# LEVERAGE, CORPORATE GOVERNANCE AND INCOME SMOOTHING IN THE FIRMS LISTED IN THE NAIROBI STOCK EXCHANGE, KENYA

International Journal of Accounting and Finance

TOPNOTCH JOURNALS AND BOOKS PUBLISHERS

# LEVERAGE, CORPORATE GOVERNANCE AND INCOME SMOOTHING IN THE FIRMS LISTED IN THE NAIROBI STOCK EXCHANGE, KENYA

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## ABSTRACT

This study sought to determine the effect of leverage and corporate governance on income smoothing of the firms listed in the Nairobi Stock Exchange, Kenya. The specific objective included; to determine the effect of leverage and corporate governance on income smoothing of the firms listed in the Nairobi stock Exchange, Kenya and to evaluate the effect of leverage on the relationship between corporate governance on income smoothing of the firms listed in the Nairobi stock Exchange, Kenya. The study adopted ex post facto research design. The target population was all the 64 firms listed in Nairobi Securities Exchange. The study found that leverage has a positive and significant effect on income smoothing. The study also found that ownership concentration and CEO duality had a negative and significant effect on income smoothing in the firms listed in NSE. Board size had a positive but insignificant effect on income smoothing in the firms listed in NSE. Generally, corporate governance had a positive and significant effect on income smoothing in the firms listed in NSE. The study also found that leverage does not moderate the relationship between board size and income smoothing in the firms listed in NSE. The study recommends that managers of the firms listed in NSE in Kenya should employ minimal debt level. This is because firms with high level of debt have high income smoothing. In addition, efforts need to be made to decrease financial risk in listed firms system by reducing the large number of non-performing loans held by local banks. This will minimize the income smoothing in the listed firms.

**Key words:** *Income smoothing, leverage, corporate governance*

# 1.0INTRODUCTION

## 1.1 Background of the Study

Income smoothing is the minimization of income fluctuations from year to year by shifting income from years of high income for the time that are less favorable (Belkaoui, 2006). Income smoothing is a manipulation of earnings that is active toward a preset target. It is also one form of earnings management. In addition, income smoothing happens when organization managers use ruling in financial reporting and in transaction structuring to manipulate financial reports to alter contractual outcomes that rely on reported accounting numbers or to mislead stakeholders on the current economic performance of the organization (Healy & Wahlen, 1999).

Income smoothing can be achieved in three means. The first way is through the management planning of the happenings of various actions over which it has recognition of such events. The second way is through the management allotting various expenses and revenues over diverse accounting periods. The third way is to have discretion to categorize various income stuffs into diverse categories (Chi-Yih, Boon & Xiaoming, 2012).

Corporate managers might be inspired to smooth their earnings. This is in assumption that growth rates and income stability are considered to high average income streams with superior variability (Samak, El Said & El Latif, 2014). In this case, codes of corporate governance have been launched in 2006, and are continuously revised, for both public and private owned organizations. However, various reforms have been introduced to the regulatory and legal framework which aims to; make tighter the trading provisions, tighten disclosure rules, companies are also required to establish board committees and to update the accounting and the auditing framework (world bank, 2009).

### 1.1.1Global Perspective of Leverage, Corporate Governance and Income Smoothing

The proportion of firms in China practicing income smoothing is higher than firms in USA, Singapore and Japan. In China, income smoothing is severe when the state is in close monitor of the firms listed in the stock exchange. Murind and Ding (2007) further indicated that firms with directors that are independent are more likely to involve in income smoothing. Ali and Marziyeh (2012) indicated a significant relationship between institutional stockholders' ownership percent, non-bound members' percent and internal auditor with income smoothing. Also, Chi-Yih, Boon and Xiaoming (2012) also established that governance mechanisms such as independence of board of directors, the audit committee are effective in lowering the income smoothing in China.

The goal of most of regulations set up by the government of USA was to improve firms' corporate governance environments. This is attributed to the fact that recent financial crises of USA firms are mostly attributed to the failures and weaknesses of corporate governance arrangements, to face the real life stress. Corporate governance regulations did not help in avoiding excessive risk taking and bad practices (Bhagat & Bolton, 2009). El Sood (2012) observes that USA firms use loan loss provision to smooth their income especially when they are in non recessionary periods.

Ellili and Farouk (2011) further indicated that firms in Dhabi Stock Exchange had cases of income smoothing. In addition, income smoothing was found to affect the profitability of the firms negatively. This is because profitable firms used their internal funds to protect the firms from income smoothing. In addition, income smoothing was high in the companies with high leverage.

### 1.1.2 Regional Perspective of Leverage, Corporate Governance and Income Smoothing

Manukaji (2018) suggests that income smoothing of firms listed in Nigeria stock exchange largely relies on the corporate governance practices such as the independence of the board of directors, the CEO duality, audit committee and the ownership concentration. In addition, these firms use LLPs to smooth income and also to manage their levels of capitals. However, these firms smooth their income so that they can be more visible to the investors and also so as the investors may not notice he stock price fluctuations (Ozili, 2015).

