

# Determinants of Earnings Management Practice among Non-Listed Firms in the Motor Industry in Kenya

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**Abstract:** *The purpose of the study was to investigate the determinants of earnings management practice among non-listed firms in the motor industry in Kenya. The study specifically sought to establish the influence of contracting motivations, presence of bonus systems, industry performance and regulatory requirements on earnings management among Non-listed firms in the Motor Industry in Kenya. The study review was based on three theories: that is the prospect theory, stake holder's theory and the big bath theory which is relevant to the study. This study employed a descriptive research design. A census was conducted on all the 38 motor companies registered by Kenya Motor Industry Association (KMIA) as at 2015. A multiple linear regression model was used to test the significance of the selected determinants of the earnings management practice in motor industry in Kenya. The study findings indicated that contracting motivations, presence of a bonus system and regulatory requirements were positively related to earnings management while industrial performance was negatively related to earnings management. The study recommends that companies should relook at their contracts both internal and external so as to avoid a case where contractual motivations lead to earnings management. The contracts involving senior management tenure as well as bonus contract should be balanced well so as not to lead to earnings management. The study also recommends that motor companies should take note of a proper balance between availing bonuses and compromising performance since bonus structures such as the compensation of senior management attached to performance and private control benefits of senior management can lead to the pressure to engage in earnings management. Furthermore, the management should not put too much pressure on employees to perform since it may lead to earnings management. The market and industry regulators like capital market authority should also not put too strict requirements especially on taxing and accounting principles since that may lead to earnings management in the sector.*

**Keywords:** Earnings management, Motor industry, Contractual motivation, Bonus system, Regulatory requirements, Industrial performance

## 1. Introduction

Earnings management is a strategy used by the management of a company to deliberately manipulate the company's earnings so that the figures match a pre-determined target. This practice is carried out for the purpose of income smoothing. Thus, rather than having years of exceptionally good or bad earnings, According to Rahman and Ali, (2006), companies will try to keep the figures relatively stable by adding and removing cash from reserve accounts. The scope of earnings management has been cast into negative light as high profile corporate scandals shattered the public opinion causing a general crisis of confidence on the aspect of corporate accountability, the role of auditors as well as investors and regulators, Eilifsen, (2010). In this context, corporate giants like WorldCom and Enron represent two extreme earnings management cases that resulted in two of the largest bankruptcies in U.S history Schilit, (2010). Unarguably in the light of akin corporate accounting scandals the public perception might view the scope of earnings management as a criminal act where "fraudster managers" engage in improper accounting activities for their own benefits Jiraporn et al., (2008).

Ronen & Varda (2008) argue that the opinions diverge on whether earnings management reflects proper or improper activities. Therefore this topic has been divided into three different categories; the "white" category summarizes earnings management as "taking advantage of the flexibility in the choice of accounting treatment to signal managers'

private information on future cash flows". The "Gray" category as "choosing an accounting treatment that is either opportunistic (maximizing the utility of management only) or economically efficient. And the "Black" category refers to earnings management as "the practice of using tricks to misrepresent or reduce transparency of the financial reports". In the current earnings management debate, the principal opinion accepted by standard setters, practitioners and regulators, is that such activities can be detrimental to the firm. In short, the prevalent perception seems to support the view of earnings management and all the activities it surrounds as being opportunistic in nature. According to Jiraporn et al., (2008), regulators and standard setters have considered the extensiveness of earnings management to be a major concern for the reliability of published financial statements.

The determinants of earnings management has continued to vary among scholars both locally and globally. In Kenya, Iraya, Mwangi & Muchoki (2015) argued that some of the determinants of earnings management in firms listed at the NSE are factors related to governance for instance ownership concentration, board size, board independence and board activity. While on the other hand, Musa (2013) argues that apart from governance, other factors such as firm size and benefits to CEOs determine earnings management. Irungu (2010) on the other hand indicated that some of the macroeconomic determinants of earnings management in Kenya are inflation rate, interest rate, money supply and foreign exchange rate. Furthermore, Irungu (2010) also

Volume 5 Issue 9, September 2016

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noted that other factors related to manager motivations can lead to earnings management in Kenyan companies.

## 2. Statement of the Problem

Since the end of the 1960s earnings management has been a current issue Szczesny (2007). Titman (2009) argues that customers care about the future of a company if they expect future services, such as new versions of a computer program or repairs of products, from the supplier. The use of income increasing accounting methods may improve the financial image of firms as perceived by customers. The issue of financial scandals in the Kenyan context is not a new case. From the cases of Euro bank, Uchumi Supermarkets, Unga Group, National Bank of Kenya, CMC Motors Madiavale (2011), to the latest scandal of Dubai bank and Imperial bank, this implies that scandals related to finance mostly as a result of earnings management, because majority of these companies had posted better financial performance before their downfall, indicates that the problem is still a current issue in the Kenyan economy. Notwithstanding, the problem cuts along all industries, listed companies or not listed companies, and motor industry, for example the case of CMC motors, is not exempted.

Previous scholars on a global front, for instance, Burgstahler et al. (2006) who conducted a study on the Importance of reporting incentives on earnings Management in European Private and Public Firms as well as Ball and Shivakumar (2005) who conducted a study on earnings quality in U.K. Private Firms: Comparative Loss Recognition Timeliness argued that earnings management is more existent in private firms but studies have focused more on public firms. As much as the scholars argue that way, a study by Beatty et al. (2002) conducted on earnings management to avoid earnings declines across publicly and privately held banks found that the earnings quality was lower in public companies meaning that they don't really practice earnings management. This implies that the results vary and that further research on the subject was necessary.

