

The Intervening Effects of Idiosyncratic Risk on the Relationship between Corporate Governance and Value of Non-Financial Listed Firms at the Nairobi Securities Exchange

By: Fred Obande Buluma¹, Cyrus Iraya Mwangi (PhD)², Mirie Mwangi³ & Nixon Omoro⁴

Abstract

This study examined whether corporate governance had a relationship with the value of non-financial listed companies at the Nairobi Securities Exchange when idiosyncratic risk was introduced as an intervening variable. The study tested the hypothesis that, idiosyncratic risk had no intervening effect on the relationship between corporate governance and the value of non-financial companies listed at the NSE. The data set included audited financial statements for non-financial listed companies that had been continually listed at the Nairobi Securities Exchange (NSE) over the ten year period, from 2010 to 2019. The study used a descriptive design and a positivist ideology to analyze the effects. After performing diagnostic tests, hypothesis testing was conducted using inferential statistics, notably correlation and regression analysis. The relationship between corporate governance, idiosyncratic risk, and company value was further investigated using multiple regression analysis. Since the sample data included both cross-sectional and time-series data, the panel data technique was deemed more acceptable. Corporate Governance was measured by a composite of board independence, female director representation; East African institution share ownership, independent directors at board meetings, and audit committee meetings while firm value was measured using Tobin's Q. The study found that when idiosyncratic risk was included as an intervening factor in the analysis, there was no effect on the value of non-financial listed companies. This finding of no idiosyncratic risk intervening in the relationship between corporate governance and non-financial listed companies' value provides useful information about non-financial listed companies' risk-taking behavior in an emerging market.

Keywords: corporate governance proxies, idiosyncratic risk, Firm value, non-financial firms.

1 Introduction

Studies have looked into the relationship between corporate governance and the value of non-financial listed companies, but they have overlooked the impact of idiosyncratic risk, which could have a significant impact on the value of publicly listed firms. Idiosyncratic risk occurs where a company applies poor management methods, reacts poorly or fails to respond properly to internal management difficulties which consequence is loss of corporate value (AlShubiri & Jamil, 2018; Fu, 2008; Brown & Kapadia, 2007; Wei & Zhang, 2006; Xu & Malkiel, 2003; Campbell et al., 2001).

¹ PhD Candidate, Department of Finance and Accounting, University of Nairobi, Email: fcbuluma@yahoo.com, Tel: +254721258282

² Professor, Department of Finance and Accounting, University of Nairobi

³ Professor, Department of Finance and Accounting, University of Nairobi.

⁴ Senior Lecturer, Department of Finance and Accounting, University of Nairobi.

Excellent corporate governance is thought to reduce idiosyncratic risk, reduce return volatility, and increase firm value (AlShubiri & Jamil, 2018). Furthermore, excellent corporate governance protects investors' interests, improves companies' access to capital at a reasonable cost, lowers the likelihood of corporate crises, and boosts the value of publicly traded companies (Schwab, 2019).

In the relationship between CG and listed company value, Berle and Means' (1932) agency theory can be utilized to trace the effects of idiosyncratic risk intervening effects. The idea emphasizes that modern companies have a number of management issues as a result of the interactions between owners and managers of companies. In reality, the idea, which is related to idiosyncratic risk, can be used to emphasize the heated interactions between corporate owners and agents, who have two main problems. These include; firstly that the goals of the principal and the agent may be conflicting (agency dilemma), and secondly, that the principals and agents are unable to reconcile their varied risk tolerances (Jensen & Meckling, 1976). Strong corporate governance, in essence, entails increased investor trust, increased manager incentive, and less rent expropriation via improved monitoring and greater transparency between the investor and the agent. The ultimate result should be a reduction in specific firm risk, more effective operations, lower monitoring expenses, and a rise in the value of a company (Melis, Carta & Gaia, 2012; Daily, Dalton, & Canella, 2003). The second theory that can be linked to idiosyncratic risk is Markowitz's modern portfolio theory (1952). Because of investor aversion to risk, assets should be subjected to more exact variance and covariance computations, allowing for better diversification and risk assessment (Xu & Malkiel, 2003). Idiosyncratic risk is influenced at the corporate level by daily securities prices and analyst annual reports on firm results and forecasts (Ferreira & Laux, 2007; Fu, 2008; Wei & Zhang, 2006; Brealey, 1969).