Corporate governance was included as a main pillar of the second phase of banking sector reform program in Egypt. The Central Bank of Egypt issued the corporate governance code in 2009, which was a very effective tool to enhance governance practices in the banking sector, as it was mandatory. CBE also issued mandatory guidelines concerning audit committees in banks (El-Said, 2009). Samak, El Said and El Latif (2014) also indicated that 51% of the companies were classified as false financial statement while 49 were non false financial statement.

### 1.1.3 Local Perspective of Leverage, Corporate Governance and Income Smoothing

In July 2007, Nairobi Securities Exchange reviewed the index and announced the firms that would constitute the NSE Share Index. A platform known as Wide Area Network was established in 2007 and this removed the need of dealers to send their workers to do business in the trading floor. These listed firms have been practicing income smoothing. However, the regulators like CMA of the accounting professions are still silent on the matters of creative accounting such as income smoothing which is still being practiced in Kenya (Mbaire, 2012).

In addition, the users of accounting information are not able to perceive income smoothing in companies thus leading to collapse of most companies in Kenya such as Nyaga stock brokers and Discount Securities (Bonyop, 2009). The hard economic times in Kenya may cause firms to practice income smoothing for various reasons. CMA only established a frauds investigations unit in 2009, after collapse of four brokerage firms (Gakeri, 2012). Carrying out research on the effect of leverage and corporate governance on income smoothing in the firm listed in the Nairobi Stock Exchange, Kenya will greatly help the listed firms.

### 1.2 Problem Statement

The recent successive financial crises and the resulting confidence crisis in financial reporting within an information and economic framework have drawn the world attention to the role of corporate governance in ensuring the quality of the financial reporting processes, reducing fraud and false statements (Samak, El Said & El Latif, 2014). This is especially after the scandal of big companies such as Enron in United Kingdom and the collapse of WorldCom in United States in 2001 and 2002 respectively. There are several instances in Kenya where directors and managers have involved themselves in poor corporate governance practices that have resulted to scandals. One of the well known scandal was in 2004 where Euro bank collapsed. Another scandal in 2004 happened where Uchumi Supermarkets was received under receivership of National bank. In addition, Unga Group nearly collapsed after reported cases of manipulation of financial reports after board room wrangles (Iraya, Mwangi & Muchoki, 2015).

In addition, the shareholders in the listed firms in Kenya regularly did party transactions at unfavorable price to appropriate company funds, or hold company assets in security for loans. The high level of income smoothing is attributed to the fact that recent financial crises are mostly attributed to the failures and weaknesses of corporate governance arrangements to address the crisis (Nyabuti, Memba & Chege, 2016).

Creative accounting report (2001) indicated a scandal that happed at African Petroleum that was slated for privatization, its financial statements did not properly represent the firm's financial position. Various transactions which include substantial loans were left out from the financial statement. This omission was revealed by the auditors who did audit during the privatization process of the company (Oyejide & Soyibo, 2001). Mire (2015) also indicated that there were cases of creative accounting at Uchumi Supermarket in the year 2014. This happened after the new management came into office in 2014.

Past studies have been conducted on corporate governance and income smoothing. However, the researcher found no study done on corporate Governance and Income Smoothing in the Commercial listed Firms in the NSE. Chi-Yih, Boon and Xiaoming (2012) did a study on corporate governance and income smoothing in China. The study found that income smoothing of Chinese firms largely depends on the corporate governance mechanisms. Samak, El Said and El Latif (2014) did a study on corporate governance and income smoothing: Case of the Egyptian listed companies. Results showed a significant difference between means of corporate governance and income smoothing. Belkaoui (2006) did a study the smoothing of income numbers: Some empirical evidence of systematic differences between core and periphery industrial sector. The study adopted a desktop study thus presenting a methodological gap. Manukaji (2018) did a study on corporate governance and income smoothing in the Nigerian Deposit Money Banks. The study found that corporate governance has significant relationship with income smoothing in Nigeria deposit money bank. Abala (2013) did a study on the determinants of dividend smoothing among listed companies at the Nairobi Securities Exchange. The recent study sought to examine the relationship between corporate governance and income smoothing in the firms listed in the NSE.

### 1.3 Research Objectives

This study sought to determine the effect of leverage and corporate governance on income smoothing of the firm listed in the Nairobi Stock Exchange, Kenya.

#### 1.3.1 Specific Objectives

i. To determine the effect of leverage on income smoothing of the firms listed in the Nairobi stock Exchange, Kenya
ii. To examine the effect of corporate governance on income smoothing of the firms listed in the Nairobi stock Exchange, Kenya
iii. To evaluate the effect of leverage on the relationship between corporate governance on income smoothing of the firms listed in the Nairobi stock Exchange, Kenya

### 1.4 Research Hypothesis

i. $H0_1$: Leverage has no significant effect on income smoothing of the firms listed in the Nairobi stock Exchange, Kenya
ii. $H0_2$: Corporate Governance has no significant effect on income smoothing of the firms listed in the Nairobi stock Exchange, Kenya
iii. $H0_3$: Leverage does not moderate the relationship between corporate governance on income smoothing of the firms listed in the Nairobi stock Exchange, Kenya.

