

Does Board Ownership Affect Bank Risk-Taking?



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ABSTRACT: The purpose of this study is to examine the effect of board ownership on risk-taking. The study uses a sample of 31 Kenyan banks and data for 2008-2018. The study finds that board ownership has a significantly negative effect on risk-taking. In addition, the results indicate that firm age, size, and bank capitalization positively affect risk-taking. Thus, the study has both managerial and policy implications.

KEYWORDS: Board ownership, risk-taking, commercial banks.

1. INTRODUCTION

The concept of risk-taking is vital and essential to all firm types in current Finance literature; hence, it has received considerable attention among scholars, practitioners, and regulators, particularly in the banking sector. Risk denotes the possibility that an asset will yield less than expected return or an investment yielding a negative return (losses) or the extent to which the worst outcome anticipated falls below the expected return. Lee and Bourdage (2020) describe risk-taking as "the engagement in behaviors that are associated with some probability of undesirable results."

Studies have revealed that risk-taking is necessary for all types of firms. In light of risk-taking, the 2007/2008 global financial crisis has reignited debate regarding the need for effective measures to curb excessive risk-taking, particularly in the banking sector. Furthermore, studies have revealed that the susceptibility of the banking sector during the crisis was partly caused by a build-up of excessive risks by some banks before the crisis (Brunnermeier, 2009; DeYoung, Peng, & Yan, 2013). Hence, there is a need for proper decision-making regarding risk-taking to contain its adverse effects, with literature suggesting measures like corporate governance through sound risk management and reporting.

Corporate governance entails the pursuit of objectives by the board and management that represent a company's interest and shareholders, including effective monitoring and efficient use of resources (Hope, 2017). Further, studies have viewed corporate governance as a set of institutional and market-based mechanisms, instruments, and rules established with the sole purpose of fulfilling one or many among the following objectives: (i) to mitigate agency problems which arise when firm ownership and control; (ii) to protect stakeholders' interests; (iii) to enhance corporate efficiency, as expressed by firm performance; and (iv) to ensure investors satisfaction through adequate return on their investment (Brychko, & Semenog, 2018; Aguinis and Glavas 2012; Jones 2010; Abor and Adjasi 2007). While corporate governance has been researched from several perspectives, ranging from performance governance codes (Blok, 2020) to relationship governance (Midttun & Martinussen, 2005) and from self-regulatory frameworks (Gond, Kang & Moon, 2011) to E-governance (Moon, 2002) corporate governance in banking has been focused on too; (Hunjra, Hanif, Mehmood, & Nguyen, 2020; Anginer, Demirgüç-Kunt, Huizinga, & Ma, 2017; Srivastav, & Hagendorff, 2016; Laeven, & Levine 2009).

Among the important aspects of corporate governance cited by literature is board ownership (Hambrick & Jackson, 2000). Board ownership represents the shareholdings of all members of the board of directors, executive and non-executive (Al Farooque *et al.*, 2007).

Moreover, (Tong 2015) claim that the importance of board ownership is twofold. First, greater stock ownership by the board increases the director-shareholder interest alignment. Studies have shown that directors are motivated by such interest alignment to be more vigilant in monitoring top management activities, examining proposals that improve management control, and defending shareholders' interests due to the stake the directors have in the company (Denis *et al.*, 1997; Mallette & Fowler, 1992; Kosnik, 1990). Second, among the sources of power listed by literature, ownership is one of the critical sources of power as owners

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have associated voting rights commensurate with the portion of total shares held (Finkelstein, 1992; Haynes & Hillman, 2010; Zald, 1969). Hence, boards with relatively larger equity stakes tend to exert more pressure to monitor and control executive activities (Lorsch & MacIver, 1989). Hambrick & Finkelstein (1995) further argue that the board's more significant influence over increased director equity ownership in a firm. In summary, boards with greater ownership have stronger motivation and more power to monitor managers (Moudud-Ul-Huq, Biswas, & Dola, 2020).

