

Financial Distress Factors And Market Value Of Manufacturing Firms Listed At Nairobi Securities Exchange; Kenya

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Abstract:

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 public's interest. The literature shows that publicly traded firms do encounter financial distressed from time to time but does not conclusively determine whether or not such situations affects the returns of equity stocks issued by the firms. Therefore, the general objective of this study is to examine the effect of financial distress factors on market value of non-financial firms listed at Nairobi Securities Exchange; Kenya. The specific objectives were to examine effect of liquidity level, financial leverage, operational efficiency and profitability on market value among listed manufacturing firms listed at NSE. The study was guided by Shiftability theory, buffer theory of capital adequacy, Wrecker's theory of financial distress and trade off theory. The study adopted descriptive survey design. The study narrowed on the 8 listed manufacturing firms listed at NSE. The study utilized census method therefore; all the 8 listed manufacturing firms listed at NSE were studied. The study utilized secondary data that was collected from NSE handbook between 2017 and 2021 for 8 firms. The quantitative data collected was analyzed using descriptive statistics and inferential statistics. Descriptive statistics comprised of maximum, minimum, standard deviation, mean and standard error while inferential statistics comprised of correlation and linear regression analyses with aid of STATA 15. The hypotheses were tested at a significance level of 0.05. The findings revealed that financial distress factors have an effect on market value of listed manufacturing firms listed at NSE although there was mixed outcome in regards to significant effect and direction. Asset quality (positive), financial leverage (negative) and liquidity levels (positive) were found to have significant effect whereas operational efficiency was found to have insignificant positive effect. Therefore, listed manufacturing firms listed at NSE are struggling with financial leverage and operational efficiency as financial distress factor which affects their market value. The study recommended that managers of listed firms should ensure that they invest excess liquid in productive assets. The amount of debt finance in the financial mix of the firm should be at the optimal level to ensure adequate utilization of the firms' assets and reduce the effect of financial distress on market value. A policy on efficient management should be put in place for listed firms' operational expenses to as to reduce their expenses against gross income. Management of listed firms are recommended to utilize their assets in a profitable manner so as to increase return on asset and return on equity and reduce risk of financial distress.

Key Word: Financial Distress Factors, Market Value, Liquidity Level, Financial Leverage

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I. Introduction

Capital markets are essential to the growth and development of every nation's economy over the long term. This is true regardless of whatever country one examines. The market caters to a diverse assortment of customers, including several levels of government, business groups, and people both within and outside of the nation. Since quite some time, the capital market has been one of the methods through which foreign money are being pumped into most economies. As a result, the movement toward a global economy is more practical and evident there than it is anyplace else. It is thus entirely accurate to argue that the expansion of a nation's capital market has become one of the barometers for assessing the expansion of the nation's overall economy. Therefore, a rise in the market share of a public limited liability firm that is achieved via the selling of its shares results in an increase in its capital base and supports expansion, which ultimately leads to a greater level of both growth and productivity (Onchangwa & Memba, 2018).

The primary objective of every company is to increase the wealth of its existing owners. Investors, management, and any other stakeholders in the firm need to be informed about the company's performance so that

they may make choices regarding the company's future that are based on accurate information. The rational investor anticipates a healthy return on their investment over the long run. Chauhan and Patel (2018) made the observation that increasing one's market value to its full potential is quickly becoming the new norm for cooperation. According to Hartomo (2015), the creation of shareholder value is becoming increasingly difficult as owners and managers are being forced to make appropriate financial decisions that contribute to the management of operations that create value and also identify activities that destroy value. Hartomo argues that this is because owners and managers are being forced to make appropriate financial decisions that contribute to the management of operations that create value. In addition to this, it is vital to put in place efficient instruments that are able to determine the actual value that is produced.

Financial distress is a global crisis reflected on the existing cases of corporate failure and bankruptcy. This can be traced back to historical dates as early as 1970s in connection to past financial crisis experienced by economies and commercial entities globally (Anderson, 2013; Hinds 1988). FD is a state that depicts an economic hitch in the operations of an entity and if successful turnaround is not administered on a timely basis the financial condition matures to events of default, absence of going concern, several attempts of recovery and restructuring strategies, operational inefficiency, incurring distress costs and liquidation (Carmassi & Patti, 2015; Muller, Steyn-Bruwer & Hamman, 2012). Distressed firms commonly experience traits such as; low or no value creation, high financial leverage as well as insufficient liquidity, a combination that eventually leads to exit options from an existing market share (Sitati & Odipo, 2009; Palinko & Svoob, 2016; Shaukat & Affandi, 2015). On the same note, other undertakings such as mergers and acquisitions, joint ventures, strategic alliances, delisting from the bourse, liquidation or major restructuring becomes subsets of business firms in grey zones headed to become distressed if not yet (Khaliq, Altarturi, Thaker, Harun, & Nahar, 2014; Muller et al., 2012).