### 1.5 Justification of the Study

The study benefits shareholders and other stakeholders of listed companies by giving an insight into the income smoothing techniques and the effect of corporate governance on income smoothing.

Potential investors will also find the study useful. Individual investors who have various investment needs will be able to make better informed investment decisions. Institutional investors whose needs are diverse from individual investors will also make use of the study.

The findings of this research will also be used by scholars in the field of finance, accounting or corporate governance as a source of reference on effect of leverage and corporate governance on income smoothing in the firm listed in the Nairobi Stock Exchange, Kenya.

### 1.6 Scope of the Study

The study sought to determine the moderating effect of leverage on the relationship between corporate governance and income smoothing of the firms listed in the Nairobi Stock Exchange, Kenya. The target population was all the 64 firms listed in Nairobi Securities Exchange. The study collected secondary data across 5 years from 2015 to 2019.

## 2.0 LITERATURE REVIEW

### 2.1 Theoretical Review

The theories that informed this study included; positive accounting theory, agency theory and trade off theory.

#### 2.1.1 Positive Accounting Theory

This theory was developed by Watts and Zimmerman (1986). This theory states that the managers are able to take control of the reported earnings since the unambiguous contracts given to them are linked to the accounting numbers. The key principle of this theory is that the accounting information gathered by a company is not just as a result of the company's actions but is it majorly depends on the choice of accounting devices used to come up with the accounting information which later relies on clear contracts that are given to the company managers. Watts and Zimmerman (1986) further claim that the explicit contracts that are given to managers inspire them to make use specific accounting methods to be able manage incomes to meet financial reporting aims that relies on the reported incomes number.

The theory also argues that the explicit contracts that are given to managers will inspire them to make use of accounting means to adjust accounting information in order to upsurge their wages, to evade debt covenant ruin or to evade the political expenses linked with the reported earnings (Watts & Zimmerman, 1986). This theory is relevant to this study. This is because it argues that it refers income smoothing as a type of earning management. The managers compensation scheme inspire them to smooth the income so as they can generate their desired earnings. The principle and the agent jointly provide the managers with incentives so as they can manipulated the reported earnings through income smoothing. The theory therefore informs the income smoothing variable.

#### 2.1.2 Agency Theory

Agency theory was proposed by Jensen and Meckling (1976). This hypothesis describes how to shape associations in which one person governs the work while an alternative person does the job. In this association, the principal employs an agent for the job, or to execute a mission the principal is incapable of accomplishing (Jensen & Meckling, 1976). The principal in this study is the company shareholder while the management of the company is the agent. The management of the company performs duties on behalf of the shareholders of the company

The principal employs a various agents to carry out various jobs and formulates a contract that associates the agents' performance to their compensation (Jhingan & Stephen, 2011). A firm with dissimilar contracts will give the agents motivations to conduct themselves in different ways. The agents should make contract efficient. In this way they are serving the principal interest. Contract tends to be identified which cause agents to put their energies to profit maximizing actions. Pressure from principal above and manager underneath in an organization drive workers in that direction. Pressure from above may link financial performance with payments to them and competition from below for superiority and position may strengthen their rewards.

The theory further argues that the separation of the shareholders and the managers creates agency problems amongst the stakeholders. These agency costs are mitigated by governance mechanisms. Better corporate governance practices helps in monitoring the management on financial reporting quality. This will help the shareholders to be able to depend on the financial information given by the management (Healy & Palepu, 2001). This theory is relevant to this study in that it is able to explain how corporate governance can affect quality of financial reports in an organization. This will help to reduce the incidence of artificial income smoothing by management thereby distorting the financial information arising from their operations.

### 2.1.3 Trade-off Theory

Myers (1984) developed the tradeoff theory. It states that the two approaches of financing a firm are usually by equity and debt. It is therefore important for a firm to come up with a decision on how much debt capital and equity capital is needed putting in mind the cost and benefit expected on both type of financing. According to Frank and Goyal (2008), a firm will decide on the appropriate debt to equity ratio according to: the benefit of tax, bankruptcy and agency cost. It is therefore important for a firm to make sure that there is an ideal balance between the debt capital and the cost of obtaining the debt capital. The optimal balance should be at the agreed level of debt and ensure that the firm value is maximized.

Myers (2001) indicates that there is a relationship between the size of a firm and the debt amount that is positive because a firm will acquire more tax benefit from the debt acquired. Large firm can offer information that the debt holders need for them to acquire a debt which results in reduction cost of being monitored and also agency cost. The large firms tend to have low chances of going bankrupt because they are more diversified with many investment opportunities which results in availability of free cash flow. According to Myers (1997), due to presences of information that is asymmetric, firms prefer to use internal finances rather than debt finances. This theory is relevant in this study as it informs the leverage variable. Leverage in this study was measured by total debt divided by the total assets.