The link between board ownership and risk-taking has been subject to extensive research, although the findings are mixed and inconclusive. On the one hand, some suggest a positive relationship (Arouri, Muttakin, Hossain, & Al Farooque, 2014; Yeh, 2017), on the other show a negative relationship (Nodeh, Anuar, Ramakrishnan, Rafatnia, & Nodeh, 2015; Randøy, & Goel, 2003) yet some studies are showing no relationship (Gleason, 1999). Furthermore, most existing studies focused on developed countries with strong corporate governance codes, thus difficult to generalize the findings in developing and emerging economies with weak corporate governance mechanisms. Therefore, this study seeks to investigate the effect of board ownership on risk-taking among commercial banks in a developing country, using Kenya as a case study. Thus, this study's hypothesis;

H1. Board ownership has no impact on risk-taking.

This paper is organized as follows. The following section explores the empirical literature on board ownership and risk-taking. The following section discusses the research methodology, target population and data, measurement of variables, and estimation model. The fourth section presents the results and the discussion. The fifth section concludes. The final section discusses the managerial and policy implications, the limitations of the study, and suggestions for further research.

2. LITERATURE REVIEW

Jensen and Meckling (1976) argue that the more managerial ownership, the less agency costs. Also, Jensen and Fama (1993) contend that the board of directors is crucial to effective internal control systems: "The problems with corporate internal control systems start with the board of directors. At the apex of the internal control system, the board has the final responsibility for the firm's functioning. Most importantly, it sets the rules of the game for the CEO." Therefore, the consequence of a dysfunctional corporate internal control system is the failure of the firm

Jensen (1993) suggests that many problems occur because neither managers nor directors usually own a substantial proportion of the firm's equity, which decreases the incentives of directors and officers to pursue the shareholders' interests.

Board members' interest in shareholding and its potential on board's effectiveness has continued to elicit a lot of interest in corporate governance research. Board ownership is the percentage of shares owned by all directors, thus aligning the interest between management and shareholders (Ozbek & Boyd, 2020). Studies show that managerial ownership and directors' ownership align agents' interests with those of the principal. When board members become part owners of the business, their level of motivation is proportionate to that of the shareholder. The board will not assume risks that jeopardize. These shareholders' wealth (Jehu & Ibrahim, 2019). Kim and Lu 2011)

While agency theory suggests that greater insider ownership improves shareholders' wealth, a competing argument focuses on the effect of management entrenchment by significant insider ownership (McClelland *et al.*, 2012). As insider ownership increases, they are likely to have greater control of the firm, leading to a greater chance that powerful managers will entrench themselves for self-serving purposes by avoiding market discipline.

Van den Bergh and Levrau (2004) argue that increased transparency of board discussions improves the quality of corporate governance. However, transparency may change the nature of incentives for stock-owning versus non-stock-owning directors. Stock-owning directors face potential reputation harm associated with being perceived by investors as acting selfishly. Directors place a high value on preserving their reputation (e.g., Srinivasan 2005; Hunton and Rose, 2008), and the study expect that the stock-owning directors would be less likely to agree with management when transparency is high, relative to low because supporting management's attempts to manage earnings could be viewed as self-serving decisions to increase personal wealth. Financial experts, however, might affect firm policies beyond more accurate disclosure and better audit committee performance. Directors spend a significant portion of their time on advising rather than monitoring (Adams & Ferreira, 2003)

Strock and Travlos (1990) provide evidence that stockholders-controlled banks have more incentives to take a higher risk than those controlled by managers. If stockholders prefer more risk than non-owner managers and stock ownership aligns managers and directors with owners, then the probability of financial distress in a bank would be higher when managers and directors own a higher proportion of the equity.

Studies on the effect of board ownership on risk-taking yield mixed findings, with some studies supporting a positive relationship (Arouri, Muttakin, Hossain, & Al Farooque, 2014; Yeh, 2017; Nodeh, Anuar, Ramakrishnan, Rafatnia, & Nodeh, 2015); some research findings oppose positive relationship (Randøy, & Goel, 2003)

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Arouri, Muttakin, Hossain, & Al Farooque (2014) researched the effect of board composition on risk-taking; the authors employed data drawn from a sample of 270 firms over 2005 – 2010. Board ownership was measured as the percentage of the firm's equity that the executives on the board hold, while risk-taking was measured by Z score. Findings show a positive and significant relationship between board composition and risk-taking meaning, and a higher executive equity ownership significantly increases a firm's total risk.