In the Kenyan context, studies conducted on earnings management have mainly focused on the effect of corporate governance on earnings management of listed firms at NSE. Waweru and Riro (2013) conducted a study on corporate governance characteristics and earnings management in an emerging economy. Kaboyo (2013) and Irungu (2010) looked at the factors motivating earnings management and the relationship between macroeconomic variables and earnings management for listed firms at the NSE. This presents both conceptual and contextual research gaps which the current study will seek to fill. No study has been conducted in Kenya to investigate earning management in motor industry considering the CMC case was a big scandal in Kenya hence the current study will seek to fill this contextual research gap. The study is also conducted in a study period where there is frequent macroeconomic volatility in the Kenyan macroeconomic environment and managers have an incentive to manage earnings due to the effect of macroeconomic factors in the country for instance interest escalation and foreign exchange depreciation in 2015. This presented the study as vital in establishing earnings management in private companies specifically,

motor industry which mostly deals with imports and Exports of vehicles and vehicle parts.

## 3. Research Objectives

- 1) To establish the influence of contracting motivations on earnings management among Non-listed firms in the Motor Industry in Kenya
- 2) To investigate the influence of the presence of bonus systems on earnings management among Non-listed firms in the Motor Industry in Kenya
- 3) To establish the influence of industry performance on earnings management among Non-listed firms in the Motor Industry in Kenya
- 4) To examine the influence of regulatory requirements on earnings management among Non-listed firms in the Motor Industry in Kenya

## 4. Literature Review

### The prospect Theory

According to Kahneman and Tversky (1979), this theory can be one explanation to the use of earnings management. The theory explains that companies gain the greatest utility when they move from a relative or absolute loss to a gain. Companies receive the greatest value when moving from negative to positive earnings, and not just when their earnings increase and that may trigger earnings management. This theory is relevant to the study as it informs the key concept of the study in seeking to find out the motivations for earnings management in private unlisted companies specifically motor companies. According to the theory, managers encourage earnings management in order to receive some benefits. The study sought to test the applicability of the theory to the companies in the motor industry in Kenya.

### The Stakeholder theory

The Stakeholder theory takes account of a wider group of constituents rather than focusing on shareholders. When a wider stakeholders group such as employees, providers of credit, customers, suppliers, government and local authority are taken into account they override the focus on shareholders' value. This means that shareholders have vested interest in trying to ensure that the resources are used to maximum effort which in turn benefits the society as a whole Madiavale (2011). The theory takes account of a wider group of constituents, such as employees, providers of credit, customers, suppliers, government and local authority, thus overriding the focus on shareholders' value. The theory would be attractive to the self-interest of managers and directors and encourages earnings management by managers. The theory is also relevant to the study since it explains why earnings management is encouraged in companies.

### The big bath theory of earnings Management

The theory suggests that firms experiencing low earnings in a given year may take discretionary write downs to reduce even further the current period's earnings. Managers may deliberately overstate a company's losses in a given year so as to absorb it from foreseeable losses in subsequent years. Just like the stakeholders theory, this theory is also relevant

to the study on its stance on the importance of earnings management. As one of the study objectives is to determine the extent of earnings management in the unlisted motor industry in Kenya, this theory is relevant as it gives reasons for practicing earnings management.