In today's investing climate, idiosyncratic risk in listed companies has forced society and investors to be extra cautious about inefficient, unproductive, and negatively functioning corporate management (Vagneur, 2016; Weber, Weber, & Nosi, 2012; Pandya, 2011; Burke, 2008; Cohen et al., 2008; Lai & Cheng, 2003). The implication is that if a company's management board is ineffective at spotting risks, the value of the company may decline (Goyal & Pedro, 2003; Vozlyublennaia, 2013; Fu, 2008; Bali, Cakici & Levy, 2008; Bali, Cakici, & Zhang, 2005). Most studies reveal that idiosyncratic risk influences the risk variance of each asset over time since it is fundamentally unpredictable. As a

result, diversification and hedging are the only ways for investors to lower their investment risks (IFC, 2012). Individual security variances and uncertainties have been caused by idiosyncratic risk, which has been worsened by the board's decisions on financial policy, investment strategy, and operations specific to a firm and securities over time (Vagneur, 2016; Chanavat & Ramsden, 2012; Gordon & Pohl, 2011).

Empirical research on the impact of idiosyncratic risk on company value has yielded varied results. Between 1990 and 2007, Li and Liy (2016) conducted a conceptual and empirical study of corporate governance and costs of equity in order to propose a different explanation for the unpredictability of the relationship between corporate governance and financial performance. Firms with good corporate governance, according to their research, were more sensitive to idiosyncratic risk than businesses with poor corporate governance. Bartram, Brown, and Stulz (2016) investigated the relationship between a firm's idiosyncratic risk and market risk, finding that the two were tightly related, with idiosyncratic risk reducing as the firm grew in size. This result backed up their theory that company values are derived from long-term idiosyncratic growth possibilities with lower risk volatility. However, none of the studied corporate factors, such as illiquidity, lagged idiosyncratic risk, book-to-market, or market size, explained the association between idiosyncratic risk and market risk. Increased firm-specific uncertainties were also associated with greater aggregate uncertainties, according to the macroeconomic perspective of this study, implying that firms whose value was negatively affected by uncertainties suffered more from combined uncertainty shocks and were unable to raise funds in the securities market.

According to Bennet, Sias and Stark (2003) and Xu and Malkiel (2003), institutional ownership, which they used as a proxy for corporate governance, was related to an increase in idiosyncratic risk (2003). These researchers found a relationship between fluctuating asset values and institutional ownership, which was more susceptible to market swings. This finding confirmed that the global financial crisis of 2007–08 was indeed driven by a lack of good corporate governance and the banking sector's incapacity to monitor and analyse risk exposures, both of which had a detrimental influence on companies' cash flows and dividend payments (Muller-Kahle & Lewellyn, 2011; Conyon et al., 2011; Kirkpatrick, 2009). Between 2006 and 2012, Kang, Chen, Lin, and Wei (2015) investigated

the impact of corporate governance on idiosyncratic risk in Taiwanese financial institutions, finding that institutional ownership had a significant relationship with company idiosyncratic risk. Further research revealed that the foreign investor shareholding ratio was positively related to idiosyncratic risk, probably as a result of short-term foreign investments in Taiwanese financial institutions.

Lin Chen and Wang (2010) looked into the effects of corporate governance on idiosyncratic risk and found that having a high block holder ownership ratio and many independent directors on corporate boards resulted in timely information availability and hence a lower idiosyncratic risk. The study found no link between corporate governance, regulatory constraints, or product market competitiveness and idiosyncratic risk, showing that the benefits of external corporate governance were ineffectual in lowering idiosyncratic risk. Haryono and Paminto (2015) investigated the relationship between corporate governance and company value, as well as the role of financial performance and risk in mediating the relationship. According to the findings, there was a substantial relationship between corporate governance and financial performance. According to their research, while corporate governance had a negative and considerable impact on company risk, firm risk had no direct impact on firm value. Corporate governance had a considerable impact on company value but little impact on firm risk in terms of financial performance indicators.

