

# Leverage as Financial Antecedent to Financial Distress among Listed Companies at Nairobi Securities Exchange

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## **Abstract**

The purpose of the research was to determine influence of leverage as financial antecedent of financial distress among listed companies at Nairobi Securities Exchange, Kenya. Capital Markets Authority (CMA) has regulatory responsibility to keep watch on the performance of listed companies in the securities exchange and to attract more listings. The crisis in the listed companies where more than 16 companies listed in the Nairobi Securities Exchange are undergoing financial challenges in the last 5 years is a worrying trend as it impacts negatively in the growth of the economy. This crisis points to the missing link between surveillance by regulator and management of listed firms. Specifically, the study examined leverage as a possible financial antecedent of financial distress in listed companies at Nairobi Securities Exchange, Kenya. The study used descriptive research design. All the 65 listed companies as at 31st December 2011 at Nairobi Securities Exchange were used. Secondary data was collected using designed schedules. Data was analyzed using Statistical Package for Social Sciences (SPSS) as tool of data analysis. A logistic regression model was determined to establish the relationship between the dependent variable and the independent variables. Pearson's correlation and regression analysis were used for the analysis. The study established significant relationship between leverage and financial distress, upon evaluation, relationship had an R2 = .799, which meant leverage explained 79.9% of the variance in financial distress. The relationship model provides a high fit, which indicates that leverage was one of the potential predictors of financial distress in listed companies at Nairobi Securities Exchange, Kenya. It therefore recommends the development of guidelines on the level of leverage to be held by the listed companies for

Key words: Leverage, financial distress, financial antecedent, listed companies, Nairobi Securities Exchange.

## 1. Introduction

Since independence, Kenya has witnessed numerous cases of financial distress among listed companies. This has been evidenced by some companies undertaking financial restructuring and others being placed under receivership and subsequently delisted. This situation is worrying and does erode confidence in the capital market. An analysis on the Nairobi Securities Exchange reveals that atleast16 listed companies have undergone financial challenges between 2011-2015 (ROK, 2016). Further, more than 56 % of the companies listed in NSE had declining trend on their market capitalization for the years2011,2012, 2013, 2014 and 2015 (CMA, 2016). There is an increasing trend of failure of Kenyan firms such as Uchumi Supermarkets, Mumias Sugar and A-Baumann (Maina&Sakwa, 2012; Kiarie, 2009).

The empirical literature reviewed reveals conflicting findings on the predictors of financial distress. According to Altman (1968), liquidity ratios were not significant whereas efficiency and profitability ratios were the most significant in prediction of financial distress. Study done by Nyamboga (2014), on Determinants of Corporate Financial Distress: case of Non-financial Firms Listed in the NSE, Kenya concluded that profitability was most influential determinant of corporate financial distress while liquidity and leverage found with no significant effect. Nyamboga (2014), study conflicted with those of Tesfamariam (2014); Pranowo et al (2010 and Kiragu (1993), who concluded that leverage and liquidity had the most significant effect on financial distress. Pranowo et al (2010), found profitability to have no significant impact on the corporate financial distress. Tesfamariam (2014), study on Determinants of Financial Distress in the Case of Manufacturing Share Companies in Addis



Ababa, Ethiopia revealed that efficiency and profitability had insignificant effect in determining financial distress. Alifiah (2013) supports use of leverage, profitability, efficiency and leverage ratios in prediction of financial distress. Cheluiget (2014) study on determinants of financial distress in insurance companies in Kenya concluded that profitability, liquidity, efficiency and leverage had positive effect on financial distress which was inconsistent with Tesfamariam (2014); Pranowo 2010 and Kiragu (1993), in the power ranking. Studies by Muigai (2014); Mwangi, Muathe and Kosimbei (2014); Memba (2013) and Nyanumba (2013) concentrated on capital structure as determinant of financial distress. Based on literature reviewed, there is a lot of conflicting theoretical and contextual literature on determinants of financial distress.