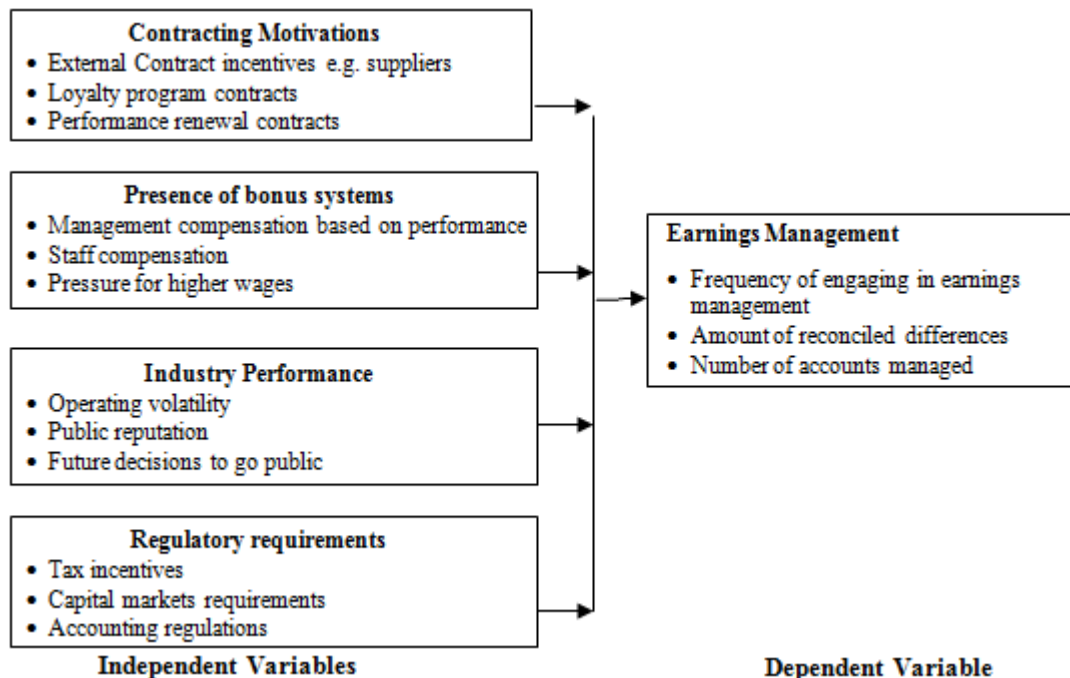
**Empirical Review**

A study was conducted in Norway by Reksten and Kristiansen (2011) who from a sample of approx. 1.5 Million private limited Norwegian companies came to the following conclusion; earnings are managed to overcome small losses in companies' financial reports and that these companies do not use a Big Four audit firm. Furthermore, a study was also conducted in Finland by Sundgren (2007), which explored the existence of earnings management in approximately 200 companies and these findings in relation to debt to equity ratio, where the author finds a correlation between companies with a high debt to equity ratio and the usage of income increasing accounting methods. A study was also conducted in Australia by Sun and Rath (2009) to

establish the industries which had more cases of earnings management. The study used a correlation. They found that, earnings management was present in the Metal & mining Industries, Motor industries, Healthcare, Information technology & telecommunications and Utilities industries.

In Germany, a study by Coppens and Peek (2005) investigated the income distribution of countries with weak and strong ties between tax law and the commercial code and came to the conclusion that in countries with strong ties between tax law and commercial law more earnings management is conducted. Burgstahler, Hail, and Leuz (2006) as well as Dücker and Wagenhofer (2007) conducted a study which focused on examining Austrian companies. They concluded that no significant increase in earnings quality, which would induce a decrease in earnings management.

**Conceptual Framework**



**Figure 1: Conceptual Framework**

**Research Methodology**

The study employed a descriptive study design. The population of study consisted of all the 38 motor companies in Kenya. A census was conducted on the companies. The main data collection instrument was a questionnaire consisting of structured closed and open-ended questions in the collection of primary data. The quantitative data collected was analyzed by calculating response rate with descriptive statistics such as mean, median, and standard deviation. Inferential data analysis was carried out by the use of correlation analysis to determine the strength and the direction of the relationship between the dependent variable and the independent variables. Regression models were fitted. The Pearson correlation tested the strength of the relationship while the regression analysis established the form of relationship between the independent and dependent variable. The regression took the following form:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where: Y = Earnings management, X<sub>1</sub> = Contracting motivations, X<sub>2</sub> = Presence of bonus system, X<sub>3</sub> = Industry performance, X<sub>4</sub> = Regulatory requirements, e = Error term, α = constant and β = coefficient of independent variables

**5. Results**

**Response Rate**

The results for response rate are as indicated in Table 2.

**Table 2: Response Rate**

Response	Frequency	Percent
Filled	36	94.70%
Unfilled	02	5.30%
Total	38	100%

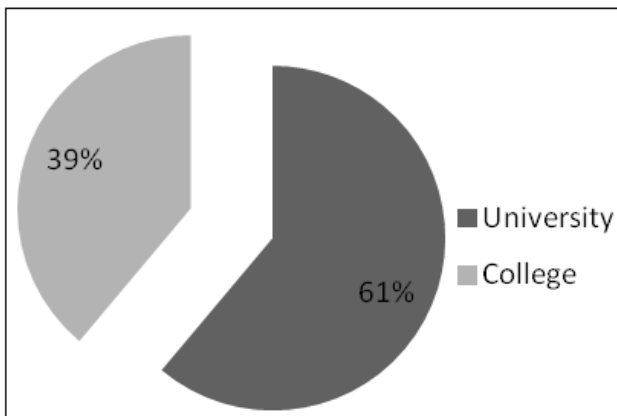
The number of questionnaires that were administered was 38. A total of 36 questionnaires were properly filled and returned. This represented an overall successful response rate of 94.70% as shown on Table 4.2. This confirms an argument by Kothari (2004) that a response rate of 50% or more is adequate for a descriptive study. Babbie (2004) also asserted that return rates of 50% are acceptable to analyze and publish, 60% is good and 70% is very good. Based on these assertions from renowned scholars, 94.70% response rate is adequate for the study.

**Demographic Characteristics**

This section analyzes the demographic characteristics of the respondents. This section presents the descriptions of the respondents in terms of their level of education, profession, their duration in the motor industry and their duration in the current company.

**Level of education**

The respondents were asked to indicate their level of education. The findings are as presented in Figure 1.



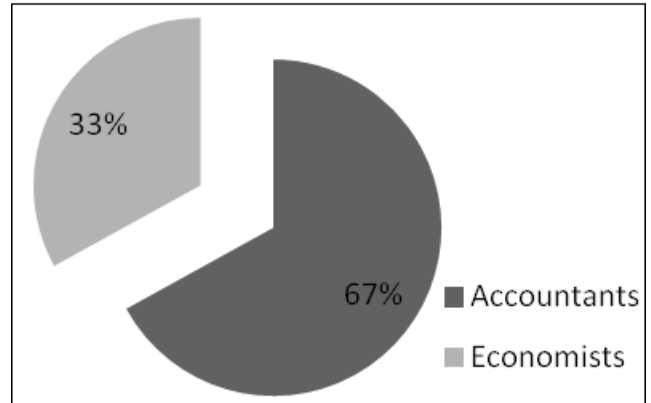
**Figure 1:** Level of education

Results in Figure 1 reveal that majority of the respondents had university level of education as supported by 61% while 39% had college level of education. The results imply that majority of employees in the motor industry in Kenya are

literate. The results can further be compared to the results regarding previous records of earnings management. This higher education level can be said to be associated with higher earnings management.