Poor corporate governance has cost Kenyan investors Sh264 billion, with roughly 13% of listed companies experiencing serious governance issues (CMA, 2019). A total of 22 firms listed on Kenya's Nairobi Stock Exchange (NSE) were placed under receivership, reorganized, or delisted between 2010 and 2019. (CMA, 2019). Mismanagement, fraud, non-disclosures, and a lack of openness to the investing public were also highlighted as some of these companies' most serious corporate governance infractions. As a result, the efficacy of securities exchange regulatory regimes came to be questioned. Investor protection, auditing and reporting requirements, corporate director misconduct, management scams, insider transactions, conflicts of interest, and minority shareholder protection were just a few of the issues that cast doubt on NSE listed companies' corporate governance (CMA, 2019). In the context of state and private sector ownership, Kenya's corporate governance problems have been defined by corruption, inefficiency, and government subsidization of failing listed state companies. Other issues with corporate governance include a disdain for minority

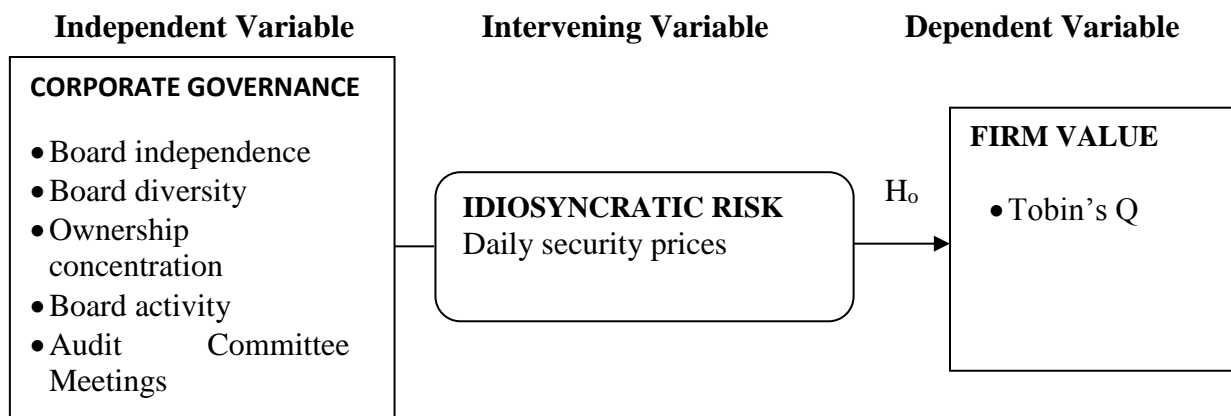
shareholders' interests, limited and poorly regulated capital markets, ineffective corporate board of director control, and inefficient corporate board of director control, to name a few (CBK, 2019).

However, the aforementioned corporate governance flaws impacted a number of the Nairobi Securities Exchange's listed companies. This was what informed the purpose of this study to establish if idiosyncratic risk can have any role in the relationship between corporate governance and firm value among Nairobi Securities Exchange companies. In Kenya, empirical research and key contextual factors are yet to provide conclusive answers to the research question: is there an intervening effect of idiosyncratic risk in the relationship between corporate governance and the value of non-financial listed companies?

The study used the following null hypothesis to reach its objective of answering the aforementioned research question:

H₀: The relationship between corporate governance and value of firms listed at the Nairobi Securities Exchange is not intervened by idiosyncratic risk.

