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Determinants of Corporate Risk Management: Does Board Size and Tenure Matter? Panel Data Approach from Kenyan Publicly Listed Firms

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Abstract

The investors' weakening confidence towards corporate risk management particularly after the crisis has made corporate governance a top priority for the board. The awareness of risk is growing and firm practices have increasingly become organized around risk. The purpose of this paper is to investigate determinants of corporate risk management by taking into consideration board size and board tenure. The study was informed by Modern Portfolio Theory while panel approach was deemed to be appropriate. Based on inclusion-exclusion criteria, 49 firms were sample from 2013-2019 giving a total of 343 firm-year observations. The findings revealed that board size had a positive and insignificant effect while board tenure was significant and positively related to corporate risk management. The longer the experience of managers, the more knowledgeable they become thus more capable of managing corporate risk. This study contributes by providing additional empirical evidence regarding determinants of corporate risk management.

Keywords: Corporate Risk Management; Board Size; Board Tenure; Modern Portfolio Theory.

JEL Classification: G20, G30, G32.

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1. Introduction

In the wake of several large corporations' failures and the recent financial crisis, boards of directors, as guardians of shareholder value, play an increasingly important role in risk management. Boards of directors are responsible for the identification, assessment, and management of all types of risk, including business risk, operating risk, market risk, and liquidity risk (Council, 2010). These recent events have led to a variety of changes in regulations and listing rules leading to a stricter interpretation of the fiduciary responsibilities of directors and the issuance of best practice governance standards. These standards have resulted in growing expectations for boards of directors thus must exercise greater oversight of their organization's risk management processes (Gupta and Leech, 2014). A risk is an event that managers need to face to gain profit and avoiding risk means giving up the opportunity to gain profit. The manager needs to manage factors that stimulate risk so that they can pursue strategic advantage and opportunity arise from the risks (Hoyt and Liebenberg, 2015; Miccolis and Shah, 2000). Corporate risk management is a vital activity to ensure business sustainability which in the era of globalization, firms have to encounter a myriad of risks that sometimes is beyond their control. Therefore, an effective risk management system is imperative for a firm to be successful and sustained in today's challenging business world. Risk is an integral feature of business activity.

The risk oversight function of the board of directors, as a central corporate governance mechanism, has never been more critical and challenging than it is today. The risks that companies face are becoming more complex, interconnected, and potentially devastating than ever before (Maingot et al., 2012). Information related to corporate governance and risk management could help the companies to fulfill the need of the investors. According to Ismail and Rahman (2011), reporting on the risks will help to inform investors about the companies' future financial position. Risk management has emerged as a key success factor and a priority for companies (Grove and Clouse, 2016). Effective risk management not only helps companies avoid costly financial distress and sustain investment programs, but also improves company-wide decision making. Emphasis has been given to the important role boards have in managing risks. The corporate governance system and particularly the board of directors plays a central role in reducing information asymmetry, planning and managing most of the strategies and risks, and consequently promoting the increase of firm value. Nevertheless, the ability of the board to successfully achieve its goals depends largely on its attributes (Gouiaa and Zéghal, 2009). Boards of directors have the responsibility for determining an appropriate level of risk appetite to achieve their objectives.

External pressure on the board is based on the foundation of the agency theory that claims stronger control over risk management strategies and activities will lead to substantial improvements in risk management and will lead to more informed decision-making (Ittner and Keusch, 2015). Boards that fail to meet monitoring and control requirements leave their businesses vulnerable to significant risk management failures (McNulty et al., 2013). The composition of the board of directors is part of the corporate governance mechanisms and has special correlations with one another according to theoretical principles of corporate governance and risk management. Nowadays, this is widely accepted in financial literature that risk management can lead to conflicts of interest between managers and shareholders. This conflict is exacerbated particularly at the time when executive directors receive a reward based on the stock options.

The investors' weakening confidence towards corporate risk management particularly after the crisis has made corporate governance a top priority for the board, top management, auditors as well as stakeholders (Sobel and Reding, 2004). Due to this development, the awareness of risk is growing and firm practices have increasingly become organized around risk. Given the increased significance of the risk oversight role in the current risk environment, a company's risk management system should function to bring to the board's attention the company's most material risks and permit the board to understand and evaluate how risks interrelate, affect the company, and to be managed. Despite the importance of risk management has been recognized, the actual role of the board of directors in the risk management context still lacks common interpretation. Recent studies have addressed various roles played by the board on risk management, and within the study knowledge, very few particularly in the emerging economy like Kenya. Therefore, this paper was intended to address the determinants of corporate risk management by taking into consideration board size and board tenure.