## 2.2 Conceptual Framework

Gerber, Gerber and Van der Merwe (2014) have depicted a conceptual framework as a conjectured illustration highlighting the concept being studied as well as the connection between variables (both dependent and independent). The conceptual framework is an instrument of research geared towards enabling a researcher to gain knowledge and conceptualize the variables under study (Lekaram, 2014).

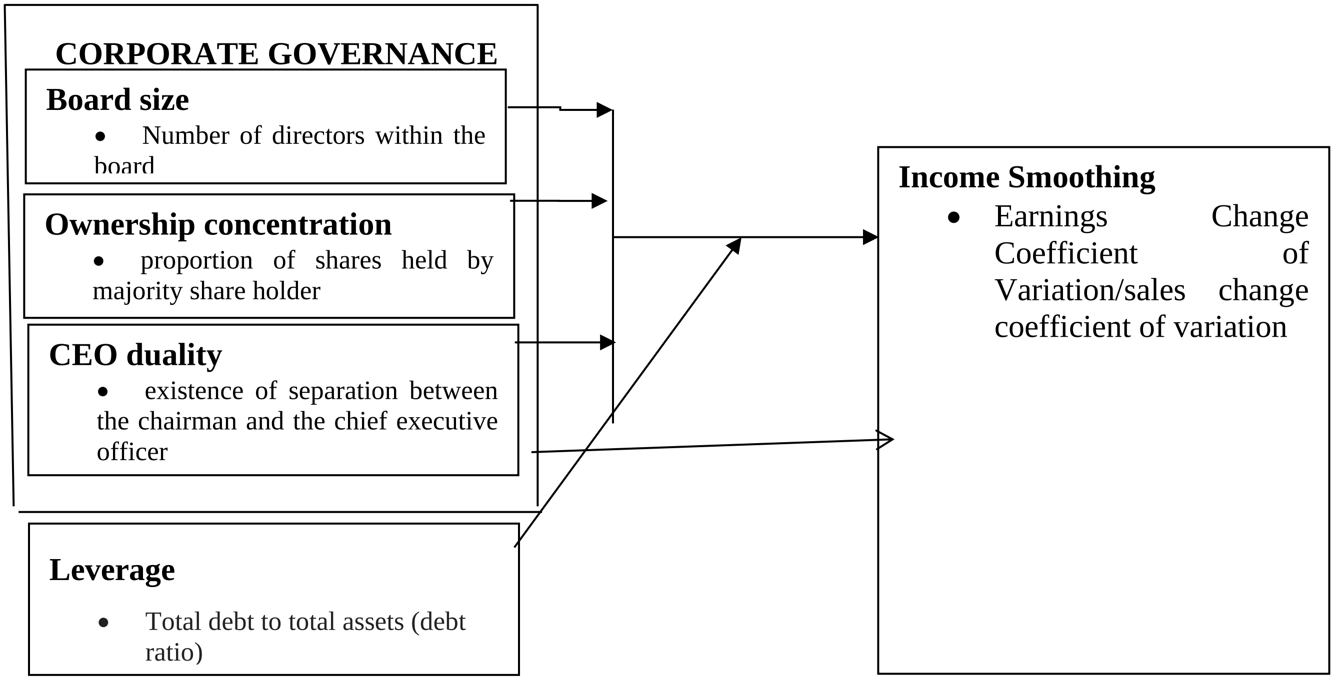


**Figure 2.1: Conceptual Framework**

## 2.3 Literature Review

Chi-Yih, Boon and Xiaoming (2012) did a study on corporate governance and income smoothing in China. The results were based on past literature. From the study, china had the highest number of firms practicing income smoothing as compared to United States, Singapore and Japan. In addition, income smoothing was high in the state firms as compared to the private firms. Corporate governance was also found to have a major impact on income smoothing of the listed firms. In addition, companies with independent directors had less likelihood to engage in income smoothing.

Gantino (2015) did a study on effect of managerial ownership structure, financial risk and its value on income smoothing in the automotive industry and food & beverage industry Listed in Indonesia Stock Exchange. Outcomes indicated that ownership structure does not affect income smoothing. In addition, the value of the company and the financial risk does not affect income smoothing.

Samak, El Said and El Latif (2014) did a study on corporate governance and income smoothing in Egyptian listed companies. The study used panel data methodology. Results indicated that corporate governance had a major and significant influence on income smoothing. Results also showed a significant difference between means of corporate governance and income smoothing.

Ribeiro and Colauto (2016) conducted a study on the relationship between board interlocking and income smoothing practices. The study is classified as empirical and analytical. The study showed that board interlocking structure affects income smoothing accounting practices. In addition, firms that have board sharing with other firms have higher levels of income smoothing as compared to firms that do not share boards.

Kamarudin, Ismail and Yasin (2018) did a study on deceptive versus Informative Income Smoothing: Evidence from Audit Committee Attributes. The study used panel data methodology. The study found that firms with small board sizes and independence of directors have less manipulation of the accounting information.