Figure 1: Conceptual Model



2. Methodology

A ten-year longitudinal panel data survey of companies continuously listed on the Nairobi Securities Exchange was employed in this study (2010-2019). A correlation and descriptive design were employed to focus on cause-and-effect correlations between variables and to characterize the variables (Cooper & Schindler, 2008). Over a ten-year period, the idiosyncratic risk value was calculated using daily selected security prices, with the predicted return for each security extracted

and fitted on the monthly Fama and French (1993) three factor model. The methodology of Ang. et al. (2006) was used in this study to calculate the magnitude of idiosyncratic risk for each company. This study further used a hierarchical regression analysis based on Kenny and Baron's (1986) four-step technique to examine if there was any intervening effect of idiosyncratic risk in the relationship between corporate governance and value of non-financial listed firms at the NSE. The models below guided the hierarchical regression analysis. The first model tested whether corporate governance was related to firm value.

$$FV = \beta_0 + \beta_1 CG_{it} + e_{1t} \dots\dots\dots (1)$$

The effect of corporate governance on idiosyncratic risk (β_1) was determined by regression equation in process two.

$$\text{Step two: } - \beta_{1it} = \beta_0 + \beta_2 CG_{it} + \varepsilon_{it} \dots\dots\dots (2)$$

In step three the intervening effects of idiosyncratic risk on Tobin's q (Y) was tested. In this step corporate governance (X) relationship on Tobin's Q (Y) was purposely omitted.

$$\text{Step three: } - Y_{it} = \beta_0 + \beta_2 Ir_{it} + \varepsilon_{it} \dots\dots\dots (3)$$

This study proceeded to determine if there were any zero-order correlations between the variables in steps 2–3. If one or more of these relationships were not significant, then intervening effect was not conceivable or plausible (MacKinnon, Fairchild, & Fritz, 2007). However, if strong relationships emerge from Steps 2–3, one should proceed to Step 4.

$$\text{Step four: } - Y_{it} = \beta_0 + \beta_1 CG_{it} + \beta_2 \beta_{1it} + \varepsilon_{it} \dots\dots\dots (4)$$

Phase four was to estimate Tobin's Q using a simple regression analysis that took both corporate governance and idiosyncratic risk into account. Step four model was to establish if there was an intervening effect after accounting for corporate governance.

3. Data Analysis and Discussion of Findings

3.1 Descriptive Statistics

Table 1 below shows the findings of 290 data points collected from 29 publicly traded companies during a ten-year period. The findings show that independent directors made up 61.5 percent of the board size of Kenyan listed companies, or at least 4 directors on a board (antilog of 0.615), with maximum and minimum (8 directors, antilog of 0.9) and 2 directors (antilog of 0.29), respectively, which were distributed on both sides of the average by 13.8 percent. With a high of 100% and a

minimum of 50%, independent directors attended 78.5 percent of meetings across the listed companies. When the data was averaged, it revealed that many independent directors attended board meetings out of the total number of sessions examined. With at least one female director (antilog of 0.162), a maximum of five directors (antilog of 0.7), and a minimum of zero, the percentage of female directors on the board was 16.2 percent. The representation was distributed by 15.2 percent on both sides of the average.

East African institutions own at least 50.4 percent of non-financial listed companies' shares, according to institutional ownership data. With 27 percent separated on both sides of the average, the maximum was at least 99 percent and the minimum was 1 percent. Independent directors of publicly traded non-financial corporations attended an equal number of board meetings, with a high of 100% and a low of 54% on both sides of the mean. At least seven times a year, the audit committees of the listed companies met (antilog of 0.840). When the total number of audit committee meetings was examined, the results revealed that when the mean was taken into consideration, many audit committee meetings were adequately attended. By 11%, these meetings were evenly distributed on both sides of the average. According to the findings, independent directors on the board, institutional ownership, and audit committee meetings all had negative skewness with positive Kurtosis. Positive skewness and Kurtosis were found in female representation on the board, board meetings, idiosyncratic risk, and Tobin's Q.