Earlier researches done in Kenya are conflicting on findings, study variables, theoretical and methodological approaches (Kihooto, 2016; Muigai, 2016; Cheluget, 2014; Ntoiti, 2013 & Memba, 2013). This conflicting empirical result informs further research focusing on examining the ability of financial antecedents to signal business failure, particularly in the Kenya context on which this study is based.

This study sought to evaluate influence of leverage on financial distress for companies listed in Nairobi Securities Exchange, Kenya. Specifically, the following hypothesis was tested.

H01: Leverage has no significant influence on financial distress for companies listed in Nairobi Securities Exchange, Kenya.

The paper is organized as follows: the next section presents a literature review. Section 3 discusses the methodology. The empirical analysis and results are presented in section 4. Section 5 concludes the study and provides recommendation for future studies.

## 2. Literature Review

The choice of this variable was informed by credit risk theory, agency theory and liquid asset theory. Once again, the theoretical underpinning for leverage as a predictor of financial distress lies in the fact that leverage limits the ability of the firm to withstand negative shocks to cash flow. In his study, Altman (1968) used the ratio of total liabilities to total assets to control for the impact of leverage on distress. According to this scholar, an increased leverage ratio is an indication of how heavily the firm is indebted. The reason for risk is the prevalence of fixed cost. Leverage is the use of debt financing, and the leverage ratios are measures of the relative contribution of stockholders and creditors, and of the firm's ability to pay financing charges (Lico, 2000). In general the higher the firms leverage, the lower the firm's ability to cover its debt services and this will lead to financial distress.

Leverage effects on financial distress has two sides of the process of financial strain influence, either operating side which causes operating risk or financial side which causes financial risk (Shim and Siegel (1998). Furthermore, high leverage may facilitate financial distress on firms through inability to pay its debt and increasing insolvency and promoting bankruptcy. High leverage contributes to firm's financial distress by facilitating inability to meet the current obligation and deterioration of cash flow. Ogawa (2003) argues that corporate debt can affect investment by creating debt overhang. Firm's leverage is a main factor that negatively impacts the level of financial distress (Andrade and Kaplan 1998). Leverage increases the degree of firm's financial distress (Outecheva, 2007).

Financial distress is seen as an intermediate state between solvency and insolvency. A firm is distressed when it misses interest payments or violates debt covenants (Purnanadam, 2008). The firm can capitalize on advantages from increasing its leverage through tax benefits. However, as firm's leverage above a certain point, the firm's degree of financial distress increase and costs associated with leverage overshadow benefits (Opler & Titman, 1994). Furthermore, the increase in leverage resulting from increase in total debt to total asset ratio increases the firm's insolvency, thus decreasing debt service charge. In addition to these effects, high total debt to total asset ratio also provide a firm with high probability of financial distress, which is often confirms in each stages of financial distress will happen. Thus, for a variety of reasons, leverage leads firms to financial distress. The reverse causation from financial distress to leverage is also intuitively straightforward. Debt service charge increment improves a firm's leverage and hence financial distress probability would be minimal (Tesfamariam 2014); Cheluget (2014) in his study observed that leverage is a good predictor of financial distress in insurance companies in Kenya.

The reviewed literature shows that there exists conflicting empirical evidence that a relationship between leverage and financial distress exists. Much of the studies have so far concentrated on developed economies. The study sought to determine influence of leverage as financial antecedent of financial distress among listed companies at Nairobi Securities Exchange, Kenya.



## 3. Methodology

This study adopted a descriptive research design where the researcher collected data to test the descriptive effect of the independent variables on the dependent variable (Kothari, 2011). The descriptive research design was adopted because it provides an accurate and valid representation of the variables that are relevant to the research question and it is more structured (Babbie, 2007). It also offers a unique form of data collection which enhances the quality of data collected. It covers a broad scope and clearly defines any opinion held (Tesfamariam (2014).

A research design refers to the process that the investigator will follow from the inception to completion of the study (Cooper & Schindler, 2011; Kothari, 2011). A research design is the determination and statement of the general research approach or strategy adopted/or the particular project; it is the heart of planning. If the design adheres to the research objective, it will ensure that the client's needs will be served. Data on the variables of financial antecedents examined here is leverage.