In a study done by Yeh (2017) examining the association between corporate governance and default risk by considering 78 publicly listed banks in the Japanese Region shows no significant relationship between board ownership on risk-taking. On the contrary, a study was done by Nodeh, Anuar, Ramakrishnan, Rafatnia, & Nodeh (2015), who explored the effect of bank board structure determinants (board independence, board size, and concentrated ownership) on financial performance and level risk-taking, and used a sample of 37 Malaysian Islamic and conventional banks for the period 2005-2014, indicate a significant and negative effect of board ownership on risk-taking. Further, the authors find that the other dimensions of board structure had a positive effect.

Randøy & Goel (2003), in their study on ownership structure, founder leadership, and performance in Norwegian SMEs, and employing a sample of 68 small- and medium-sized enterprises (SMEs) publicly traded in Norway, found a significantly negative relationship between of board ownership on risk-taking and firm value. Risk-taking was measured as the debt of total assets, while board and inside ownership is the percentage of all shares owned or controlled (through direct representation) among the board members and the CEO.

Employing a sample of 300 banking firms and logit regression model, Simpson and Gleason (1999) investigated the impact of board structure and ownership on financial distress (measured by bank's risk-taking) in banking firms. The findings of this show no significant relationship between board ownership (ratio of shares owned by the directors to the total shares) and the probability of financial distress in the future. Further, the findings show that the combined equity ownership of directors and officers and the individual equity ownership of the CEO did not affect. The percentage of insiders on the board and the number of directors on the board do not appear to impact future financial distress.

Hayes *et al.* (2005) explored the interactions between the percentage of shares held by directors and firm performance. Using a sample of S&P 500 firms for the period 1997 and 1998, they report a significant positive relationship between the percentage of shares held by independent directors serving on the finance & investment committee as well as on the strategy committee (but not in the other committees) and firm's performance. A positive relationship is found between the fractions of shares held by CEOs and firm's performance.

3. RESEARCH METHODOLOGY

3.1. Sample and data

The target population consists of all the commercial banks in Kenya in operation between 2008 to 2018. As of 2018, Kenya had 42 registered commercial banks and one mortgage company recognized as a bank. However, after applying the inclusion and exclusion criteria, only 36 banks qualified for further analysis. The inclusion and exclusion criteria were based on whether the bank was in full operation for the entire study period and if the data was available. The bank ought not to have undergone a significant reorganizational change that impairs financial reporting.

3.2 Measurement of variables

3.2.1. Dependent variable

Risk-taking is the study's dependent variable, and its proxy is default risk. Default risk is the primary factor considered in risk-taking by banks. Z-score is the measure commonly used in determining a bank's default risk (Erkens *et al.*, 2012; Belratti & Stultz, 2012; IMF, 2014).

$$Z - score = \frac{ROA + E/A}{\sigma ROA}$$

Where; ROA and E/A are the return on asset and capital to asset ratio, respectively. $\sigma(ROA)$ is the standard deviation of return on assets (rolling standard deviation –the present year and the past two years), calculated over the same time window (Laeven & Levine, 2009; Houston, Lin, Lin, & Ma, 2010). Further, the z-score is transformed into its natural logarithm owing to its skewed nature (Bley, Saad & Samet, 2019).

3.2.2. Independent Variable

Board ownership is the study's explanatory variable, and is the total amount of ownership that board members have of the company presented as a percentage of the total value of equity (Nguyen & Rahman, 2020)

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3.2. Control Variable (Firm Size, Firm Age and Bank capitalization)