Table 1 Descriptive Statistics

Variable	Mean	Standard Deviation	Median	Maximum	Minimum	Kurtosis	Skewness
Independent Directors	0.615	0.1382372	0.63	0.9	0.29	2.83225	-0.36941
Female directors on the Board	0.162	0.1522115	0.13	0.7	0	2.82152	0.651701
Institutional ownership	0.504	0.2696617	0.57	0.99	0.01	1.78723	-0.20197
Board Meetings	0.785	0.102411	0.78	1.0	0.5	2.27728	0.170246
Audit Committee Meetings	0.840	0.1102418	0.855	1.0	0.54	2.93839	-0.70540

Idiosyncratic Risk	0.016	0.0288971	0.0063	0.2303	0.0036	23.6757	4.108925
Tobin's q	1.682	2.019216	0.785	11.07	0.03	8.23908	2.244714

3.2 Diagnostic Tests

Data pre-estimation testing was used to detect issue areas, reduce measurement error, and aid in the reformulation of research models by removing study variables and introducing new ones as needed. All of the variables were shown to be stationary using panel unit root tests. The unit root test revealed that the panel data variables were stationary; hence no cointegration tests were done. The Wooldridge residuals autocorrelation test was used to test the autocorrelation of the panel data. To determine the normality of the corporate governance proxy data and idiosyncratic risk, the Shapiro–Wilk normality test was applied. The results confirmed non-normality. This necessitated the transformation of variables in the study.

The model's residuals had a serial correlation, according to the findings. The standard errors of the regression result were similarly unreliable, indicating that the response variable needed to be transformed to fix the problem, according to a heteroscedasticity test. After variables were transformed, a Breusch-Pagan test was performed, and the findings revealed that there was no heteroscedasticity. When the independent variables were tested for multicollinearity, the VIF was less than 10, indicating that there was no multicollinearity.

3.3 Correlation Analysis

The correlation coefficients can be used to accept or reject the null hypothesis that no relationship exists between the research variables. Multicollinearity was not an issue because the correlation coefficients were all less than 0.8 (Mang'unyi, 2011). As indicated in table 3, a weak positive relationship between board independence and Tobin's Q that was insignificant ($r = 0.007$, $p > 0.050$). Female board members exhibited a weak, significant correlation with Tobin's Q ($r = -0.072$, $p > 0.050$). Tobin's Q, on the other hand, had no significant relationship with East African institutions that owned shares in listed non-financial companies ($r = -0.004$, $p > 0.05$). According to the data, independent directors' attendance at board meetings exhibited a minor and negligible negative

connection with Tobin's Q ($r = -0.052$ $p = p > 0.05$). In this study, the number of independent directors that attended board meetings was found to lower Tobin's Q. The audit committee met on a regular basis, according to the observations, and reducing the number of audit committee meetings would enhance the firms' Tobin's Q, as indicated in the table below.

Table 3 Correlations

		TOBIN	Independent Directors	Female Directors	East African Institutions	Board meetings	Audit Committee meetings
TOBIN	Pearson Correlation	1					
	Sig. (1-tailed)						
Independent Directors	Pearson Correlation	.007	1				
	Sig. (1-tailed)	.450					
Female Directors	Pearson Correlation	.072	.105*	1			
	Sig. (1-tailed)	.110	.037				
East African Institutions	Pearson Correlation	.004	.014	-.007	1		
	Sig. (1-tailed)	.476	.406	.452			
Board meetings	Pearson Correlation	-.053	.189**	.244**	.074	1	
	Sig. (1-tailed)	.185	.001	.000	.103		
Audit Committee meetings	Pearson Correlation	-.060	-.095	-.019	.180**	.362**	1
	Sig. (1-tailed)	.152	.053	.374	.001	.000	

*. Correlation was significant at the 0.05 level (2-tailed).

** . Correlation was significant at the 0.01 level (2-tailed).

List wise N=290

3.4 Hypothesis Testing and Findings

The study's major objective was to establish if idiosyncratic risk had an intervening effect in the relationship between corporate governance and the value of non-financial companies listed at the NSE.