## 3.1 Data Collection Methods

This study used panel data which consisted of time series and cross sectional. This enhanced quality of data at all levels. According to Kothari (2011), when deciding on data collection procedure, one needs to safeguard against bias and unreliability of the procedure used. This study used secondary data from NSE publications and published financial statements.

Brigham and Ehrhardt (2005), stated that the four basic financial statements are the balance sheet, the income statement, the statement of retained earnings and the statement of cashflow. Financial statements provide essential information about the operating performance and/or financial position of a company (Brigham & Ehrhardt 2005; Laitinen, (2009; Stickney, Brown & Wahlen 2007). According to Tuvadaratragool (2013), the financial statement provides more valuable data in prediction of financial distress in businesses.

#### 3.2 Data Analysis and Presentation

The data collected was analyzed using Logistic Regression Analysis method. Logistic Regression Analysis was used as the analysis procedure because it will give a clear relationship and effect of the various variables to be used. It could also provide us with the sign of the independent variables (Alifiah, 2013). Before the actual analysis was done, data cleaning was performed. Statistical Package for Social Sciences (SPSS) was used to facilitate analysis as it has in-build formulae.

The researcher modeled financial distress using a logistic model, as in Shumway (2001). The logistic model used was:  $P = 1 - \epsilon (1/(\beta_0 + \beta_1 LV + e))$ 

Where;

 $\beta_0$ = Constant

LV= Leverage (Debt to equity, Debt to capital, Interest coverage)

e=error term

Leverage was used as independent variable for logistic regression analyses. The dependent variable is binary, that is whether the company experienced distress or not (distressed = 1, non-distressed = 0). The forward regression analysis was conducted to pick the most influential ratios to apply in the model. The study tested the research hypotheses.

The selected sub-variable was regressed to establish its effect on financial antecedents and financial distress (Cohen and Cohen, 1983)). Assuming that 1 indicates financial distress, the greater the resulting decimal fraction is above 0.5 (which implies an equal chance of a company being financially distressed or non-financially distressed), the higher chance there is of the subject company being financially distressed. It should be stated that the positive coefficients of ratios in the developed logistic model indicate that these ratios are negatively correlated with the probability of financial distress (they decrease the risk of financial distress), while the ratios with negative coefficients have a positive effect on the probability of financial distress (they increase the risk of financial distress).

Logistic Analysis (the stepwise procedure) was used in this study to determine influence of leverage as a financial antecedent of financial distress among listed companies at Nairobi Securities Exchange, Kenya. The logistic model has two distinct advantages: first, the logistic model does not rely on the assumption of normality for the sample data; second, the logistic model does not require an equal dispersion matrix.



# 3.3 Influence of Leverage on Financial Distress among Listed Companies at Nairobi Securities Exchange, Kenya

The study sought to determine influence of leverage on financial distress among listed companies at Nairobi Securities Exchange, Kenya. According to Khalid (2012), leverage is the proportion of current and long term liabilities to total equity. Leverage reflects the levels of current and long term liabilities and how they are serviced by the firm and consists of debt to equity, debt to capital and debt to asset ratios. The firms leverage ratio show how heavily the firm is in debt. Ogawa (2003) found out that corporate debt can affect investment by creating debt overhang which is the deterrence of new investment due to the presence of debt outstanding. Andrade and Kaplan (1998); Gupta, Srivastava, & Sharma (2014) and Chen (2004) have provided evidence that use of debt financing increases corporate financial distress. However, the findings of these studies are at variance with the findings of studies carried out by Shehla Akhtar, Javed, Maryam & Sadia (2012), Ogbulu, Emeni (2012) and Ogundipe, Idowu, and Ogundipe (2012) that found use of leverage to mitigate corporate financial distress. On the other hand, it also does not concur with study taken by Ebaid (2009) which concluded that the way firms are financed does not affect the failure process. This study finding supports the findings of studies of Muigai (2016); Cheluiget (2014); Khalid (2012); Lee (2010); Outecheva (2007); and Ogawa (2003).

