which they put into consideration financial leverage in relation to market returns.

The current study did not control or moderate other variables that may have impact on the relationship between financial leverage and market

returns. Therefore, future studies should consider firm size as moderating variable and macro-economic indicators such as interest rate, foreign exchange and taxation as control variables

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