The probability of distress in a trading organization is associated with high fixed costs, a number of illiquid assets compared to liquid assets and increased revenue sensitivity directly or indirectly influenced by economic recessions (Khaliq et al., 2014). Leveraged firms with compelling amounts of debt increase the probability of financial distress to a significant extent and this leads to other related costs such as; loss of exclusive financing, opportunity costs of projects, demotivated workforce due to lost confidence and bankruptcy costs (Berk et al., 2013; Khaliq et al., 2014). Volatility of operating profit is also a major determinant as to whether an entity is likely to encounter financial distress in the near future since it is directly proportional to increased susceptibility of business failure (Khaliq et al., 2014; Sporta, 2018). Financial distress contributes to volatility in cash flows which reduces return on equity and exposes creditors to credit risk (Brown, Ciochetti & Riddiough, 2006). This translates to possible balance sheet conflicts in form of either negative working capital or outstanding non-current financial obligation (Carmassi & Patti, 2015; Outecheva, 2007). Carmassi and Patti (2015) identifies internal and external business.

Financial distress has characterized the corporate sector for many years. In recent times, the world has witnessed numerous cases of failure among globally reputed firms. These corporations were regarded as icons of corporate financial stability and their collapse came with tremendous surprise to researchers and analysts alike. When a firm is under financial distress, the situation frequently sharply reduces its market value, suppliers of goods and services usually insist on cash on delivery terms, and large customer may cancel their orders in anticipation of not getting deliveries on time (Almeida & Philippon, 2016).

A number of organizations listed at the NSE such as Uchumi Supermarkets Limited, Kenya Airways, Mumias Sugar Limited, and Express Kenya Limited etc. have gone through cycles of financial distress in the recent past arising from a myriad of factors. A research project on the effect of financial distress on the value of the firm, therefore, presents a pool of knowledge for companies listed at the NSE to establish if they are in distress and if so, how their values are affected and how to rectify the situation. Further, this study presents a perfect opportunity for assessing how firms operating in highly turbulent and competitive environment as well as with inherent operational risks may be affected by financial distress. These circumstances may be worsened if the firms are highly leveraged. High operational risks coupled with high debt levels may lead to financial distress leading to negative return on equity. These factors exacerbated by negative perception in the market, loss of market share and imminent low investor confidence often lead to depreciation of the value of the company (Muigai & Muriithi, 2017).

An analysis on the Nairobi Securities Exchange reveals that at least 13 listed companies have undergone financial challenges between 2011 and 2016 (ROK, 2018). Further, more than 56 % of the companies listed in NSE had declining trend on their market value for the years 2013, 2014, 2015, 2016 and 2017 (CMA, 2018). There is thus need for the Nairobi securities exchange to come in handy and look at the financial circumstances of these firms in order to protect the interest of investors while the capital markets authority should regulate these institutions by providing guidance on proper financial management (NSE, 2018).

Firms quoted in Nairobi Securities Exchange did experience financial distress from time to time to which there was minimal reaction from market observable in terms of movement of stock returns. Koske, Tuwei and Kimwolo (2019) examined whether there's a relationship between stock market liquidity and the likelihood of

financial distress among listed firms in Kenya. The study found a negative and significant effect of stock market liquidity on likelihood of financial distress. This finding revealed that stock market liquidity plays an important role in enabling firms to be financially stable and reduces chances of becoming financially distressed

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 public's interest. One of the possibilities of investor to achieve the greatest return on investment made is to gaining understanding of the investment decision (Ronoh 2014). However, in 2018, CMA proposed the creation of a recovery board where financially distressed firms on the NSE would be rehabilitated for two to three years to help them get back to financial stability. Failure by the rehabilitated firms to recover within this period would eventually lead to delisting from the exchange as the last resort (CMA, 2018).

Market value stood at about 2.1 trillion shillings (about 20.6 billion U.S. dollars), as at Dec., 2018 NSE trading, having shed off some eight billion dollars since April 2018. In April, the index hit a high of 29 billion dollars, market data shows. On the other hand, the NSE All Share Index stands at an average of 140 points, which is 17 percent lower year-to-date while the NSE 20 Share Index, which measures stocks of the best performing blue-chips, dropped below the psychological 2,800 points. The index has fallen 25 percent year-to-date. The index on Dec 24, 2018 stood at 2,796.72 and like the rest of the indices; it is highly unlikely that it will rise significantly before the end of 2018. Nairobi Securities Exchange Market value was reported at 2,425.530 KES bn in Mar 2022. This records a decrease from the previous number of 2,492.460 KES bn for Feb 2022.