**Table 1: Descriptive statistics: Leverage on Financial Distress** 

| Statistics     |         |        |  |  |
|----------------|---------|--------|--|--|
| Profitability  |         |        |  |  |
| N              | Valid   | 65     |  |  |
| 11             | Missing | 0      |  |  |
| Mean           |         | .0763  |  |  |
| Median         |         | .0500  |  |  |
| Std. Deviation |         | .08202 |  |  |
| Range          |         | .39    |  |  |
| Minimum        |         | .00    |  |  |
| Maximum        |         | .39    |  |  |

Descriptive statistics on leverage according to the data showed a, mean of 0.0763, median of 0.05, standard deviation of 0.08202 and a min and max of 0.00 and 0.39 respectively.

Inferential Statistics: The coefficient of determination Cox & Snell R Square= .595 and Nagelkerke R Square= .799 at 0.05 significant level. The model  $P=1-\epsilon (1/(\beta_0+\beta_2 LV))$  explained that 79.9 % of the variation on financial distress.

Considering the R square value of 79.9% the study showed a good model fit that can be used to explain financial distress of a company implying that leverage on its own has a greater influence on any financial distress.

Table 2: Model Summary: Coefficient of Determination of Leverage on Financial Distress

| Step | -2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square |      |
|------|-------------------|----------------------|---------------------|------|
| 1    | $30.093^{a}$      | .595                 |                     | .799 |
|      |                   | 7.1                  | 1 11 1 1 001        |      |

a. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

From the findings the model table 3 below, correctly classified 96.9% of overall cases or also known as the percentage accuracy in classification which is higher than the 50% when the analysis was conducted without any of the independent variables that are used in the model.



Table 3: Classification Table: Classification of Leverage on Prediction Financial Distress

|        | Observed        |      | Predicted |      |                    |
|--------|-----------------|------|-----------|------|--------------------|
|        |                 |      | Distres   | ss_1 | Percentage Correct |
|        |                 |      | .00       | 1.00 |                    |
|        | Distress_1      | .00  | 36        | 1    | 97.3               |
| Step 1 | Distress_1      | 1.00 | 1         | 27   | 96.4               |
|        | Overall Percent | tage |           |      | 96.9               |

a. The cut value is .500

As shown in the table 4, Leverage made a statistically significant contribution to the model. This is based on the Wald test that is a test that shows the contribution or importance of each of the predictor or independent variables. Variables that contribute significantly to the models should have significance value of less than 0.05 (Pallant, 2007).

The relationship between leverage and distress is significantly negative as shown by a negative coefficient of -15.115 and p-value of 0, model  $P = 1 - \epsilon (1/(\beta_0 + \beta_1 LV + e))$ .

The study therefore found a unit increase in leverage will lead to 15.115 increases in log-odds of financial distress. This study found out that increase in leverage increases the probability of financial distress; the outcome is supported by the studies of Muigai, 2016; Cheluiget, 2014; Khalid, 2012; Lee, 2010; Outecheva, 2007; and Ogawa, 2003.

Table 4: Variables in the Equation: Influence of Leverage on Financial Distress

|                     |          | В     | S.E.     | Wald   | df | Sig. | Exp(B)   |
|---------------------|----------|-------|----------|--------|----|------|----------|
| Ctan 1a             | Leverage | -15.1 | 15 4.058 | 13.873 | 1  | .000 | .000     |
| Step 1 <sup>a</sup> | Constant | 7.13  | 84 2.028 | 12.545 | 1  | .000 | 1318.082 |

# 3.4 Coefficient for Influence of Leverage on Financial Distress

The coefficient of determination Cox & Snell R Square= .518 and Nagelkerke R Square = .790 at 0.05 significant level. The model  $P = 1 - \epsilon (1/(\beta_0 + \beta_1 DR + \beta_2 DC + \beta_3 IC + e)$  explained that 79.0 % of the variation on financial distress.

Considering the R square value of 79% the study showed 21% of other factors that contributes to financial distress of a company.

Table 5: Model Summary: Coefficient for Influence of Leverage on Financial Distress

| Step | -2 Log likelihood   | Cox & Snell R Square | Nagelkerke R Square |
|------|---------------------|----------------------|---------------------|
| 1    | 27.948 <sup>a</sup> | .518                 | .790                |

a. Estimation terminated at iteration number 8 because parameter estimates changed by less than .001.