Bouvatier, Lepetit and Strobel (2014) did a study on bank income smoothing, ownership concentration and the regulatory environment. Using a panel of European commercial banks, it was established that ownership concentration had an effect on income smoothing. In addition, low ownership concentration levels causes high levels of income smoothing.

Kamarudin, Ismail and Samsuddin (2012) did a study on the influence of CEO duality on the relationship between audit committee independence and earnings quality. The study found that audit committee independence have an impact on earnings quality. However, the association is affected negatively by CEO duality. This implied that the decisions of the directors are affected by the CEO.

Zouari, Lakhal and Nekhili (2012) did a research on CEO's characteristics and their effect on earnings management. CEO characteristics positively affect earnings management. This is because most CEO have fear of losing their job or their level of compensation. In this case, the motivation to manipulate the earnings increases. In addition, CEO and chairman relationship influences the CEO to manage earnings.

Fengju, Yari Fard, Ghassab Maher and Akhteghan (2013) did a study on the relationship between financial leverage and profitability with an emphasis on income smoothing in Iran's capital market. Results showed that the association between financial leverage and income smoothing was positive. In addition, financial leverage affects gross profit and net profit. In addition, profitability has no impact on income smoothing.

Hidayat, Sinoeraya and Widyaningsih (2016) did a study on the effect of reported comprehensive income. The study adopted desktop study. Financial leverage will be proxied by DAR. The study found that firm's financial leverage does not influences income smoothing behavior. Zarnegar and Hamidian (2016) also established that financial leverage had a direct association on income smoothing of the firms.

### 2.4 Research Gaps

Ribeiro and Colauto (2016) conducted a study on the relationship between board interlocking and income smoothing practices. The study focused on only one aspect of corporate governance that affect income smoothing thus presenting a conceptual gap. The recent study used three aspects of corporate governance. Bouvatier, Lepetit and Strobel (2014) did a study on bank income smoothing, ownership concentration and the regulatory environment in Europe. This study was done in Europe thus presenting a scope gap. The recent study was done in Kenya.

Gantino (2015) did a study on effect of managerial ownership structure, financial risk and its value on income smoothing in the automotive industry and food & beverage industry Listed in Indonesia Stock Exchange. The study was conducted in Indonesia while the recent study was conducted in Kenya. Fengju, Yari Fard, Ghassab Maher and Akhteghan (2013) did a study on the relationship between financial leverage and profitability with an emphasis on income smoothing in Iran's capital market. The study focused on financial leverage, profitability and income smoothing thus presenting a conceptual gap. The recent study focused on leverage, corporate governance and income smoothing.

## 3.0RESEARCH METHODOLOGY

The study adopted ex post facto research design. Ex post facto design is a quasi-experimental study examining how an independent variable, present prior to the study in the participants, affects a dependent variable. A quasi-experimental study simply means participants are not randomly assigned. The study was a quantitative study and the data collection covered the last five financial years (2015-2019). The target population was all the 64 firms listed in Nairobi Securities Exchange. The study collected secondary data across 5 year. The data was therefore collected from 2015 to 2019. The sample was deduced through a census of the firms. Therefore, the sample was 64 firms listed in Nairobi Securities Exchange across 5 years making it 320 observations.

The study used panel data as acquired from secondary sources which include NSE handbooks, audited financial accounts and library materials. Relevant ratios were collected and computed.

Quantitative secondary data was analyzed using Strata software. Diagnostics tests which include normality test, multicolinearity and heteroskedasticity test were done before the inferential statistics. Further, correlation and regression analysis were applied to evaluate the link between the study variables

Panel data model:

The model is as illustrated below;

$Y_{it}= \beta_0+ \beta_1X_{1it} + \beta_2X_{2it} + \beta_3X_{3it}+e$……………………………………………………………3.1

$\beta_0$ = Constant

$b_1$, $b_2$, $b_3$ = Regression Co-efficient

Where Y = Income Smoothing – This is measured by Eckel (1981) index. When the amount of Eckel index is less than 1, the income smoothing has been done. Otherwise, it has not been done. Eckel index = Earnings Change Coefficient of Variation/sales change coefficient of variation

$X_1$= Board size – number of directors within the board

$X_2$ = Ownership concentration - proportion of shares held by majority share holder. A value greater than 20% is 1, otherwise 0

$X_3$ = CEO duality – existence of separation between the chairman and the chief executive officer (binary variable)

The second model is as illustrated below;

$Y_{it}= \beta_0+ \beta_1X_{1it} +e$………………………………………………………………………3.2

$\beta_0$ = Constant

$b_1$ = Regression Co-efficient

Y = Income Smoothing

$X_1$= Leverage

Moderation effect was tested using Ongore and Kusa (2013) approach. The moderator (leverage) was interacted with each of the independent variable as presented in equation 3.3.