**Respondent's profession**

The respondents were also asked to indicate their profession. The results are presented in Figure 2.

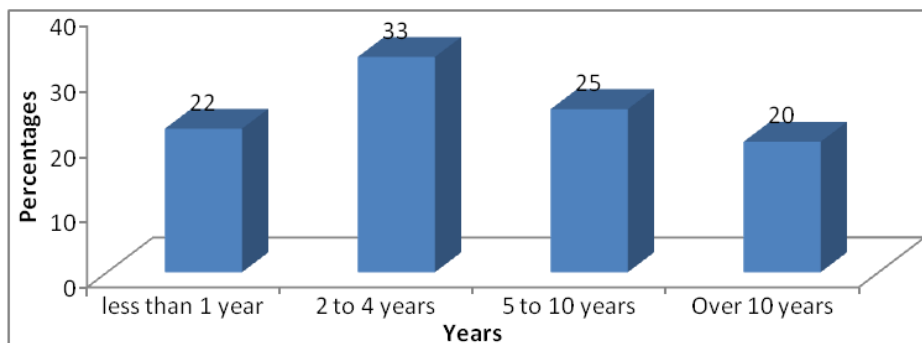


**Figure 2:** Profession of respondents

Results in Figure 2 reveal that majority, 67%, of the respondents were accountants while 33% were economists. This implies that the right groups of respondents who are aware of earnings management were targeted. Financial management is done by the accountants and they are aware of the earnings of the company. They understand better when earnings management is done and hence having a large percentage, 67%, of the respondents as accountants, implies that the study obtained the information from the right target.

**Duration in the Motor industry**

The respondents were asked to indicate how long they had worked in the motor industry. The results are as presented in Figure 3.



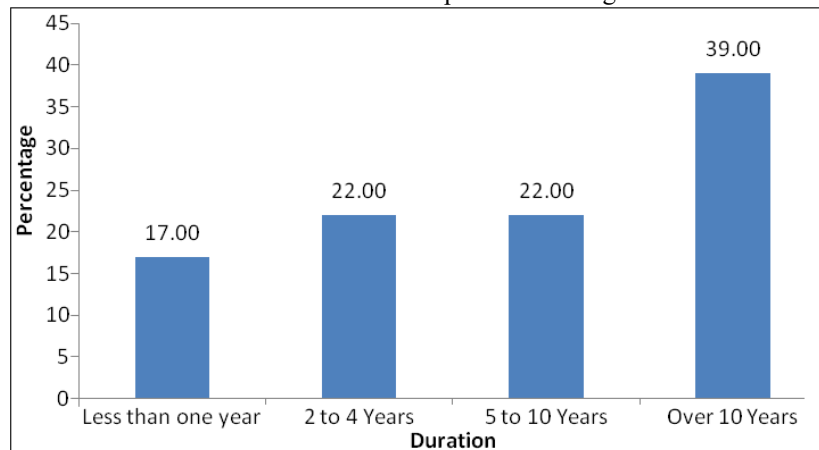
**Figure 3:** Duration in the motor industry

Results in Figure 3 reveal that majority of the respondents, 58%, indicated that they had worked in the motor industry for a period between 2 years and 10 years while 20% had worked for over 10 years. Only 22% of the respondents had worked in the industry for a period less than a year. The results imply that the rate of turnover in the motor industry in Kenya is low. The findings also imply that the respondents targeted by the study had experience in the

motor industry. Having a low percentage number of respondents who have worked in the industry for less than a year implies that there is a low turnover in the industry. Furthermore, the findings mean that very few people work in the industry beyond their 10<sup>th</sup> year in the industry. These findings agree with the findings of a study by Bashir & Durrani (2014) that as people gain more experience in an industry, the rate of turnover decreases.

**Duration with the current company**

The respondents were asked to indicate how long they had worked with their current company. The results are as presented in Figure 4.



**Figure 4:** Duration with the current company

Results in Figure 4 reveal that majority of the respondents, 39%, indicated that they had worked with the current company for a period over 10 years while 44% had worked with the company for a period of between 2 to 10 years. Only 17% had worked with their current company for a period less than 1 year. The findings imply that the respondents had enough details of operation in their respective companies. The results imply that the rate of turnover in specific companies is not high. Having a low percentage number of respondents who have worked in the company for less than a year implies that there is a moderately low turnover in the companies. Furthermore, the findings mean that very few people work in the industry beyond their 10<sup>th</sup> year in the industry as only 39% had worked with their current companies for over 10 years. The findings also agree with the argument by George & Jones (1996) and Flanagan (1974) that labor experience in a company leads to low turnover.

**Descriptive analysis**

The respondents were asked to respond to statements on all the five variables in the study. This section presents the findings.

**Descriptive analysis of contracting motivations**

The first objective of the study was to establish the influence of contracting motivations on earnings management among Non-listed firms in the Motor Industry in Kenya. The respondents were requested to indicate their agreement or disagreement with statements regarding contracting motivations. The statements were on a scale of 1 to 5 where 1 was strongly disagree, 2 was disagree, 3 was neutral, 4 was agree and 5 was strongly agree. The results are as presented in Table 4.3. The results are presented in Table 3.