The literature shows that publicly traded firms do encounter financial distress from time to time but does not conclusively determine whether or not such situations affect the returns of equity stocks issued by the firms. A total of 21 listed firms has either been placed under receivership, undertaken financial restructuring or delisted from NSE altogether since independence (CMA, 2019). Existing studies have not conclusively and exhaustively examined the relationship between financial distress and market value. Majority of the study have focused on determinants of financial distress (Ikpesu, 2019; Ndungu, 2019) as well as influence of financial distress on financial performance (Sporta, 2018; Wu, Shao & Zhang, 2020). Further, majority of these studies have focused on financial listed firms leaving a significant knowledge gap in regards to the effect of financial distress factors on market value of manufacturing firms listed at Nairobi Securities Exchange; Kenya.

Objectives of the Study

- i) To evaluate the effect of financial leverage on market value of manufacturing firms listed at Nairobi Securities Exchange; Kenya.
- ii) To examine the effect of liquidity level on market value of manufacturing firms listed at Nairobi Securities Exchange; Kenya.
- iii) To examine the effect of asset structure on market value of manufacturing firms listed at Nairobi Securities Exchange; Kenya.
- iv) To examine the effect of operational efficiency on market value of manufacturing firms listed at Nairobi Securities Exchange; Kenya.

II. Literature Review

Theoretical Framework

Trade-Off Theory

theory was advanced by Kraus and Litzenberger (1973). According to trade-off theory firms usually choose how much debt finance or equity finance to use by looking at advantages and disadvantages of both debt and equity. According to Kraus and Litzenberger (1973) trade-off theory is applied in a situation where the firm works towards striking a balance between taking advantage of tax shield on interest expense arising from debt financing and the actual cost of the debt. Companies will use debt but will be cautious of any risks that could come due to bankruptcy. At this point, the tax saving from other additional debts equals to costs that will arise from an increase in the likelihood of financial distress arising (Wang & Sheikh, 2011). So long as a company uses debt effectively, shareholders benefit from more debt than equity (Baker & Martin 2011). The theory is applicable since the quoted firms that carefully select equity and debt levels for as a measure of financial leverage. Trade-off theory actually supports the leverage to construct capital structure by assuming leverage-benefits. Optimal level of leverage is achieved by balancing the benefits from interest payments and costs of issuing debt. Trade-off theory hence predicts the cost and benefit analysis of debt financing to achieve optimal capital structure as firm specific financial factors, therefore, in explaining influence of financial leverage as financial distress factors on market value.

Shiftability Theory

Shiftability Theory was proposed by Dodds in 1982. The theory states that liquidity is maintained if it holds assets that can be shifted or sold to other investors for cash or lenders for cash. The arguments indicate that a firm’s liquidity can be enhanced if it has assets to sell or stands ready to purchase the asset offered for discount. This identifies and states that shiftability or transferability of assets is the basis for improving liquidity. Obilor (2013) adopted the theory to explain the impact of liquidity management on the profitability of banks in Nigeria. The theory was analyzed using short term funds, cash balances, bank balances treasury bills and profit after tax. Findings shows that liquidity management is a crucial problem in profitability hence recommended for optimal level of liquidity to maximize profitability. The theory has been adopted to explain influence of liquidity level as financial distress factor on market value of listed firms. The Shiftability approach allows firms to efficiently run with small amount of reserves or by making long term investments on assets. Firms can attempt to prevent liquidity crisis by always selling their securities at good prices as presumed by the Shiftability theory. That is, firm hold assets that are marketable and their convertibility will not be at a discount. The theory ensures firms are liquid by assisting in the Shiftability of assets (Koranteng, 2015).

Theory of Efficient market hypothesis (EMH)

According Fama (1973), there three efficiencies in a firm; operational efficiency, allocative and pricing efficiency. The basic idea underlying the EMH developed by Eugene Fama in 1970 is that asset prices promptly reflect all available information such that abnormal profits cannot be produced regardless of the investment strategies utilized. Fama (1973) distinguished between three forms of market/pricing efficiency based upon the level of information used by the market: weak form, semi-strong, and strong form market efficiency. The implications of the EMH are broad. From an investor’s perspective, participants in the stock market should not be able to generate an abnormal profit regardless of the level of information they may possess (Fama,1973). In the literature, the three forms of the EMH are usually used as guidelines rather than strict facts (Fama, 1998). Gill, Singh, Mathur, and Mand (2014) suggested that in order to survive, prosper and reduce the effects of financial distress; firms have to produce their output from input efficiently. Operational efficiency therefore, can be used as a proxy for competitive advantage, which affects the firm’s current profitability and its future potential performance. This theory reflects efficiency as a key factor in financial performance of an organization, making investment choices by using all the available information reflected in the security prices. Further EMH indicates that poor operational efficiency may be costly to the firm, as a result, lead to financial distress due to high cash outflows for operational costs and this means that all forms of efficiency; operational, pricing and allocation efficiency are necessary for firms in order to reduce the effects of financial distress.

Conceptual Review

A conceptual framework illustrates the researcher’s combination on how to explain a phenomenon and the expectations of results to be derived from a study. It shows how the researcher’s variables connect with each other. Conceptual framework is meant to assist the researcher on how to identify variables in a study as represented in figure 1.0 below.