From the findings the model table 6 below correctly classified 60% of overall cases or also known as the percentage accuracy in classification which is higher than the 50% when the analysis was conducted without any of the independent variables that are used in the model.



Table 6: Classification Table: Coefficient of Leverage on Financial Distress

|        | Observed        |      |          | Predicted |                    |  |  |  |
|--------|-----------------|------|----------|-----------|--------------------|--|--|--|
|        |                 |      | Distress | _1        | Percentage Correct |  |  |  |
|        |                 |      | .00      | 1.00      |                    |  |  |  |
|        | Distress_1      | .00  | 38       | 4         | 90.5               |  |  |  |
| Step 1 | Distress_1      | 1.00 | 13       | 15        | 53.6               |  |  |  |
|        | Overall Percent | age  |          |           | 60.0               |  |  |  |

a. The cut value is .500

As shown in the table 7 below, independent variables made a statistically significant contribution to the model. This is based on the Wald test that is a test that shows the contribution or importance of each of the predictor or independent variables. Variables that contribute significantly to the models should have significance value of less than 0.05 (Pallant, 2007).

Table 7 Coefficient for Influence of Leverage on Financial Distress

|                     |                   | В      | S.E.  | Wald  | df | Sig. | Exp(B) |
|---------------------|-------------------|--------|-------|-------|----|------|--------|
|                     | Daht to aquity    |        |       | 1.340 | 1  | .001 |        |
| Step 1 <sup>a</sup> | Debt to equity    | -1.188 | 2.376 |       |    |      | 0.305  |
|                     | Debt to capital   | -0.702 | 1.404 | 2.04  | 1  | .002 | 0.496  |
|                     | Interest coverage | -0.294 | 0.588 | 2.018 | 1  | .023 | 0.745  |
|                     | Constant          | 0.522  | 1.044 | 1.169 | 1  | .011 | 0.593  |

a. Variable(s) entered on step 1: Debt to equity, Debt to capital, Interest coverage

Given model  $P = 1 - \epsilon (1/(\beta_0 + \beta_2 LV))$  from the table 7 a logit regression function Y=.522+1.188\*DE+0.702\*DC+0.294\*IC can be developed. According to the regression equation established, taking all factors (Debt to equity, Debt to capital, Interest coverage.) constant at zero, log-odds of financial distress will be 0.522.From the findings, Debt to Equity contributes most to financial distress as shown by a beta coefficient of -1.188 at 0.001 significance level which is consistent with study by Cheluiget (2014); Pranowo et al (2010) and Outecheva (2007).

# 4. Results and Discussion

# 4.1 Descriptive analysis of leverage and financial distress

The study examined leverage ratios tabulated from financial statements of the listed companies to determine influence of leverage as a financial antecedent of financial distress among listed companies at Nairobi Securities Exchange, Kenya. Table 1 shows score results for the research questions under leverage as a financial antecedent of financial distress in listed companies at Nairobi Securities Exchange, Kenya. The standard deviation values are low, confirming no major deviations exist in the data set. From table 1 results, low leverage was a possible determinant of financial distress with (mean value = 0.0763), and improving Leverage enhances performance in listed companies had a median value of 0.0500. A study by Moyer and Chatfield, (1983), where leverage was measured by current ratio, they recommended that companies should maintain an appropriate level of leverage to cover interest payments and other obligations when they are due. They further observed that more liquid firms have a cushion against risk, thus we expect a positive relationship between low leverage and risk of financial distress. Other earlier studies supporting the same were Beaver, Kettler and Scholes (1970).

Earlier on, Boissay (2007) looked at low operational cashflow and financial distress and found negative cashflows enhanced financial distress. They further analysed the financial contagion phenomenon when a company defaults on its trade credit resulting in low operational cashflows for firms. Since trade credits are widely used in the economy, the non-payment of large amounts has an adverse impact on the leverage of the suppliers at the micro-level and may cause a chain reaction, which implies that one economic agent defaults



because his client, another economic agent, has defaulted previously. Improving Leverage provides a central purpose and direction to the activities of the organization, to the staff, that will positively impact the performance of the organization.