H₀: The relationship between corporate governance and value of non-finance listed firms in Kenya is not intervened by idiosyncratic risk.

The intervening effect in the relationship between corporate governance and value of non-financial companies listed on the Nairobi Securities Exchange was investigated using Baron and Kenny's (1986) mediation analytic method. To test for the presence of an intervening effect in a regression model, the relationship used four phases, each of which directly linked the independent and dependent variables before examining the consequences of the linkage in the case of an intervening effect. The test results were as indicated in the table 3 below.

Table 4: Intervening Effect of Idiosyncratic Risk on the Relationship

Variables	B	SE	Std P	Sig	t	R	R ²	AdjR ²	F
Step 1 ^a									
Constant	2.5122	0.16803		0.000	14.95	0.11	0.0001	-0.003	0.034
CG	-0.011	0.05713	0.4108	0.855	-0.18				
Step 2 ^b									
Constant	6.7016	0.78246		0.000	8.56	0.151	0.0227	0.0193	6.669
CG	-0.6886	0.26605	1.9131	0.010	-2.59				
Step 3 ^c									
Constant	2.5726	0.0124		0.000	40.67	0.091	0.0083	0.0049	2.422
IR	-0.0194	0.06326	0.4092	0.121	-1.55				
Step 4 ^d									
Constant	2.6474	0.1877		0.000	14.10	0.095	0.0089	0.0020	1.297
CG	-0.0243	0.0576	-0.025	0.673	-0.42				
IR	-0.0201	0.0126	-0.095	0.111	-1.60				

^aDependent variable: Firm value

^bDependent Variable: Idiosyncratic Risk.

^cDependent variable: Firm value.

^dDependent variable: Firm value

The results of the hierarchical multiple linear regressions, as well as the effect of idiosyncratic risk in the relationship between corporate governance and non-financial firm value at the NSE, are shown in table 3 above. The first model indicated a statistically negligible relationship between corporate governance and firm value without accounting for idiosyncratic risk. The adjusted R² of 0.0001, F = 0.034, and p > 05 in step 1 of the multiple regression model showed that CG explained 0.01 percent of the variation in firm value. A slope test was used to assess the strength of the correlations between Tobin's Q (dependent variable) and corporate governance (independent variable). The coefficient (□)

value of corporate governance in the regression results was -0.001, very close to zero, with a t-value $t = -0.18$ lower than the t-critical statistic's value at the 0.05 significance level, i.e. 1.96 for 290 observations, However, the relationship was weak ($p = 0.855$ with $p > 05$), implying that, while corporate governance was important, it had only a little impact on a company's value.

In step 2, the relationship between idiosyncratic risk (intervening variable) and corporate governance (Independent variable) was investigated without including the dependent variable (firm value). The regression model was statistically significant, and the adjusted $R^2 = 0.0193$, $F = 6.669$, and $p < 05$. This meant that corporate governance accounted for 1.93 percent of idiosyncratic risk variation. The t-value of -2.59 was lower than the value of the t-critical statistic at the 0.05 significance level, i.e. 1.96 for 290 observations, and it was significant $p = 0.010$ with $p < 05$, indicating that corporate governance was significant. According to slope tests, the regression coefficient (β) value of CG was -0.6885872, with a significance level (p-value) of 0.010. This found that corporate governance was a significant predictor parameter ($p < 05$), indicating that corporate governance and idiosyncratic risk were related. This meant that idiosyncratic risk dropped by 0.6885872 for every increase in corporate governance proxies. Step two verified the intervening connection theory, which indicated that for every unit of negative change in corporate governance, there was a 6.669 unit shift in idiosyncratic risk. Prediction model was stated as: $IR = 6.701631 - 0.6885872CG + e_{it}$

The corporate governance variable had to be removed from the regression procedure in step three, and the model yielded a statistically insignificant result. Idiosyncratic risk explained 0.49 percent of the variation in firm value in the multiple regression model, with an adjusted $R^2 = 0.0049$, $F = 2.422$, and $p > 05$. The t-value of -2.59 was lower than the t-critical statistic's value of -1.55 with significance level i.e. 1.96 for 290 observations was the result, but insignificant $p = 0.121$ with $p > 05$, indicating that even though idiosyncratic risk was an important variable, it had an insignificant relationship with firm value. The regression coefficient (β) value of idiosyncratic risk was -0.0194, according to slope tests, with a significance level of $p > 05$. This showed that the relationship between idiosyncratic risk and company value was insignificant.