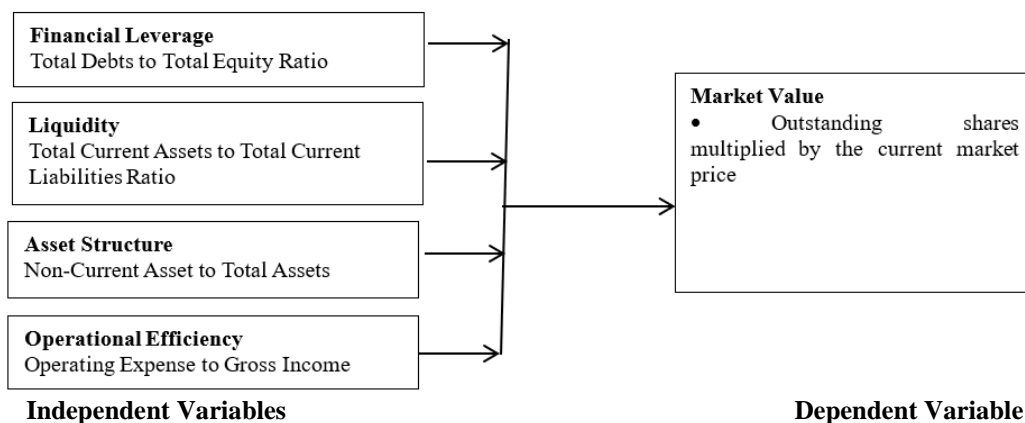


Figure 1.0: Conceptual Framework

Empirical Review

Financial leverage and Market value

Kumar, Bhatia and Chattopadhyay (2021) examined the relationship between the market value added and degree financial leverage, degree of operating leverage, and asset turnover ratio of the listed firms in India. Their study concludes that the degree of financial leverage and asset turnover ratio are significantly and negatively associated with the market value added of listed firms in India. We also reported an insignificant relationship

between market value added and degree of operating leverage. Our results indicate that promoters holding and firm sizes are important factors driving the performance of the firms listed in India. Zimny (2021) examined the impact of leverage on the market valuation of companies. The research showed positive correlation and regression coefficients between the debt ratio and the price to book value ratio for highly leveraged companies and negative ones for companies with a low level of debt. The results are surprisingly contrary to the expectations based on theoretical premises. Karimi (2020) investigated the effect of financial leverage on the stock price volatility trend in listed companies in Tehran Stock Exchange for the period 2011-2018 using systematic elimination method. The results of data analysis showed that financial leverage capital has significant effect on the trend of stock price volatility in listed companies in Tehran Stock Exchange.

Liquidity Level and Market value

Jihadi, Vilantika and Sholichah (2021) examine the effect of liquidity on firm value. The data analysis method in this study used was the Multiple Linear Regression Analysis with the SPSS 18 Program. The results show that the ratios of liquidity, activity, leverage, and profitability are significant to firm value in accordance with the initial hypothesis of the study. Putri and Rahyuda (2020) examined and analyzed the effect of liquidity and its value in capital structure. The results of this study indicate that liquidity, profitability, and firm size significantly influence capital structure. Capital structure is not a mediator of the influence of liquidity and profitability on firm value, while the capital structure is a mediator of the effect of firm size on firm value. Rosmayanti, Purnamasari and Tanuatmodjo (2018) purposed to prove the influence profitability, liquidity and market value to towards the stock return at mining companies listed on Indonesia Stock Exchange. F test results show that the regression model can be used to make conclusions that illustrate liquidity and market value to stock returns. The result of t test statistic shows that profitability and liquidity have no effect on stock return, while market value have positive effect to stock return. Contradicting results have been revealed by other studies. Example, Abubakar, Sulaiman and Haruna (2018) examined the Effect of Firms Characteristics and market value of Listed Insurance Companies in Nigeria. The results of the study revealed that liquidity and Age have significant negative impact on financial performance of insurance companies in Nigeria.

Asset Structure and Market value

An investigation of the determinants of market value in Turkey was carried out by Acaravci (2015). By adopting panel data research design a sample of 79 listed companies from 1993 to 2010 were considered. Results of the study revealed that there was significant relationship between growth opportunities, size, profitability, tangibility and leverage. Harc (2015) investigated the relationship between asset structure and financial distress among small and medium enterprises (SMEs) in Croatia. Results of the study revealed an inverse and significant relationship between short term debt and asset tangibility while long term debt had positive and significant relationship. Barus, Muturi and Kibati (2017) carried out a study to establish the effect of asset quality on the financial performance of savings and credit societies in Kenya. The findings of the study concluded that asset quality influenced the financial performance of savings and credit societies in Kenya. This was explained by the regression results that showed that the influence was positive and showed the magnitude by which asset quality influenced the financial performance of savings and credit societies. The univariate regression results showed that asset quality influenced the financial performance of savings and credit societies in Kenya.