**Table 3:** Contracting motivations

Statement	1	2	3	4	5	Mean	Std Dev
External contract incentives with suppliers influences the decision to engage in earnings management	13.90%	16.70%	11.10%	27.80%	30.60%	3.44	1.44
External contract incentives with customers influences the decision to engage in earnings management	16.70%	16.70%	13.90%	19.40%	33.30%	3.36	1.51
The need by the senior management to safeguard their tenure plays a role in practicing earnings management	13.90%	16.70%	13.90%	25.00%	30.60%	3.42	1.44
The availability of bonus contract influences the decision to engage in earnings management	13.90%	19.40%	2.80%	25.00%	38.90%	3.56	1.52
The presence of contacts relating to loyalty programmes as a result of better performance influences the decision to practice earnings management	13.90%	16.70%	5.60%	38.90%	25.00%	3.44	1.40
<b>Average</b>						<b>3.44</b>	<b>1.46</b>

The study findings presented in Table 3 indicate that 58.3% of the respondents agreed that external contract incentives with suppliers influences the decision to engage in earnings management, 52.8% agreed that external contract incentives with customers influences the decision to engage in earnings management while 55.6% agreed that the need by the senior management to safeguard their tenure plays a role in practicing earnings management. The respondents who agreed that the availability of bonus contract as well the presence of contacts relating to loyalty programmes as a

result of better performance influences the decision to practice earnings management were 63.9%. The overall average mean score of 3.44 indicates that the respondents were neutral on most of the statements concerning contracting motivations and a standard deviation of 1.46 indicates less variation in the responses. The study findings confirm the argument by Bowen et al. (2007) who suggested that considerations towards contracts with stakeholders, such as customers, suppliers and short term creditors, give companies the incentive to manage earnings although there

are no explicit contracts related to accounting numbers. Suppliers might for similar reasons sell on more favorable terms to firms having used income increasing accounting methods. This is also in line with Louis and Robinson (2005) who indicated that contractual constraints such as debt covenants and compensation contracts provide further incentives to manipulate earnings.

**Descriptive analysis of presence of bonus system**

The second objective of the study was to investigate the influence of presence of bonus system on earnings

**Table 4: Presence of bonus system**

Statement	1	2	3	4	5	Mean	Std Dev
The compensation of senior management attached to performance influences the decision to engage in earnings management	2.80%	8.30%	13.90%	27.80%	47.20%	4.08	1.11
The need to protect private control benefits of senior management influences the decision to engage in earnings management	2.80%	8.30%	27.80%	25.00%	36.10%	3.83	1.11
The need for employee to maximize their income prior to retirement influences the decision to engage in earnings management	11.10%	8.30%	13.90%	41.70%	25.00%	3.61	1.27
The pressure for higher wages influences the decision to engage in earnings management	19.40%	16.70%	38.90%	8.30%	16.70%	2.86	1.31
The need for a new employee to increase their future income potential influences the decision to engage in earnings management	36.10%	25.00%	13.90%	8.30%	16.70%	2.44	1.48
<b>Average</b>						<b>3.37</b>	<b>1.26</b>

The study findings presented in Table 4 indicates that 75.0% of the respondents agreed that the compensation of senior management attached to performance influences the decision to engage in earnings management, 61.1% agreed that the need to protect private control benefits of senior management influences the decision to engage in earnings management and 66.7% agreed that the need for employee to maximize their income prior to retirement influences the decision to engage in earnings management. The findings further indicated that only 25.0% of the respondents agreed that the pressure for higher wages as well as the need for a new employee to increase their future income potential influences the decision to engage in earnings management as well. The overall average mean score of 3.37 indicates that the respondents were neutral on most of the statements concerning the presence of bonus system and a standard deviation of 1.26 indicates less variation in the responses. These study findings are in agreement with the argument by

management among Non-listed firms in the Motor Industry in Kenya. The respondents were requested to indicate their agreement or disagreement with statements regarding presence of bonus system. The statements were on a scale of 1 to 5 where 1 was strongly disagree, 2 was disagree, 3 was neutral, 4 was agree and 5 was strongly agree. The results are as presented in Table 4.4. The results are presented in Table 4.

Leuz et al (2003) who indicated that insiders, in an attempt to protect their private control benefits, use earnings management to conceal the true picture of firm performance from outsiders. This is also supported by an argument by Murphy and Zimmerman's (1993) that a CEO of a poorly performing firm will use earnings management to maximize his/her income prior to retirement.

**4.5.3 Descriptive analysis of Industry performance**

The third objective of the study was to establish the influence of industry performance on earnings management among Non-listed firms in the Motor Industry in Kenya. The respondents were requested to indicate their agreement or disagreement with statements regarding industry performance. The statements were on a scale of 1 to 5 where 1 was strongly disagree, 2 was disagree, 3 was neutral, 4 was agree and 5 was strongly agree. The results are as presented in Table 4.5. The results are presented in Table 5.