In the fourth and last step of the intervening effect, the process sought to establish a relationship between company value, idiosyncratic risk, and corporate governance. The model was determined to be statistically insignificant ($p\text{-value} > 05$) as indicated in Table 5.1. Further analysis of the regression model's goodness of fit revealed an adjusted R^2 of 0.0020, F of 1.27, and $p > .05$, implying that corporate governance and idiosyncratic risk explained 0.20 percent of the variation in company value. According to slope tests, the value of CG's regression coefficient (β) was -0.0243, with an insignificant $p\text{-value}$ of $p > 05$. The regression coefficient (β) of -0.0201 was the idiosyncratic risk regression coefficient with a significance level of $p > .05$. This suggested that neither corporate governance nor idiosyncratic risk was good predictor of a firm's value ($p > 05$). Even when Corporate Governance was controlled ($p > 0.05$), idiosyncratic risk insignificantly predicted firm value, indicating that the model was not a good predictor. Therefore idiosyncratic risk had no intervening effect in the relationship between corporate governance and value of non-financial firms listed at the NSE.

Stages 1 through 3 were used to test if the variables showed zero-order correlations. An intervening effect was not conceivable or realistic if one or more of these relations were not significant (MacKinnon, Fairchild, & Fritz, 2007; Baron & Kenny, 1986). After the first three regressions, only the second testing stage was relevant, therefore not all of them stood out. The hypothesis was not rejected since the regression test found that idiosyncratic risk had no statistically significant impact on the link between corporate governance and non-financial listed company value.

3.5 Discussions of Findings

According to the findings of the study, idiosyncratic risk had no intervening effect on the relationship between corporate governance and value of non-financial listed firms on the Nairobi Securities Exchange. Campbell et al. (2001) and Gokgoz and Altintas (2013) reported similar results. However, the findings contradict that of Bennet et al. (2003), who found that idiosyncratic risk increased when institutional ownership as a proxy for governance norms increased. The hypothesis (H_0), stating that idiosyncratic risk had no intervening effect on the relationship between corporate governance and NFLC value on the NSE, could have major consequences. Corporate management's financial policy, investment strategy, and operations decisions are all idiosyncratic risks specific to that a firm and securities. This implies that the lack of a strong intervening effect on the relationship between

corporate governance and non-financial listed company value can result into negative consequences for non-financial listed firms. As a result, this conclusion had far-reaching repercussions for the NSE's non-financial listed companies risk management strategies. According to the findings of this study, publicly traded non-financial companies must recognize and anticipate risks associated with changing conditions or risk losing investment capital and market share. A company's reputation could be harmed for a long period if it fails to plan for risks in investment planning and management.

3.6 Limitations of the Study

The data was gathered from publicly available financial records, and the components were investigated using a longitudinal cross-sectional data approach. The analysis did not cover all publicly traded non-financial corporations since certain firm data was missing from the databases. Some companies fell short of the study's objectives, such as listing for a ten year period of time and on a more regular basis. Similarly, some of the companies were left out of the study due to attrition, suspensions, and reinstatement from the securities exchange listing and therefore did not fit within the time range required. Despite the constraints, the study was not jeopardized because data attrition varied by industry, and sufficient data was collected. This problem was solved by removing companies that were not listed.

Due to lack of empirical literature in the Kenyan setting on the intervening effect of idiosyncratic risk in the relationship between corporate governance and value of non-financial listed companies, the effect was confined to a partial comparative analysis. A large number of comparable empirical data from industrialized countries, on the other hand, made a comparison study easier.