Operational Efficiency and Market value

Klingenberg, Timberlake, Geurts and Brown (2013) examined the relationship between operational innovation and financial performance, the study also took a critical look at the appropriateness of the profitability ratios return on asset (ROA), Fixed-effect regression noted that no consistent relationship between ROA, ROE, BEP and inventory management ratios exists. Klingenberg, Timberlake, Geurts and Brown (2013) noted that, profitability of a firm is affected by at least two factors: results from its operations, and how these are financed (e.g. usage of cheap debt, which enhances profitability). The study further suggested that the impact of an individual operations strategy is difficult to isolate from other firm activities, such as its financial management. The study was based on manufacturing firms in developed countries and the findings did not link operational efficiency and financial distress factors to financial performance of the Kenyan banking industry. However, the researcher noted that operational efficiency is a factor of performance. Ongore and Kusa (2013) concluded that efficiency is one of the key internal factors that determine bank profitability. However, Ongore and Kusa (2013) argued that operational efficiency is one of the complex subjects to capture with financial ratios. Moreover, operational efficiency in managing the operating expenses is another dimension for management quality. The management has the capability to deploy its resources efficiently, income maximization; reducing operating costs can be measured by financial ratios.

III. Material and Methods

This study used a descriptive research design. Akonga (2014) defined descriptive research as one which involves collecting data so as a researcher can be able to study a given research topic. The population of interest in this study was manufacturing firms listed in NSE, whose number stood at 8 as at 30th Dec, 2021. 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, 2017-2021 to ensure a trend can be established across time and reasonable conclusions can be drawn from the analysis. Data analysis is a body of methods that help to describe facts, detect patterns, develop explanations, and test hypotheses. Descriptive statistics such as mean, median, mode and standard deviation was used to help in data analysis. Tables and other graphical presentations as appropriate were used to present the data collected for ease of understanding and analysis. Multiple regression analysis was used to establish the relationship between the variables of study. In this study, the use of multiple regression analysis was used to examine the effect of financial distress on market value of manufacturing companies listed in Nairobi Securities Exchange. This was done with aid of STATA version 15.00. The regression model was as follows.

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

Where: Y = Market value

α = is the constant which denotes the intercept

$\beta_1, \beta_2, \beta_3, \beta_4$, =are regression coefficients to be estimated of each explanatory Variable are

X_1 = Financial Leverage X_2 = Liquidity Level

X_3 = Asset structure X_4 = Operational Efficiency

ϵ = error term i=is the listed manufacturing firm

t=time in year

IV. Result and Discussion

Descriptive Analysis

Table 1 below is a representation of descriptive statistics and distribution of variables as considered for this study: liquidity level, financial leverage, operational efficiency and asset structure on market value. The descriptive statistics considered were mean, maximum, minimum and standard deviation. The results are shown in Table 1.

Table 1: Descriptive Statistics

Stats	Liquidity	Financial Leverage	Operational Efficiency	Asset structure	Market value
N	40	40	40	40	40
Min	0.001508	-33.1651	-6.9308	0.013129	133,000,000
Maximum	3.115085	6.586766	36.06839	0.439574	49,100,000,000
Mean	1.187734	-0.43042	-0.74889	0.210329	6,290,000,000
Std Dev.	0.701483	1.43428	2.0914	0.161978	9,640,000,000

This study considered eight manufacturing firms listed at NSE, whose variables were studied over 5 years (2017–2021), making a total of 40 observations. The summary of their characteristics is as presented in Table 1. Observing overall statistics as obtained from panel data from 2017 to 2021, market value (proxied outstanding shares multiplied by share price) ranged from 133,000,000 to 49,100,000,000 with a mean of 6,290,000,000. The distribution had a standard deviation of 9,640,000,000. Operational efficiency was measured using the ratio of operating expense to gross income. During study period, 2017-2021, operational efficiency ranged from -96.8308 to 36.068 with a mean of -0.74889 and standard deviation of 2.0914. Liquidity was measured using total current asset to total current liabilities. Between 2017 and 2021, liquidity level ranged from 0.001508 to 3.115085 with a mean of 1.187734 and a standard deviation of 0.701483. In regards to financial leverage, it was measured using total debts to total equity. It ranged from -33.1651 to 6.586766 with a mean of -0.43042 and standard deviation of 1.43428. Lastly, asset structure was measured using the ratio of non-core asset to total assets. It ranged from 0.013129 to 0.439574 with a mean of 0.210329 and standard deviation of 0.161978.

Inferential Analysis

Correlation Analysis

The study conducted Pearson moment correlation analysis. Using the correlation coefficient, the study tested whether interdependency existed between the predictor variables and whether there was any relationship between response variable and predictor variables. The pertinent results are summarized in Table 2.