$Y_{it}= \beta_0+ \beta_1X_{1it} *M_{it}+ \beta_2X_{2it} *M_{it} + \beta_3X_{3it} *M_{it} +e$……………………………………………3.3

Where;

$\beta_0$ = Constant

Y= Income Smoothing

M= Leverage

$X_1$= Board size

$X_2$ = Ownership concentration

$X_3$ = CEO duality

## 4.0 RESULTS

### 4.1 Diagnostic Tests

The following diagnostic tests were conducted.

#### 4.1.1 Normality Test

Figure 4.1 below shows that the results for dependent variable which was income smoothing was normally distributed.

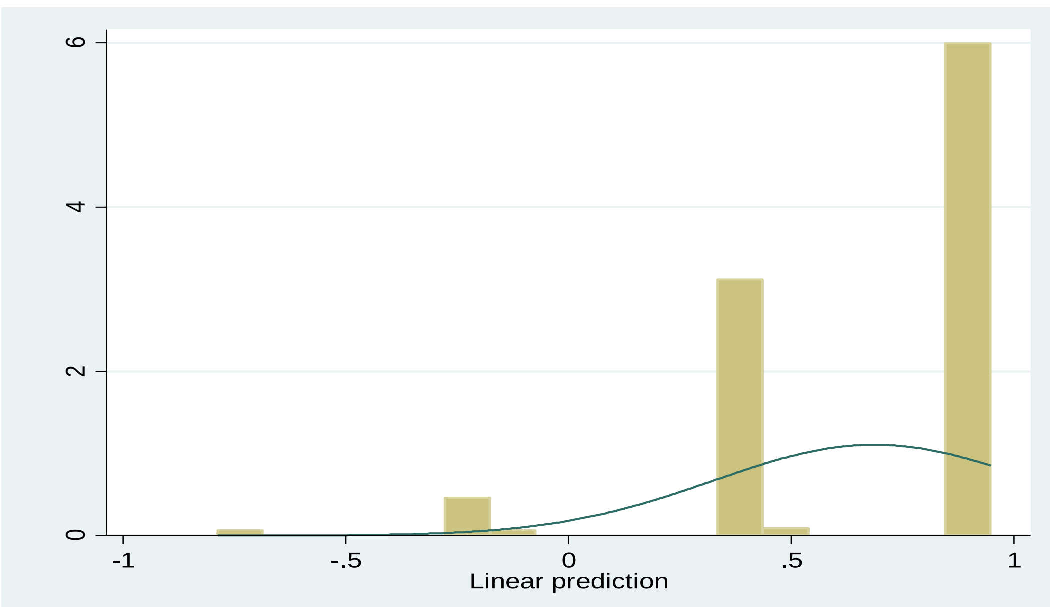


**Figure 1: Normality test**

#### 4.1.2 Multicolinearity Test

VIF was used to test the multicollinearity. According to Field (2009) VIF values in excess of 10 is an indication of the presence of Multicollinearity.

**Table 4.1: Multicolinearity Results**

| Variable | VIF | 1/VIF |
|---|---|---|
| Ownership concentration | 1.03 | 0.96886 |
| board size | 1.03 | 0.97528 |
| CEO duality | 1.01 | 0.99057 |
| Leverage | 1.00 | 0.99528 |
| Mean VIF | 1.02 | |

The results in Table 4.1 present variance inflation factors results and were established to be 1.02 which is less than 10 and thus there is no Multicollinearity.

### 4.1.3 Heteroskedasticity Test

Breusch-Pagan test was used to test for heteroskedasticity.

**Table 4.2: Heteroskedasticity Test Results**

| **Modified Wald test for group wise heteroskedasticity in fixed effect regression model** |
|---|
| H0: sigma(i)^2 = sigma^2 for all i |
| chi2 (1) = 907.02 |
| Prob>chi2 = 0.543 |

The results in the Table 4.2 below indicate that the error terms are heteroskedastic, given that the p-value (p=0.543) was less than the 5% (0.000)

### 4.1.4 Test for Autocorrelation

Wooldridge test was used to test autocorrelation. Results were shown in Table 4.3 below.

**Table 4.3: Serial Correlation Tests**

| **Wooldridge test for autocorrelation in panel data** |
|---|
| **$H_0$: no first-order autocorrelation** |
| F( 1, 319) = 4.17 |
| Prob > F = 0.067 |

The results showed that the F statistic was 4.17 while the p value was 0.067. This implied that the p value was greater than 0.05 implying that there was no autocorrelation.

### 4.1.5 Hausman Test

Both fixed and random effects were run in order to determine the most appropriate to use. Hausman test was used to select.