**Table 5: Industry performance**

Statement	1	2	3	4	5	Mean	Std Dev
The operating volatility of the macroeconomic environment for example fluctuating inflation rate influences the decision to engage in earnings management practices	11.10%	8.30%	22.20%	30.60%	27.80%	3.56	1.30
The need to protect public reputation of the company influences the decision to engage in earnings management practices	22.20%	12.20%	11.10%	19.40%	35.00%	3.03	1.54
The need to gain investor confidence influences the decision to engage in earnings management	27.80%	16.70%	25.00%	22.20%	8.30%	2.67	1.33
The need to have a sustainable company in the competitive world influences the decision to engage in earnings management	9.40%	8.90%	27.80%	18.30%	35.60%	2.42	1.08
The company's future decisions to go public influences the decision to engage in earnings management	33.30%	44.40%	16.70%	2.80%	2.80%	1.97	0.94
<b>Average</b>						<b>3.58</b>	<b>1.24</b>

The study findings presented in Table 5 on industry performance indicates that 58.3% of the respondents agreed that the operating volatility of the macroeconomic environment for example fluctuating inflation rate influences the decision to engage in earnings management practices,

54.4% agreed that the need to protect public reputation of the company influences the decision to engage in earnings management practices while those who agreed that the need to gain investor confidence influences the decision to engage in earnings management were only 30.6%. The findings

further indicated that only 53.9% of the respondents indicated that the need to have a sustainable company in the competitive world influences the decision to engage in earnings management while 5.6% indicated that the company's future decisions to go public influences the decision to engage in earnings management. The overall average mean score of 3.58 indicates that the respondents agreed on most of the statements concerning industry performance and a standard deviation of 1.24 indicates less variation in the responses. The findings of the study confirm the argument by Gu et al. (2005) who indicated that the variability of cash flows is highly correlated with the variability of accruals, suggesting that higher operating volatility leads to heavier use of accruals to mitigate the timing and matching problems of cash flows. This is further supported by Francis et al. (2005) who argued that the association between TMT ownership and earnings management will be stronger in high-volatility firms than in

low-volatility firms. The findings also agree with Palepu et al. (2004) who argued that future decisions to go public can also have an influence on adoption of earnings management and DuCharme, Malatesta and Sefcik (2004) who argue that market factors related to stock returns play a key role regarding earnings management.

**Descriptive analysis of regulatory requirements**

The fourth objective of the study was to establish the influence of regulatory requirement on earnings management among Non-listed firms in the Motor Industry in Kenya. The respondents were requested to indicate their agreement or disagreement with statements regarding regulatory requirements. The statements were on a scale of 1 to 5 where 1 was strongly disagree, 2 was disagree, 3 was neutral, 4 was agree and 5 was strongly agree. The results are as presented in Table 4.6. The results are presented in Table 6.

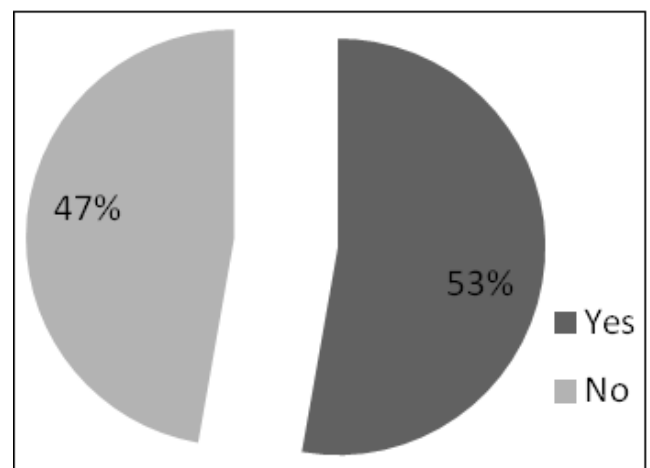
**Table 6: Regulatory requirements**

Statement	1	2	3	4	5	Mean	Std Dev
The need to gain tax incentives influences the decision to engage in earnings management	22.20%	11.10%	16.70%	19.40%	30.60%	3.25	1.56
The capital markets requirements influences the decision to engage in earnings management	19.40%	8.30%	8.30%	22.20%	41.70%	3.58	1.57
Stringent regulations on the calculation of taxable net income influences the decision to engage in earnings management	22.20%	5.60%	16.70%	25.00%	30.60%	3.36	1.53
Accounting regulations regarding depreciation influences the decision to engage in earnings management	16.70%	8.30%	19.40%	22.20%	33.30%	3.47	1.46
Regulations on financial reporting frequency influences the decision to engage in earnings management	25.00%	5.60%	11.10%	22.20%	36.10%	3.39	1.63
Average						3.41	1.55

The findings on regulatory requirements indicate in Table 4.6 reveal that 50.0% of the respondents agreed that the need to gain tax incentives influences the decision to engage in earnings management, 63.9% agreed that the capital markets requirements influences the decision to engage in earnings management while 55.6% agreed that stringent regulations on the calculation of taxable net income influences the decision to engage in earnings management. In addition, 58.3% agreed that regulations on financial reporting frequency influence the decision to engage in earnings management. The overall average mean score of 3.41 indicates that the respondents were neutral on most of the statements concerning regulatory requirements and a standard deviation of 1.55 indicates less variation in the responses. The study findings agree with Chen and Yuan (2004) and Yu, Du and Sun (2006) who indicated that regulations to cross firms have an influence on earnings management. The current findings also confirm the argument Hunton et al. (2006) and Libby et al. (2006) that regulations on auditing have an influence on earnings management. This is also in line with Jackson (2008) who revealed that innocuous reporting methods can motivate managers to engage in real earnings management by altering their subsequent investment decisions. The findings also support the findings of a study by Bhojraj and Libby (2005) which found out that regulations on financial reporting frequency have an influence on earnings management. The findings confirm the findings of a study by Coppens and Peek (2005) which found out that countries with strong ties between tax law and commercial law more earnings management is conducted.