Table 2: Pearson Correlation Analysis

		Market value	Liquidity	Financial Leverage	Operational Efficiency
Market value	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	40			
Liquidity	Pearson Correlation	0.5496**	1		
	Sig. (2-tailed)	0.0001			
	N	40	40		
Financial Leverage	Pearson Correlation	-0.4731**	-0.423**	1	
	Sig. (2-tailed)	0.001	0.0038		
	N	40	40	40	
Operational Efficiency	Pearson Correlation	0.5646**	0.569**	-0.3303*	1
	Sig. (2-tailed)	0.0001	0.000	0.0267	
	N	40	40	40	40
Asset structure	Pearson Correlation	0.663**	0.7054**	-0.5461**	0.6741**
	Sig. (2-tailed)	0.000	0.000	0.0001	0.000
	N	40	40	40	40

Table 2 presents the findings of Pearson correlation between financial distress and market value. As indicated in Table 4.8, there is significant positive relationship between asset structure and market value as indicated by 0.663, $p=0.000$. This implies that increase in asset structure would result to increase in market value of manufacturing firms listed at NSE. The results are supported by Reschiwati, Syahdina and Handayani (2020) investigate the impact of asset structure, bank and macroeconomic factors on the market value of the Middle Eastern banks. The result of indicated that market value has positive relationship with asset structure. However, the results are not supported by Al-Nimer and Alslihat (2016) examined the effect of asset structure ration on market value in the Jordanian insurance companies listed in Amman stock exchange (ASE). The study revealed that asset structure does not affect the market value for the companies operating in the insurance sector listed in ASE.

Similarly, a correlation coefficient of 0.5646**, $P=0.000$ implied that there is significant positive relationship between operational efficiency and market value. Therefore, increase in operational efficiency would result to increase in market value of manufacturing firms listed at NSE. The results are supported by Sporta (2018) examined the effect of financial distress factors on performance of commercial banks in Kenya. The study revealed a significant relationship between liquidity, leverage, operational efficiency, asset quality and capital adequacy as financial distress factors on financial performance with operational efficiency being the most significant determinant of financial distress on financial performance of commercial banks in Kenya. However, Klingenberg, Timberlake, Geurts and Brown (2013) examined the relationship between operational efficiency and market value. Fixed-effect regression noted that no consistent relationship between market value and operational efficient ratios exists.

From the correlation Table 2, financial leverage is negatively correlated to market value of DTS the coefficient is -0.4731 (p value < 0.05) this is significant at 95% confidence level. Thus, increase in financial leverage would make market value to decrease. This result concurs with (Okello, 2015; Zeitun & Saleh, 2015) who linked leverage as a risk factor on performance of listed companies in NSE. Their study concluded that leverage was the strongest determinant of the financial risk of the listed companies and could easily influence financial distress in listed companies in Kenya since more debt financing implies higher possibilities of default hence higher risk. Tan (2012) found out that firms with low financial leverage perform better than firms with high financial leverage. The current study also was in agreement with Kosikoh (2014) who found out that there exists a positive relationship between leverage and financial distress and financial performance on insurance companies in Kenya. However, the study only emphasized on the relationship between leverage and financial distress for insurance companies in Kenya.

The correlation coefficient for liquidity level was 0.5496, $P=0.0001$, suggesting that there is significant positive relationship between liquidity level and market value. Increase in liquidity level would result to increase in market value. These findings concur with early studies of Kibuchi (2015) and Cheluget et al., (2014). Kibuchi (2015)'s study was on the relationship of liquidity risk on financial performance of banks. It was established that there is a positive relationship between liquidity risk and financial performance as measured by ROE on commercial banks in Kenya while Cheluget et al., (2014) confirmed that low liquidity had significant influence on financial distress and led to failure of insurance companies in Kenya. Ongore and Kusa (2013) contradicts this

finding as liquidity was found to have no significant effect on performance of commercial banks in Kenya and concluded that performance was not as such about keeping high liquid.

Multiple Linear Regression Analysis

Fixed effect model was estimated between financial distress factors (asset structure, operational efficiency, financial leverage and liquidity level) and market value. Panel regression was conducted to determine whether there was a significant effect of financial distress on market value. Table 3 presents the regression model on financial distress with market value.

Table 3: Model Summary Fixed Effect

Fixed-effects (within) regression	Number of obs =	40
Group variable: Firms	Number of groups =	8
R-sq:	Obs per group:	
within = 0.8971	min =	5
between = 0.6934	avg =	5
overall = 0.4341	max =	5
corr(u_i, Xb) = -0.9303(assumed)	F(4,27)=	69.77
	Prob > F=	0.000

The analysis shows that the panels were strongly balanced for this multivariate analysis as shown by the number of observations per group. They 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 the determinants accounted for 43.41% (Overall R square=.4341) of the variation in market value of manufacturing firms listed at NSE. The F-statistic to the model shows is F(4,32)= 69.77 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 distress have an influence on market value of manufacturing firms listed at NSE. This influence is significant (P=0.0000). The results are supported by Mwaniki (2022) who established that there was an increasing trend in the number of companies in financial distress as measured by the Altman Z-score, Zmijewski, and Springate Models. In addition, the study established that financial distress is much more than having liabilities exceed the assets of a company. Further, the study established a significant relationship between financial distress and market value as measured by Springate and Zmijewski Model and an insignificant relationship as measured by the Altman Z-score model.