**Table 4.4: Hausman Test**

| | (b) Fixed | (B) random | (b-B) Difference | sqrt(diag(V_b-V_B)) S.E. |
|---|---|---|---|---|
| Board size | -0.0305 | 0.00121 | -0.0317 | 0.02623 |
| Ownership Concentration | 0.1196 | 0.03869 | 0.08091 | 0.04499 |
| CEO duality | 0.88747 | 0.8629 | 0.02458 | 0.01589 |
| Leverage | 0.47374 | 0.51503 | -0.0413 | 0.04607 |
| b = consistent under Ho and Ha; obtained from xtreg | | | | |
| B = inconsistent under Ha, efficient under Ho; obtained from xtreg | | | | |
| Test: Ho: difference in coefficients not systematic | | | | |
| chi2(4)= | (b-B)'[(V_b-V_B)^(-1)](b-B)=5.85 | | | |
| Prob>chi2 | = | 0.2106 | | |

Random effects was used in this study since the p value was greater than 0.05 (p=0.2106).

## 4.2 Effect of leverage on income smoothing

### 4.2.1 Correlation Results

Correlation results for leverage and income smoothing were determined as shown in Table 4.5 below.

**Table 4.5: Correlation between leverage on income smoothing**

| Income Smoothing | 1 |
|---|---|
| Leverage | 0.205 |
| | 0.0002 |

The results showed that leverage had a positive and significant effect on income smoothing in firms listed in NSE (r=0.205, p=0.002).

### 4.2.2 Regression Results

The results showed that leverage had a positive and significant effect on income smoothing (β=0.58113, p=0.002). In addition, the results showed that the R squared was 13.87. This implied that leverage explained 13.87% of the income smoothing in the listed firms in NSE

**Table 4.6: Regression Results for Leverage and Income Smoothing**

| | Coef. | Std.Err | Z | P>\|z\| | [95% conf.interval] | |
|---|---|---|---|---|---|---|
| leverage | 0.58113 | 0.18692 | 3.11 | 0.002 | 0.21478 | 0.94748 |
| _cons | 0.11727 | 0.1863 | 0.63 | 0.529 | 0.2479 | 0.4824 |
| R Squared =13.87 | | | | | | |
| p=0.0019 | | | | | | |
| Wald Chi2(1)=9.67 | | | | | | |

Model

$Y= 0.11727+ 0.58113X_{1it} +e$

where

Y = Income Smoothing

$X_1$= Leverage

### 4.2.3 Hypothesis Testing

The hypothesis was tested by using multiple linear regression and determined using p-value. The acceptance/rejection criterion was that, if the p value is less than 0.05, we reject the $H_{01}$ but if it is more than 0.05, the $Ho_1$ is not rejected. The results in table 4.6 showed that the p value was 0.0019 implying that we reject the null hypothesis that stated that leverage has no significant effect on income smoothing in the firm listed in the Nairobi stock Exchange, Kenya. The study therefore concluded that leverage has a significant effect on income smoothing in the firm listed in the Nairobi stock Exchange, Kenya

## 4.3 Effect of Corporate Governance on Income Smoothing

### 4.3.1 Correlation Results

The results showed that board size had a positive but insignificant correlation on income smoothing (r=0.0216, p=0.7004). In addition, results showed that ownership concentration had a negative and significant correlation on income smoothing (r=-0.0838, p=0.013). Results also revealed that CEO duality had a negative and significant correlation on income smoothing (r=-0.8622, p=0.000).

**Table 4.7: Correlation Results**

| | Income Smoothing | | | |
|---|---|---|---|---|
| **Income Smoothing** | **1** | | | |
| Board size | 0.0216 | 1 | | |
| | 0.7004 | | | |
| Ownership concentration | -0.0838 | 0.1545 | 1 | |
| | 0.013 | 0.0056 | | |
| CEO duality | -0.8622 | 0.0205 | 0.0815 | 1 |
| | 0.000 | 0.7154 | 0.146 | |

### 4.3.2 Regression results before moderation

The results showed that board size had a positive but insignificant effect on income smoothing (β=0.02387, p=0.77). In addition, results showed that ownership concentration had a positive and significant effect on income smoothing (β=-0.31312, p=0.000). Results also revealed that CEO duality had a positive and significant effect on income smoothing (β = -0.867016, p=0.000). The R squared was 74.31. This implied that corporate governance explained 74.31% of income smoothing in the listed firms in NSE. In addition, corporate governance had a significant effect on income smoothing in the listed firms in NSE (p=0.000).

**Table 4.8: Regression results before moderation**

| **Smoothing index** | **Coef.** | **Std.Err** | **Z** | **P>\|z\|** | **[95%Conf.Interval]** | |
|---|---|---|---|---|---|---|
| Board size | 0.02387 | 0.081621 | 0.29 | 0.77 | 0.18384 | 0.136104 |
| Ownership concentration | -0.31312 | 0.0261 | -11.91 | 0.00 | -0.261 | -0.364 |
| CEO duality | -0.867016 | 0.028981 | -29.92 | 0.00 | -0.810215 | -0.923817 |
| _cons | 0.067754 | 0.089027 | 0.76 | 0.447 | 0.10674 | 0.242244 |
| R squared =74.31 | | | | | | |
| p=0.000 | | | | | | |
| WaldChi(3)=901.78 | | | | | | |

Model

$Y= 0.067754 + 0.02387X_{1it} + 0.31312X_{2it} + 0.867016X_{3it} + e$

Where

Y = Income Smoothing

$X_1$ = Board size

$X_2$ = Ownership concentration

$X_3$ = CEO duality

### 4.3.3 Hypothesis Results

The null hypothesis stated that corporate governance has no significant effect on income smoothing in the firm listed in the Nairobi stock Exchange, Kenya. As shown in Table 4.8 the overall p value was 0.000 implying that corporate governance has a significant effect on income smoothing in the firm listed in the Nairobi stock Exchange, Kenya and thus the null hypothesis was rejected. Therefore the study concluded that corporate governance has a significant effect on income smoothing in the firm listed in the Nairobi stock Exchange.