**Earnings management**

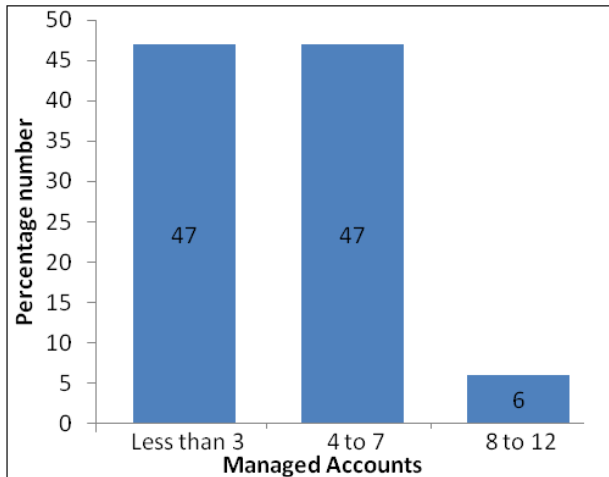
The study sought to generally establish the determinants of earnings management among non-listed firms in the motor industry in Kenya. The respondents were requested to indicate whether their company has ever engaged in the practice of earnings management before. The results are presented in Figure 5.



**Figure 5: Engagement in Earnings management**

The results presented in Figure 5 indicate that majority, 53% of the respondents indicated that the company they are working with has ever engaged in earnings management before while 47% indicate that their companies has never.

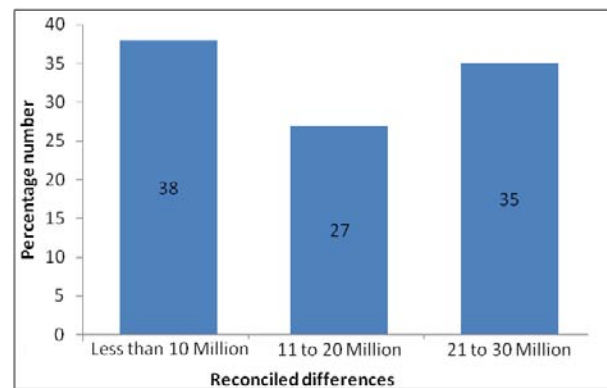
These findings imply that earnings management is indeed practiced in private companies in Kenya and not just the listed and public companies. The results confirm the argument by Burgstahler et al. (2006) who implied that private companies engage more in earnings management compared to public companies. The study also confirms the findings of a study by Ball and Shivakumar (2005) who indicated that earnings management is more existent in private firms. The study further sought to establish the approximate number of managed accounts for the last 5 years. The results are presented in Figure 6.



**Figure 6: Managed accounts**

The findings indicate that 47% of the respondents agreed that the number of managed accounts were less than 3. A further 47% indicated that they were between 4 and 7 while only 6% of the respondents indicated that they were between 8 to 12. These findings also confirm that earnings management is present in private firms. Existence of managed accounts confirms the findings of existence of earnings management in private firms. This confirms the findings of a study by both Burgstahler et al. (2006) as well as Ball and Shivakumar (2005) who indicated that earnings management is more existent in private firms. The study

further established the approximate amount of reconciled differences for the last 5 years for the companies. The results are indicated in Figure 4.7.



**Figure 7: Reconciled differences**

The results in Figure 7 indicate that majority of the respondents, 38%, indicated that the amount of reconciled differences was less than 10 Million while 35% indicated that it is between 21 to 30 million. Those who indicated that the amount is between 11 to 20 million were 27%. First, the results confirm that there is earnings management in private companies. Second, the results indicate that the amount involved in the practice is close to 30 million on average. This confirms the findings of a study by both Burgstahler et al. (2006) as well as Ball and Shivakumar (2005) who indicated that earnings management is more existent in private firms.

### Inferential analysis

#### Correlation analysis

Correlation analysis was conducted to establish the association between the study variables. A correlation matrix was used for correlation analysis. The results are presented in Table 7.

**Table 7: Correlation analysis**

		Contracting motivation	Bonus system	Industry performance	Regulatory requirement	Earnings management
Contracting motivation	Pearson Correlation	1				
	Sig. (2-tailed)					
Bonus system	Pearson Correlation	0.023	1			
	Sig. (2-tailed)	0.893				
Industry performance	Pearson Correlation	-0.027	-0.153	1		
	Sig. (2-tailed)	0.876	0.374			
Regulatory requirement	Pearson Correlation	0.262	.447**	0.096	1	
	Sig. (2-tailed)	0.123	0.006	0.578		
Earnings management	Pearson Correlation	0.294	0.040	-0.394*	0.318	1
	Sig. (2-tailed)	0.121	0.037	0.044	0.093	

The study findings presented in Table 7 indicate that the association between contracting motivation, bonus system as well as regulatory requirement and earnings management is positive while the association between industry performance and earnings management is negative. The association between bonus system as well as industry performance and earnings management is significant at 5% level of significance as indicated by P values of 0.037 and 0.044

respectively. The study findings confirm an argument by Liang (2004) who argued that bonus contracts offer an incentive to acquire accounting policies that increase net income and, thus, increase a manager's bonus. The findings also confirm an argument by Louis and Robinson (2005) who indicated that managers bonus contracts can lead to earnings management since if income is anticipated to be high in upcoming years, a manager will choose to implement



an accounting policy (such as a departure from accelerated to straight-line amortization) that encourages a higher reported net income. The findings further agree with Francis et al.(2005) who argued that bonus related to managers income affect earnings management as the managers have an incentive to manage earnings, either by increasing earnings or by manipulating accounting choices that affect earnings such as managing accruals. The study findings also confirm an argument by Hutchinson and Leung (2007) as well as Kwon, Yin and Han (2006) who argued that industry requirements influence earnings management.