Regression coefficients are estimates of the unknown population parameters and describe the relationship between a predictor variable and the response. In linear regression, coefficients are the values that multiply the predictor values. P-values and coefficients in regression analysis work together to tell which relationships in the model are statistically significant and the nature of those relationships. The coefficients describe the mathematical relationship between each independent variable (investment decision) and the dependent variable (Financial performance). The p-values for the coefficients indicate whether these relationships are statistically significant. The results are presented in Table 4.

Table 4: Regression Coefficient

Market Value	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
Financial Leverage	-0.145679	0.057	-2.55	0.019	-0.195980	-0.0953774
Liquidity level	6.918292	0.976	7.09	0.000	4.930246	8.906338
Asset structure	0.392042	0.050	7.79	0.000	0.2894768	0.494609
Operational efficiency	0.00208	0.002	0.83	0.413	-0.00303	0.007195
_cons	-2.26575	0.690	-3.28	0.001	-3.61859	-0.91292

The study regression model as obtained from table above is as shown below.

$$Y = -2.26575 + 6.918292X_1 - 0.145679X_2 + 0.00208X_3 + 0.392042X_4$$

Where Y is the market value,

X₁ is Financial Leverage

X₂ is Liquidity level

X₃ is Asset structure

X₄ is Operational efficiency

H₀₁: Financial leverage has no significant effect on market value of manufacturing firms listed at Nairobi Securities Exchange; Kenya.

From the findings, financial leverage had a regression co-efficient (β_1) of 0.145679, $p=0.019$ implying that when operational efficiency, liquidity level and asset structure are controlled, a unit increase in financial leverage across time and among manufacturing firms listed at NSE would result in a significant decrease of 0.145679 units in market value. The current study concurs with Demirhan (2014) whose findings indicated that leverage as a financial distress factor has a positive relationship with financial performance. Demirhan (2014) found that high leverage was inversely correlated with firm financial performance during financial crisis period and managing a reasonable amount of debt in the capital structure should be another consideration for finance managers. In addition, the results of the current study were in agreement with the pecking order theory by Stewart and Nicholas (1984). The theory asserts that use of leverage is less costly than any other source of external finance and as a result, leverage as a financial distress factor will positively affect financial performance. However, Nyamboga et al (2014) based on non-financial firms listed in NSE, disagreed that leverage does not have significant influence on corporate financial distress and financial performance. The findings also contradicted those of Hussain and Fayyaz (2015); Innocent and Nnagbogu (2014) whose studies that were based on commercial banks in Pakistan and Nigeria respectively found that financial leverage has a significant negative relationship with firm's performance as measured by ROA. The current study also disagreed with Chinedu and Nnagbogu (2014) who in their study of the effect of financial leverage on financial performance of companies in Nigeria found out that financial leverage has no significant effect on financial performance of the sampled companies in Nigeria.

H₀₂: Liquidity level has no significant effect on market value of manufacturing firms listed at Nairobi Securities Exchange; Kenya.

The results revealed that liquidity level had a regression co-efficient (β_2) of 6.918292, $p=0.000$ implying that when financial leverage, asset structure and operational efficiency are controlled, a unit increase in liquidity across time and among manufacturing firms listed at NSE would result in significant increase of 6.918292 units in market value. The results are supported by Jihadi, Vilantika and Sholichah (2021) showed that the ratios of liquidity, activity, leverage, and asset structure are significant to market value in accordance with the initial hypothesis of the study. Putri and Rahyuda (2020) examined and analyzed the effect of liquidity, asset structure, the size of the firm and its value in market value. The results of this study indicate that liquidity significantly influence market value. However, some studies have indicated that liquidity has insignificant effect on performance. Vaita (2017) sought examine the effect of liquidity on the firm value of tier one listed commercial banks in Kenya. The study concluded that liquidity management is not a contributor alone of the firm's market value and there exist other variable that will influence market value.

H₀₃: Asset structure has no significant effect on market value of manufacturing firms listed at Nairobi Securities Exchange; Kenya.