2. Theoretical Review

The theory anchoring the research is Modern portfolio theory which states that shareholders use portfolio diversification to costless eliminate firm-specific (idiosyncratic) risks, leading many financial economists to doubt whether ERM can add value to the firm. Stulz (1996), however, argues that risk management creates value by reducing or eliminating the costs and losses of financial distress. Froot et al., (1993) advocate that risk management adds value if it helps the firm avoid unfavorable outcomes, or states of the world, that prevent it because of insufficient internal funds from investing in attractive, positive net present value opportunities. This theory suggests that risk management is

more valuable for highly leveraged companies that also have volatile earnings, and limited cash reserves. Companies with high growth options associated with future unrealized cash flows and high levels of current research and development research and development also benefit from risk management (Sum and Khalik, 2020; Desender and Lafuente, 2009).

3. Review of Literature

3.1. Board size and Corporate Risk Management

Board size is considered as one of the significant dimensions of board characteristics, and it is measured as the overall number of directors (executive and nonexecutives) serving on the board of a company (Vafeas, 2000). Board size refers to the number of directors sitting in a single company (Rachdi and Ameur, 2011) and it is an important element that determines the effectiveness of the board. It has been hypothesized that a larger board leads to diversity that would assist firms in safeguarding their resources and as well, lessen the uncertainties in their operating environment and ensure effective management decisions (Dahya and McConnell, 2005). According to Jensen and Meckling (1976), they argued that a bigger size board of directors may improve the companies' board effectiveness and support the management in reducing agency cost that resulted from poor management and consequently leads to better financial results. Decision-making costs are assumed to be lower in smaller boards than in larger boards and as such, smaller boards might be more effective monitors. If boards are acting in the interest of shareholders, then one may expect board size and risk to be inversely related. If, on the other hand, boards are more concerned with the interests of regulators, one may expect a negative relation between board size and risk. Cheng (2008) also argues that because of the coordination problems that can arise in larger boards the decisions of larger boards might be less extreme, resulting in lower levels of risk.

Recent years have seen heightened concern and focus on risk management, and it became increasingly clear that a need for a robust framework to effectively identify asses, and manage risk (Yazid, 2011). Moreover, companies face a lot of risky activities involved in various types of risks such as physical risk, interest rate risk, political risk, and investment risk. Jensen (1993) confirmed that the smaller board size is more correlated with the quality of monitoring. The board becomes less effective in monitoring management when its size increases. The study recommended that board members should be between eight and nine persons, and any additional benefits that can be gained from the increased monitoring by additional membership will offset the costs linked with slow decision making (Lehn et al., 2009; Lipton and Lorsch (1992).

The size of the board plays an important role in the ability of directors to control executives and oversee the accounting and financial process (Belkhir, 2009; Mak, &

Kusnadi, 2005; Pearce and Zahra, 1992;). The effectiveness of the board's oversight increases with its size because of the possibility of distributing the workload to a larger number of observers (Klein, 2002). Besides, large boards allow for better monitoring and are more effective at controlling by providing greater expertise (Gafoor et al., 2018). If larger boards are more efficient controllers of the accounting and financial process, information users should benefit through more effective risk management. The findings by (Limpaphayom and Connelly, 2006; Beiner et al., 2004, Bhagat and Black, 2002) found no significant association between board size and risk management.

More empirical studies by Mohammadi and Lotfi, (2013), found a positive correlation between board size and risk management implying that by increasing the board size the risk management is increased. The reason is that a larger board is more likely to be alert to the agency's problems, because, more people will supervise the work of the management. Finally, Maruhun et al., (2018) found a positive and significant relationship between board size and risk management thus revealing that board size is an important determinant of risk management.

Other empirical evidence revealed the negative relation between board size and risk which reflects an equilibrium in which both variables are jointly determined in response to the firm's environment (Hermalin and Weisbach, 2003). For example, firms may consider smaller boards to be better suited to risky business conditions. In that case, decreasing the board's size will not induce greater risk taking. On the other hand, the notion that risk is related to the complexity of the firm's operations suggests that risky firms should operate with larger boards because of their greater need for advice and monitoring (Coles et al., 2008; Linck et al., 2008; Guest, 2008). The results show that the size of the board of directors has a negative and significant relationship with financial risk management (Gouiaa, 2018). According to Salhi and Boujelbene (2012), they found that a smaller board size helps to decrease risk management. Wang, (2012) found that companies with smaller boards are associated with higher future risk thus supporting the hypothesis that board size has a negative correlation on a firm's risk management. The study therefore hypothesis that:

H₀₁: *There is no significant relationship between board size and corporate risk management.*