## 4.4 Moderating effect of leverage on the relationship between corporate governance on income smoothing

### 4.4.1 Regression Results after Moderation

The results showed that leverage does not moderate the relationship between board size and income smoothing in the firms listed in NSE (p=0.83). However, leverage moderate the relationship between ownership concentration and income smoothing in the firms listed in NSE (p=0.00). In addition, leverage moderate the relationship between CEO duality and income smoothing in the firms listed in NSE (p=0.00). The results further showed that the overall p value was 0.000 implying that leverage moderate the relationship between corporate governance and income smoothing in the firms listed in NSE (p=0.00). This was further supported by R squared that improved from 74.31% before moderation to 78.44% after moderation.

**Table 4.9: Regression results after moderation**

| Smoothing index | Coef. | Std.Err | z | P>\|z\| | [95% Conf.Interval] | |
|---|---|---|---|---|---|---|
| Board size*leverage | 0.01356 | 0.06311 | 0.21 | 0.83 | -0.1101 | 0.13726 |
| Ownership concentration*leverage | -0.27971 | 0.0392 | -7.14 | 0.00 | -0.2029 | -0.3565 |
| CEO duality*leverage | -0.88335 | 0.02677 | -32.99 | 0.00 | -0.8309 | -0.9358 |
| _cons | 0.02754 | 0.06151 | 0.45 | 0.654 | -0.093 | 0.1481 |
| R squared=78.44 | | | | | | |
| p=0.000 | | | | | | |
| WaldChi2(3)=1126.87 | | | | | | |

$Y_{it}$= 0.02754+ 0.01356$X_{1it}$ *$M_{it}$+ 0.27971$X_{2it}$ *$M_{it}$ + 0.88335$X_{3it}$ *$M_{it}$ +e

Where;

Y= Income Smoothing

M= Leverage

$X_1$= Board size

$X_2$ = Ownership concentration

$X_3$ = CEO duality

### 4.4.2 Hypothesis Testing

The null hypothesis stated that leverage does not moderate the relationship between corporate governance on income smoothing in the firm listed in the Nairobi stock Exchange, Kenya. As shown in Table 4.9 the overall p value was 0.000 implying that leverage moderate the relationship between corporate governance on income smoothing in the firm listed in the Nairobi stock Exchange, Kenya. The study therefore concluded that leverage moderate the relationship between corporate governance on income smoothing in the firm listed in the Nairobi stock Exchange, Kenya.

## 5.0 CONCLUSION

The study concluded that leverage has a positive and significant effect on income smoothing in the firm listed in the Nairobi stock Exchange, Kenya. This implies that the higher the leverage the higher the income smoothing in firm.

The study also concluded that ownership concentration had a negative and significant effect on income smoothing in the firms listed in NSE. In addition, CEO duality had a negative and significant effect on income smoothing in the firms listed in NSE. However, board size had a positive but insignificant effect on income smoothing in the firms listed in NSE. Generally, corporate governance had a positive and significant effect on income smoothing in the firms listed in NSE.

The study also concluded that leverage does not moderate the relationship between board size and income smoothing in the firms listed in NSE. However, leverage moderate the relationship between ownership concentration and income smoothing in the firms listed in NSE. In addition, leverage moderate the relationship between CEO duality and income smoothing in the firms listed in NSE. Generally, leverage moderate the relationship between corporate governance and income smoothing in the firms listed in NSE.

## 6.0 RECOMENDATIONS

The study recommends that managers of the firms listed in NSE in Kenya should employ minimal debt level. This is because firms with high level of debt have high income smoothing. In addition, efforts need to be made to decrease financial risk in listed firms system by reducing the large number of non-performing loans held by local banks. This will minimize the income smoothing in the listed firms.

Position of CEO should be separated from the position of the board chairman because the duality leads to lower board independence, reduction in board monitoring effectiveness, and CEO entrenchment. In addition, proponents CEO board chairman duality will strengthen definite leadership, achieve unity of command, and avoid conflict between CEO and board chairman. This will minimize the income smoothing in the listed firms.

The study recommends that corporate governance mechanism should be strictly adhered to by the firms listed in NSE in order to reduce the incidence of artificial income smoothing. This will help to improve the quality and reliability of accounting information in the listed firms.

Investors should be more selective in determining and deciding to invest in the company because the company that practice income smoothing is a company which has lot of debts and thus profits are low.

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