This study controlled for several variables to isolate the effect of the explanatory variable on the outcome variable. Extant literature shows that firm size affects a firm's risk-taking (Ng, Chong, & Ismail, 2013), and the variable is measured as the natural log of total assets measures. Firm age controls for larger firms have more subdivisions and larger branch office networks that are more complex to manage (Eriki, 2015). Studies also show that older firms are more cautious than younger businesses because of their accumulated knowledge about the industry and the related risks (Li, & Tang, 2010). Firm age is measured by the natural log of the number of years a firm has been operating since registration by the respective regulatory authority (Laeven *et al*, 2014). Researchers argue that poorly capitalized banks tend to prefer riskier investments than a well-capitalized bank since poorly capitalized banks have little to lose by bankruptcy, so they maximize the option value of deposit insurance by gambling in riskier assets (Jeitschko & Jeung, 2005). Bank capitalization (B.C.) is calculated as the book equity-to-asset ratio as used in previous studies (Huang, de Haan, & Scholtens, 2020)

3.3. Model specification.

The following equation describes the empirical model

$$Z \text{ score} = \beta_0 + \beta_1 FA_{it} + \beta_2 FS_{it} + \beta_3 BO_{it} + \beta_4 BC_{it} + \varepsilon_i$$

Where:

β_0 is a constant, while $\beta_1 \dots \dots \beta_n$ are the beta coefficients

FA_{it} is the firm age for firm i over the period t

FS_{it} is the firm size for firm i over the period t

BC_{it} is the bank capitalization firm i over the period

BO_{it} is the board ownership for firm i over the period t

4. FINDINGS AND DISCUSSIONS

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Z-score	396	0.739	0.390	-0.534	1.571
Firm age	396	35.583	27.376	2.000	123.00
Firm size	396	4.504	0.519	3.167	5.642
Bank capitalization	396	0.151	0.045	-0.117	0.322
Board ownership	396	8.655	11.573	0.001	42.01

Data was collected from individual bank's annual reports and the central bank of Kenya's annual banks' supervisory reports from 2008 to 2018. Table 1 presents the raw summary descriptive statistics for the research variables under study. The mean value of firm age is 35.583 taking 2008 and 2018 as the reference points (standard deviation = 27.376; Minimum= 2.000; Maximum= 123.00). This means that a good number of banks have been in operation for over 35 years. The mean firm size is 10.513 taking 2008 and 2018 as the reference points (standard deviation = 1.326; Minimum = 21.507; Maximum = 27.156). On average, the selected banks hold assets worth Ksh. 30.489 billion (€^{24.141}). From the table the mean Z-score is 0.739 (standard deviation = 0.390; Minimum = -0.534; Maximum= 1.571). Considering that a high value of Z score is an indicator of lower levels of risk. In comparison, a lower value indicates higher levels of risk; therefore, it can be concluded that the selected banks take relatively lower risks. Further, the gap between the minimum value and the maximum value implies that the level of risk-taking varies considerably among banks, which is also a high standard deviation. The mean board ownership value is 8.655% (standard deviation = 11.57; Minimum=0.001; Maximum=36.2). This shows that there is less board ownership in the selected banks. Therefore, there is a high chance of agency problems as the board's interests could be less aligned with those of shareholders. Further, there is high variability in board ownership, as shown by a high standard deviation. The mean bank capitalization 0.151 (standard deviation = 0.045; Minimum= -0.117; Maximum= 0.322), implying that banks use less debt capital.

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Table 2. Correlation matrix

Variable	Z-score	FA	FS	BC	BO
Z-score	1.000				
Firm age (FA)	0.419*	1.000			
Firm size (FS)	0.595*	0.504*	1.000		
Bank capitalization(BC)	0.192*	0.109*	0.001	1.000	
Board ownership (BO)	-0.3061*	0.063	-0.278*	-0.010	1.000

** means significant at 5%

Correlation is a method of assessing the relationship between variables/factors. The correlation results were summarized and presented in Table 2. Results further show that board ownership is negatively related with risk-taking ($r = -0.306$, $p < 0.05$). Therefore, the higher the directors' ownership, the lower the risk-taking rate indicating that since directors are interested in the company, they avoid exposing the firm to additional risks. Additionally, the correlation results indicate that firm age is positively related to risk-taking ($r = 0.419$, $p < 0.05$). Thus, an increase of firm age leads to an increase in risk-taking. Further, bank capitalization shows a positive correlation with risk-taking ($r = 0.192$, $p < 0.05$). Moreover, firm size ($r=0.5947$, $p<0.05$) is positively related with risk-taking, meaning that large firms are more likely to take higher risks.