This now supports this study finding above and shows there is need to improve leverage to sustain the mission of the organisation and direct efforts of all the staff members in a coordinated way towards companies' objectives. This also meant that failure to improve leverage pose a major challenge to the interest companies in reducing financial distress risk (Cheluiget, 2014).

Companies with more liquid assets are less likely to fail because they can realize cash even in very difficult situations. It is therefore expected that listed companies with more liquid assets will outperform those with less liquid assets. Perinpanathan (2014) found evidence supporting that performance is positively related to the proportion of liquid assets in the asset mix of a listed company. More empirical findings have confirmed that there is a positive relationship between leverage and financial performance of listed companies (Ambrose and Carroll, 1994). However, according to the theory of agency costs, high leverage of assets could increase agency costs for owners because managers might take advantage of the benefits of liquid assets (Adams and Buckle, 2000). In addition, liquid assets imply high reinvestment risk since the proceeds from liquid assets would have to be reinvested after a relatively short period of time. Undoubtedly, reinvestment risk would put a strain on the performance of a company. In this case, it is, therefore, likely that listed companies with less liquid assets outperform those with more liquid assets. Ahmed et al. (2011), study found out that leverage supports growth of companies. They establish a positive relation to performance of listed companies.

# 4.2 Pearson correlation coefficient between Leverage and financial distress

Correlation between variables is a measure of how well the variables are related. The most common measure of correlation in statistics is the Pearson Correlation (technically called the Pearson Product Moment Correlation or PPMC), which shows the linear relationship between two variables. Results are between -1 and 1. A result of -1 means that there is a perfect negative correlation between the two values at all, while a result of 1 means that there is a perfect positive correlation between the two variables. Result of 0 means that there is no linear relationship between the two variables. The results on Pearson correlation from this study as shown in table 8, reveals that there is a positive linear relationship between leverage and financial distress. Pearson correlation coefficients between the independent variable leverage and the dependent variable financial distress show a significant positive correlation between leverage and financial distress of -0.609.

Table 8: Model Summary: Coefficient for Influence of Leverage on Financial Distress

|          |                     |          | 609** |
|----------|---------------------|----------|-------|
| Leverage | Pearson Correlation | Leverage |       |
|          | Sig. (2-tailed)     |          | .000  |
|          | N                   |          | 65    |

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

**Test of research hypothesis:** There is no significant influence of leverage on financial distress for companies listed in Nairobi Securities Exchange, Kenya. In this section the research hypothesis was tested and results presented. As a pretest requirement, the following assumptions of linear regression were checked: that the data set was normally distributed, data did not suffer from linearity, homoscedasticity, multi collinearity and no significant outliers. No major violations were reported and hence the studies proceeded with regression analysis.

## 4.3 Relationship between leverage and financial distress

The research objective was to determine influence of leverage as a financial antecedent of financial distress among listed companies at Nairobi Securities Exchange. The predicted model relating leverage and financial distress was presented using the logistic regression model in equation:  $P = 1 - \epsilon (1/(\beta_0 + \beta_1 LV + e))$ .

Where: P = Financial DistressB = Constant term associated with the regression model

 $\beta$  1 = Coefficients of independent variable leverage

LV = Leverage (Debt to equity, Debt to capital, Interest coverage)



e = error term associated with the regression model. Panel root test was employed in testing the research hypothesis (H01) which stated that: H01: There is no significant influence of leverage on financial distress for companies listed in Nairobi Securities Exchange, Kenya.

The regression analysis resulted in the Wald table 4, which was used to assess the statistical significance of the regression model. The W-value = 13.783 and the sig. value = .000 for model. This meant that model was significant (p  $\le 0.05$ ) at 0.05 level in explaining the linear relationship between Leverage and Financial Distress. The adjusted coefficient of determination R square (R2) column shows model had R2 = .799.

Model table 4 shows that Leverage had significant p-values (p-value =.000). The study therefore failed to accept H01 at 95% C.I and deduced that there is a significant effect of Leverage on Financial Distress.