**Regression Analysis**

An ordinary regression analysis was also conducted to establish the determinants of earnings management among non-listed firms in the motor industry in Kenya. The results for the model summary are presented in Table 8.

**Table 8: Model Summary**

R	R Square	Adjusted R Square	Std. Error of the Estimate
.598a	0.357	0.25	1.125

The results in Table 4.8 indicate that the predictor variables (contracting motivations, presence of a bonus system, industry performance and regulatory requirements) are jointly positively correlated to earnings management as indicated by an R of 0.598. Furthermore, the four predictor variables explain up to 25% of the changes in the frequency of earnings management among non-listed motor companies in Kenya as indicated by an R-square of 0.25. This implies that the remaining 75% of the changes in the frequency of earnings management among non-listed motor companies in Kenya is explained by other factors not considered in this study. The model fitness was also established and the results are presented in Table 9.

**Table 9: Model Fitness**

	Sum of Squares	df	Mean Square	F	Sig.
Regression	16.866	4	4.216	3.331	0.026
Residual	30.376	31	1.266		
Total	47.241	34			

The study findings in Table 9 indicate that the F statistic of 3.331 was significant at 5% level of significance implying that the model fit well. The variable coefficients were lastly established and the results are presented in Table 10.

**Table 4.10: Model coefficients**

Indicator	B	Std. Error	t	Sig.
(Constant)	-1.344	1.509	-0.891	0.382
Contracting motivation	0.196	0.267	0.731	0.472
Bonus system	0.346	0.168	2.453	0.031
Industry performance	-0.701	0.35	-2.205	0.046
Regulatory requirement	0.389	0.192	2.027	0.054

The study findings indicated in Table 4.10 reveal that the relationship between contracting motivation, bonus system as well as regulatory requirement and earnings management is positive while industry performance is negatively related to earnings management. The relationship between bonus system as well as industry performance and earnings management is however significant as indicated by P values

of 0.031 and 0.046 respectively. The findings imply that bonus system is positively related to earnings management indicating that an increase in bonuses leads to an increase in frequency of earnings management. Furthermore, an improvement in industry performance is related to a decrease in earnings management.

The final regression model is:

$$\text{Earnings management} = -1.344 + 0.346 \text{ Bonus} - 0.701 \text{ Industry performance.}$$

The findings confirm the findings of a study by Fields et al. (2001) who stated that several studies suggest that bonus contracts can give managers the incentive to manage earnings. The findings further confirm the findings of a study by Watts (2003) which indicated that bonus schemes create an incentive for managers to select accounting procedures and accruals to increase the present value of their awards. These findings are however inconsistent with the argument by Kim, Pandit and Wasley (2015) who stated that during periods of high macroeconomic uncertainty there is a decrease in the likelihood of earnings management, consistent with managers assigning a higher cost to releasing forward-looking information as macroeconomic uncertainty increases.

**6. Conclusions**

Based on the study findings, the study concludes that contracting motivations is positively and insignificantly correlated to earnings management. Contracting motivations is also positively but insignificantly related to earnings management. The major contracting motivations that influence earnings management are external contract incentives with suppliers, external contract incentives with customers, the need by the senior management to safeguard their tenure and availability of bonus contract as well the presence of contacts relating to loyalty programmes as a result of better performance. The study findings also led to the conclusion that presence of a bonus system is positively and significantly correlated to earnings management. Presence of a bonus system is also positively and significantly related to earnings management. Another conclusion is that among the major determinants of earnings management related to bonus system is the compensation of senior management attached to performance, the need to protect private control benefits of senior management and the need for employee to maximize their income prior to retirement.

The study also concludes that industry performance is negatively and significantly correlated to earnings management. Furthermore, industry performance is positively and significantly related to earnings management. The major determinants of earnings management in regard to industry performance are operating volatility of the macroeconomic environment for example fluctuating inflation rate, the need to protect public reputation of the company, the need to have a sustainable company in the competitive world and the company's future decisions to go public. The study lastly concludes that regulatory requirements are positively and insignificantly correlated to earnings management. Furthermore, it is positively but

insignificantly related to earnings management. Another conclusion is that, the need to gain tax incentives, the capital markets requirements, stringent regulations on the calculation of taxable net income and regulations on financial reporting frequency are the major regulatory requirements components that influence earnings management.

## 7. Recommendations of the Study

The study conclusion led to the recommendation that since contracting motivations is positively related to earnings management, companies should relook at their contracts both internal and external so as to avoid a case where contractual motivations lead to earnings management. The contracts involving senior management tenure as well as bonus contract should be balanced well so as not to lead to earnings management. The study also recommends that motor companies should take note of a proper balance between availing bonuses and compromising performance since bonus structures such as the compensation of senior management attached to performance and private control benefits of senior management can lead to the pressure to engage in earnings management.

Majority of factors regarding industry for instance volatility in macro-economic environment are beyond the control of the company. The management of these companies should therefore not demand too much when the country's economy is volatile. The study recommends that the market and industry regulators like capital market authority should also not put too strict requirements especially on taxing and accounting principles since that may lead to earnings management in the sector. The regulations on financial reporting frequency by the company should not be so strict as this puts pressure on the management to engage in earnings management.

## 8. Suggested Areas for Further Study

The current study investigated the determinants of earnings management practice among non-listed firms in the motor industry in Kenya. A similar study can be conducted in a different context for instance non listed manufacturing firms or non-listed companies in other service industry other than motor.

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