Table 3. Regression analysis

	Fixed Effect	Random Effect
Z-score	Coef.	Coef.
<i>Firm age</i>	0.299(0.052)**	0.211(0.042)**
<i>Firm size</i>	0.333(0.050)**	0.335 (0.041)**
<i>Bank capitalization</i>	0.124(0.047)**	0.192(0.046)**
<i>Board ownership</i>	-0.550(0.066)**	-0.077(0.018)**
<i>Constant</i>	-1.525(0.269)**	-1.121(0.200)**
R- squared	0.448	0.370
F/ Wald chi2 values	72.140	244.140
Prob > F/ chi2	0.000	0.000
Observations	395	395
Hausman chi2(4)	79.02	
Prob>chi2	0.000	

** means significant at 5%

Based on the results of the Hausman test, $\text{Prob}>\chi^2 = 0.00$ in table 3, the regression results are interpreted using the fixed effect model. The table shows that firm age has a significant and positive effect on risk-taking ($\beta = 0.299$, $p < 0.05$), and our results contradict Li and Tang (2010). Faced with organizational inertia, competition, and declining performance, older firms tend to seek new growth opportunities; therefore, managers are more likely to engage in risk-taking behaviors. The results also show that firm size has a significant and positive effect on risk-taking ($\beta = 0.333$, $p < 0.05$), and the findings are consistent with those of Li and Tang (2010), Audia and Greve (2006) argue that large firms have enormous resources hence they are more likely to take more risks compared to smaller ones. Further, large firms invest more in R&D thus have higher propensities to take higher risks in an attempt to acquire high and new technologies. The relationship between bank capitalization and risk-taking is significant and positive ($\beta = 0.124$, $p < 0.05$). Hence, well-capitalized banks tend to engage in riskier investments than poorly-capitalized banks. With increased capitalization, a firm is expected to invest more to meet the shareholders' expectations and maximize the firm's value.

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Board ownership denotes the proportion of shares the board of directors owns in a company and is measured by the director's shares ownership to total share shares. Board ownership had a negative and statistically significant effect on bank risk-taking ($\beta = -0.379$ $p < 0.05$). These study findings are similar to those of (De Vita, & Luo, 2018; Olson, B., Parayitam, Skousen & Skousen, 2018; Fakhrunnas & Ramly, 2017) but contrast those of (Elamer, AlHares, Ntim, & Benyazid, 2018; Hunjra, Hanif, Mehmood, & Nguyen, 2020; Te Brick & Chidambaran, 2010; Pathan 2009) which could indicate the autonomy of board ownership function in firms under consideration. Some studies find no effect of board ownership on firm risk-taking (Cheng *et al.*, 2010; Zhang, Cheong & Rasiah, 2018). Board equity ownership prompts board members to align their interests with those of other investors leading to more effective monitoring and improved oversight of critical corporate decisions (Chatterjee, 2009).

CONCLUSION

Though risk-taking is essential to all types of firms, it has received considerable attention among scholars, practitioners, and regulators, particularly in the banking sector, owing to the 2007-2008 financial crises that resulted in a global bank failure. Though have also pointed out that board characteristics, such as board ownership, reduce risk-taking in banks though the findings are inconclusive. Therefore, this study seeks to examine whether board ownership and risk-taking among commercial banks in Kenya. Using a sample of 36 banks and data for 2008 to 2018, the study finds that a high level of board ownership is associated will is less risk-taking, implying that board ownership aligns the directors' interests with those of shareholders. Therefore, by encouraging higher board ownership, firms will maintain an optimal risk level that guarantees superior returns.

Despite the novelty of our findings, there is a need to replicate these results to other sectors, especially the manufacturing sector, to establish whether a significant contribution of corporate governance to risk management can be found. Also, there is a need for future studies to increase the sample firms. Future studies should perform a longitudinal analysis to establish the evolution of corporate governance and risk-taking in the banks over a long time in Kenya, more than ten years. More studies need to be done, primarily to determine a comparative analysis of corporate governance and risk-taking in financial institutions such as banking companies, insurance, microfinance, or investment banks in Kenya.

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