# 4.4 Evaluating the model predicted by leverage

The preceding analysis shows a significant relationship exist between leverage and financial distress. Results model in table 2 had R2 = .799, this meant leverage explained 79.9% of the variance in financial distress. The model provides a moderate fit, and demonstrated that leverage cannot be ignored when examining the financial antecedents of financial distress in listed companies in Kenya. This relationship is presented by the fitted model below;  $P = 1 - \varepsilon (1/(\beta_0 + \beta_1 LV + \Theta))$ , Leverage had a R2 = 0.799 according to equation, Leverage therefore explained 79.9% of the variations in financial distress. By inserting the B-factor of -15.115 in the equation the study indicates that an increase in leverage leads to -15.115 increases in log-odds of financial distress holding other factors constant.

This indicated the existence of a negative relationship between leverage and financial distress. Leverage therefore significantly predicts the financial distress in listed companies in Kenya. A study by Jahur and Quadir (2012) found that leverage explained 9.27% variation in financial distress in Bangladesh Small and Medium Enterprises. The current study findings in the Kenyan market are better results at 79.9% variation in financial distress attributed to leverage.

Turetsky and McEven (2001), study sought to illustrate dependence of the risk of default on the change in leverage through empirical investigation of firm longevity. They examined the factors influencing the shift from the upper to the lower level of the downward spiral. Results show that the volatile decrease in cash flows from positive to negative has an enormous impact on subsequent default: a one-unit increase in leverage measured by the current ratio increases the risk of default by approximately 59.4%. The study focused on effect of leverage on financial distress and firm's longevity. The finding from this study depicts the important role leverage plays in financial distress. It shows that a one unit increase in leverage increase risk of default by 59.4%. This result compares to the current results found in the Kenyan market where a one unit increase in leverage increases probability risk of default by 79.9%. A study by Mehari and Aemiro, (2013), Leverage is found to be negatively related to debt coverage rate. The result of the study is consistent with that of Chen and Wong (2004) and Ahmed et al (2011). Katz et al (1985) views the increase of leverage that precedes bankruptcy as the behavioral basis for firm failure, and for whatever combination of reasons, a firm may increase leverage for a number of consecutive years, if it does not exceed the optimal limit, the firm may remain solvent, otherwise, failure ensues. A study by Zavgren (1985) the coefficients of the leverage measure in earlier years and its negative sign indicate that the failing firms were more interested in interest coverage than productive opportunities.

All above statements had a strong positive factor component and shows that there is a significant effect of Leverage on financial distress.

# 5. Conclusions and Recommendations

The study established a positive linear relationship which is also significant between leverage and financial distress. The resulting relationship had an R2 = .799 which meant leverage explained 79.9% of the variance in financial distress. The relationship is good fit, which demonstrated that leverage cannot be ignored when examining the financial antecedents of financial distress in listed companies in Kenya. When listed companies maintain an appropriate level of leverage, it enables them to cover interest payments and other obligations when they are due. The study findings also confirmed operational negative cash flows had a great influence in causing financial distress in listed companies in Kenya. Since trade credits are widely used in the economy, the non-payment of large amounts has an adverse impact on the leverage of the suppliers at the micro-level and may cause a chain reaction, which implies that one economic agent defaults because his client, another economic agent, has defaulted previously. The finding suggested that firms with low levels of leverage are more likely to experience financial distress, because cash constrained firms are more vulnerable to exogenous negative shocks to cash flow among others (Cheluiget, 2014). The lower the current ratio indicates that the firm has lower amount of current funds to cover the current obligation. The firm unable to meet its current obligation may have high probability of financial distress. Therefore, leverage is an important financial antecedent of financial distress (Tesfamariam, 2014). The Capital Markets Authority (CMA) regulator should, develop a policy on the



appropriate level of leverage to be maintained by listed companies to cover interest payments and other obligations when they are due. The NSE players should further enforce industry leverage standards to ensure that listed companies adhere to them. The listed companies' management should develop policies on debt to equity ratio, debt to capital ratio, and interest coverage. All above, if implemented will impact positively on the performance of listed companies in Kenya and may result in decrease in financial distress exposures.

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