3.2. Board tenure and Corporate Risk management

The tenure of a firm's directors at the aggregate level affects both the level of the board's firm-specific knowledge as well as the extent of its independence. Administrators with long-term tenure on the board of directors accumulate greater experience and expertise (Vafeas, 2003; McDonald et al., 2008; Reguera-Alvarado and Bravo, 2017). A

long-term mandate increases the quality and effectiveness of the board in the performance of its duties as the mandate term is associated with greater experience, commitment, and knowledge of the organization and its business environment. According to Anderson et al., (2004), effective supervision is an acquired skill, which implies that boards of directors made up of more experienced directors can provide greater oversight. Considering the above, boards of directors who opt for longer directorships would be less likely to take excessive risks. An experienced manager as a result of long tenure may possess sufficient firm- and job-specific skills that are necessary to take strategic risks (Simsek, 2007). Some studies also suggest that experiences promote strategic risk management practices that not only ensure improvement of shareholder value but also its sustainable development capability.

Director chooses the risky project regardless of her ability, resulting in excessive risk management. In the context of a dynamic environment, (Fu and Li 2014) argued that a privately informed board has the incentive to engage in a risky reform to be perceived as able to perform. The results by Fu and Li (2014) suggest board tenure is positively associated with risk management if the manager possesses private information about her ability. The findings by Gouiaa, (2018) revealed that board tenure had a positive and significant effect on risk management.

From existing literature, there are several interpretations of corporate board tenure. Longer tenure increases the managerial power experiences of a manager (Chakraborty et al., 2017; Simsek, 2007; Ryan and Wiggins 2004). As tenure increases, managers also have more non-diversified human capital invested in the firm (Berger et al. 1997), a newly-appointed manager may have strong concerns for her future career prospects thus this might influence his willingness to manage risk. The predictions for the relationship between tenure and risk management based on the other interpretations are uncertain but have a significant effect on the overall productivity of the organization. The findings by (Holmstrom 1999), revealed that board tenure and risk management are negatively and significantly associated. A differential impact of managerial tenure on risk management is expected conditional on the level of information asymmetry regarding the ability of the manager. The study therefore hypothesis that:

H₀₂: *There is no significant relationship between board tenure and corporate risk management.*

4. Research Methodology

The study adopted a panel approach research design which was deemed to be appropriate in establishing the link between predictor and outcome variables over several years. Data were collected from audited financial statements reports of publicly listed

entities from January 2013 to December 2019 while the target population comprised of 67 listed firms. Based on inclusion-exclusion criteria, 49 firms were consistently operating for the 7 years irrespective of their industry or market segment giving a total of 343 firm-year observations. As pointed by Hsio (2014), panel data have the strength of accommodating more observations over a given period hence increasing the degree of freedom. The study proceeds to test the formulated hypotheses where the researcher analyzed the effect of board size and board tenure that may have an effect on corporate risk management using the following multiple linear regression model.

$$Y = \beta_{0it} + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it}$$

Where;

X_1	=	Board size,
X_2	=	Board Tenure,
β_0	=	Constant
$\beta_1 - \beta_2$	=	Coefficient of estimates,
Y	=	Corporate risk management,
ε_{it}	=	Error term.

4.1. Measurement of the Variables

Corporate risk management was measured in terms of checking the appointment of chief risk officer, senior risk management, risk management director, deputy risk management director, and enterprise risk management director. Board size was measured by the number of directors on the board (Rachdi, and Ameur, 2011). Board tenure was measured by dividing the number of years the firm's directors have served on the board by total directors serving the board (Jackling and Johl, 2009).

5. Results & Findings

5.1. Descriptive Statistics

The statistical summarized results of board size and board tenure are presented in Table 1. Results indicated that publicly listed firms had board size with a (mean = 8.80, standard deviation = 2.76 skewness = 0.09, and kurtosis = -0.04) implying that the number of directors on the board on average was 9 members. A review of board tenure which is indicated by the number of years the

directors have served on the board revealed that they have been in the company between a minimum of 1 year and a maximum of 15 years with a (mean = 4.88 standard deviation = 2.45, Skewness = 1.44 and Kurtosis = 2.67). This implies that on average the tenure of the board is 5 years.

Table 1. Descriptive statistics

	N	Min.	Max.	Mean	Std. Dev.	Skewness	Kurtosis
<i>Board Size</i>	343	3	17.00	8.80	2.76	0.09	-0.04
<i>Board tenure</i>	343	1	15.55	4.88	2.45	1.44	2.67

5.2. Correlation Results

Correlation is a method of assessing a probable two-way linear association between two measurable variables. From table 2, the findings revealed that board size had a positive and significant correlation with corporate risk management ($r = 0.158$, $p < 0.01$). The findings also revealed that board tenure had a positive and significant correlation with corporate risk management ($r = 0.243$, $p < 0.01$) an indication of a 24.3% positive relationship with the outcome variable.