From the findings, asset structure had a regression co-efficient (β_3) of 0.392042, $p=0.000$ implying that when liquidity level, operational efficiency and financial leverage are controlled, a unit increase in asset structure across time and among manufacturing firms listed at NSE would result in a significant increase of 0.392042 units in market value. The current study agrees with Barus, Muturi and Kibati (2017) and Ogilo (2012) who concluded that asset quality influenced the financial performance of savings and credit societies in Kenya. Ogilo (2012) carried out a study using asset quality as an indicator of credit risk on financial performance. Wang'ombe, Muturi, and Ngugi (2016) and Kimanzi (2015)'s studies also found out that asset quality have a weak relationship with financial intermediation of SACCOs and financial performance of commercial banks respectively. Wang'ombe, Muturi, and Ngugi (2016) also found that a decline in asset quality is associated with decline in efficiency of deposit taking SACCOs. While Kimanzi (2015) found out a negative relationship between asset quality and financial performance of commercial banks in Kenya.

This result contradicted with Umoru and Osemwegie (2016) whose results on the effect of asset quality on financial performance of Nigerian banks found a significant adverse effect and noted that banks had been confronted with a crisis of non-performing loans. The findings of the current study also differed with that of Olweny and Mamba (2011) whose findings indicated that there is a negative and strong relationship between poor asset quality and profitability on commercial banks. The findings of Akhtar and Hayati (2016) revealed that asset quality of Islamic banking system does not significantly impact financial distress and later insolvency, whereas, interaction with capital asset ratio significantly impact asset quality. Similarly, the findings were in contrast with findings by Nasieku (2014) in a study on commercial banks in Kenya and Gebreslassie (2015) whose study found that nonperforming loan ratio has statistically significant negative influence on the financial health of the banks.

H₀₄: Operational efficiency has no significant effect on market value of manufacturing firms listed at Nairobi Securities Exchange; Kenya.

The study established that operational efficiency had a regression co-efficient (β_4) of 0.00208, $p=0.414$ implying that when liquidity level, financial leverage and asset structure are controlled, a unit increase in operational efficiency across time and among manufacturing firms listed at NSE would result to insignificant increase of 0.00208 units in market value. The findings of the current study do not agree with findings of Chortareas, Girardone and Ventouri (2012) based on a sample of EU commercial banks which found that high operating efficiency reduces the effect of financial distress. Klingenberg, Timberlake, Geurts and Brown (2013) based on manufacturing firms in developed countries, found out that there was a positive relationship of operational efficiency and financial performance but there was no link of operational efficiency and financial distress as a factor of financial performance of Kenyan banking industry. Ongore and Kusa (2013) also found out that efficiency is a key internal factor that determines bank asset structure but negatively associated with asset structure.

V. Conclusion and Recommendation

In line with the first objective, the study concluded that financial leverage has significant negative effect on market value of manufacturing firms listed at NSE. An increase in debt over equity would result to significant decrease in market value of manufacturing firms listed at NSE. The higher the debt owned by the company, the higher the potential for financial difficulties experienced by the company. because it allows the company to be unable to pay its debts in the future which will result in bankruptcy. Liquidity level has significant positive influence on market value of manufacturing firms listed at NSE. An increase in liquidity level would result to significant increase in market value of manufacturing firms listed at NSE. The higher the liquidity value indicates that the lower the potential for financial difficulties experienced by the company because it shows that the company is able to fund and pay off its short-term obligations so that it can avoid financial distress. Asset structure has significant positive effect on market value of manufacturing firms listed at NSE as indicated by multiple linear regressions. An increase in asset structure would result to significant increase in market value of manufacturing firms listed at NSE. The higher the level of asset structure the company has, the lower the potential for financial difficulties experienced by the company because it shows the company is able to generate profits by using its assets so that it avoids financial difficulties. From the multiple regression results, the study concluded that operational efficiency has insignificant positive effect on market value of manufacturing firms listed at NSE. An increase in operational efficiency would result to insignificant increase in market value of manufacturing firms listed at NSE. The insignificant effect was as a result of significant deviation among the firms, with some firms exhibiting better positive operational efficiency while other negative operational efficiency.

The amount of debt finance in the financial mix of the firm should be at the optimal level to ensure adequate utilization of the firms' assets and reduce the effect of financial distress on market value. Therefore, managers should employ financial leverage in a way that enhances value for their company's owners that will lead to an increase in market value of listed firms, other than being a financial distress factor affecting the market value negatively. The study recommended that managers of listed firms should ensure that they invest excess liquid in productive assets. This ensures that they do not hold excess cash at the expense of fixed assets that can improve their market value. Further, listed firms should have a supervisory framework to enable them make assessments of their liquidity management and adequacy of their liquidity, in both normal times and periods of stress. The study also recommended that there is need for firms to increase their asset structure so as to achieve superior market value over time. This can be achieved by increasing the rate of return of assets. In this case, management of listed firms are recommended to utilize their assets in a profitable manner so as to increase return on asset and return on equity. A policy on efficient management should be put in place for listed firms' operational expenses. This should be done by finding ways to obtain the optimal utilization of resources during production of products and services. In other word, policy instruments should be able to reduce operational expenses through cost decisions. From a regulatory perspective, firm market value should be based on individual firms' efficiency. Consequently, both firm management and the regulatory authority should exercise strong monitoring and control of assets.

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