Table 2. Correlation Matrix

	<i>Corporate Risk Management</i>	<i>Board Size</i>	<i>Board Tenure</i>
<i>Corporate Risk Management</i>	1		
<i>Board Size</i>	0.158**	1	
<i>Board Tenure</i>	0.243**	0.309**	1

5.3. Hypothesis Testing

Statistical findings from Table 3 revealed that the model summary of multiple regression was at R squared =0.383 implying that approximately 38.3 percent of the variation of corporate risk management is explained by both board size and tenure. The contribution was statistically significant at $p < 0.05$ confidence level.

The board size findings showed a positive coefficient of estimates and were statistically insignificant (0.021, $p = 0.634$), signifying that board size does not affect corporate risk management. The findings are consistent with the studies by (Limpaphayom and Connelly, 2006; Beiner et al., 2004, Bhagat and Black, 2002) found no significant association between board size and risk management.

However, the results are in contrast with empirical studies by (Maruhun et al., 2018; Mohammadi & Lotfi, (2013), where they found a positive correlation between board size and corporate risk management. Whereas, (Gouiaa, 2018; Salhi and Boujelbene, 2012; Wang, 2012) revealed that the size of the board of directors have a negative and significant relationship with corporate risk management .

Finally, the statistical findings revealed that board tenure had a coefficient of estimates which was significant and positive based on (0.142, $p < 0.05$) values. Therefore, board tenure significantly affects corporate risk management. This suggested that there was up to 0.142 unit increase in corporate risk management for each unit increase in board tenure. The t-test value was at 3.353 which surpasses the standard error by over 3 times. The findings are consistent with Gouiaa, (2018) who found that board tenure had a positive and significant effect on corporate risk management. The results by Fu and Li (2014) suggest board tenure is positively and significantly associated with risk management if the manager possesses private information about its ability. The findings are in contrast to (Holmstrom 1999), who found that board tenure and risk management are negatively and significantly associated. A differential impact of managerial tenure on risk management is expected conditional on the level of information asymmetry regarding the ability of the manager.

Table 3. Regression Results

	Coefficient	T-stats.	P-Value	Collinearity Statistics	
				Tolerance	VIF
<i>Intercept</i>	3.079	4.994	0.000	-	-
<i>Board Size</i>	0.021	0.476	0.634	0.897	1.115
<i>Board Tenure</i>	0.142	3.353	0.001	0.938	1.066
<i>R-Squared</i>	0.393		Durbin-Watson	1.1714	
<i>Adj. R-Squared</i>	0.383		F-Stats.	39.064	

Note: Dependent variable is Corporate Risk Management

6. Conclusion and Recommendations

The finding of the study indicates that small boards are effective in managing corporate risks due to efficiency in decision making and coordination. Though increasing board size links the organization with the external environment and secures a wide array of

resources, large boards are associated with challenges in communication and are likely to face the problem of free-riding hence reducing their effectiveness in managing risks. The study established that a small board is effective in managing corporate risk. It is therefore imperative for firms to have a board with at least 8 members to benefit from efficiency in decision making and coordination. Further, embracing a smaller board enhances effectiveness in managing risks and the minimal situation of information asymmetry.

The finding of the study also indicates that board tenure impacts positively on corporate risk management. The longer the experience of managers, the more knowledgeable they become. As a result, they are more capable of managing corporate risk. Further, the accumulation of experiences results in less risk-taking and in cases where the board tenure of executive directors was greater than that of non-executives. There is evidence from the study that board tenure impacts positively on corporate risk management. It is, therefore, necessary for the firm to retain managers that have a vast wealth of experience since they are knowledgeable and more capable of managing corporate risk. Re-election of board members that have served for more than 9 years would be an important strategy for firms to embrace.

The results contribute to enriching the accounting and financial literature by showing the importance of the board's characteristics, as the main governance mechanism, in determining risk management practices. This study reveals that companies are encouraged to strengthen the attributes of their boards of directors to maximize efficiency in the performance of their duties and to ensure more effective risk management that allows them to take advantage of the opportunities that arise, by controlling the associated risks. This study provides additional empirical evidence regarding determinants of corporate risk management.

This study was conducted to analyze the effect of board characteristics on corporate management in a case of listed firms in the Nairobi securities exchange, Kenya. This study included only two factors, there could be some other relevant factors that may be perceived as important but were excluded from this study. Further research, may consider other factors such as the presence of a risk committee, board independence, and the minimum educational requirement for directors sitting on the board to establish whether they understand subjects related to risk and risk management. Moreover, including moderator factors and looking forward to direct and indirect relationship towards corporate risk management can also be made by future researchers.

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