3.7 Future Research Directions

This study did not consider all publicly traded companies therefore a study of the idiosyncratic risk's intervening effect for all publicly traded corporations is recommended. Similarly, a study of government-owned publicly traded companies might be undertaken to better understand how government influence is established and valued in the corporate governance of state-owned corporations. It will further look into whether idiosyncratic risk plays a role in the relationship between corporate governance and the value of a company.

References

- AlShubiri F & Jamil SA. (2018). The impact of idiosyncratic risk of banking sector on oil, stock market, and fiscal indicators of Sultanate of Oman: *International Journal of Engineering Business Management*, 10: 1–8.
- Ang, A, Robert J. H, Yuhang X, & Xiaoyan Z. (2006). The cross-section of volatility and expected returns. *The Journal of Finance* 61: 259–99.
- Bali, T., Cakici, X, Y., & Zhang, Z. (2005). Does idiosyncratic risk really matter? *Journal of Finance*, 60, 905-929.
- Bali, T.G.; Cakici N.; & Levy, H. (2008). A model-independent measure of aggregate idiosyncratic risk. *Journal of Empirical Finance*, 15 (5), 878–896.
- Baron, R. M., & Kenny, A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173–1182.
- Bartram, S.M., G.W. Brown, and R.M. Stulz, (2016). Why does idiosyncratic risk increase with market risk? *Centre for Financial Studies Working Papers* no. 533, 1-46
- Bennett, J. A., Sias, R. W., Xu., Malkiel., Stark, L. T. (2003). Greener pastures and the impact of dynamic institutional preferences. *Review of Financial Studies*, 16(4), 1203-1238
- Berle, A. A., & Means, G. C. (1932). The modern corporation and private property, *Indiana Law journal*, 8, 514-516
- Brealey, R. A. (1969). *An introduction to risk and return from common stock prices*. M.I.T Press
- Brown, G., & Kapadia, N. (2007). Firm-specific risk and equity market development. *Journal of Financial Economics*, 84, 358–388.
- Burke, W. W. (2008). *Organization change: Theory and practice* (2nded.). Thousand Oaks, CA: Sage Publications, Inc
- Campbell, J., Martin, L., Malkiel, B., & Xu, Y. (2001). Have individual stocks become more volatile? An empirical exploration of idiosyncratic risk, *Journal of Finance*, 56 (1), 1-43.
- Chanavat, A., & Ramsden, K. (2014). “*Climb to the Top—Tracking Gender Diversity on Corporate Boards.*” New York: Thomson Reuters.
- CMA (2016), *Capital market 3rd quarter statistical report*.

- Capital Markets Authority. (2019). Quarterly statistical bulletin (QSB). Issue 38/2019.
- Cohen, D. A., Aiyasha, D., & Thomas, Z. L. (2008). Real and accrual-based earnings management in the pre-and post-Sarbanes-Oxley periods. *The Accounting Review*, 3(83), 757-787.
- Conyon, M., Judge, W. Q., & Useem, M. (2011) 'Corporate governance and the 2008–09 financial crisis', *Corporate Governance: An International Review*, 19(5), 399-404.
- Cooper, D. R., & Schindler, P. S. (2008). *Business research methods* (8th Edition). New York: Mc Graw Hill.
- Daily, C. M., Dalton., D. R., & Canella, A. A. (2003). Corporate governance: Decades of dialogue and data. *Academy of Management Review*, 28(3), 371–382.
- Ferreira, M. A., & Paul, A. L. (2007). Corporate governance, idiosyncratic risk, and information flow. *Journal of Finance*, 62 (2), 951–89.
- Fu, F. (2008). Idiosyncratic risk and the cross-section of expected stock returns. *Journal of Financial Economics*, 91(1), 24-37.
- Gokgoz, F., & Altintas, I. (2013). Does idiosyncratic volatility matter in the emerging markets: Istanbul Stock Exchange evidence. *Journal of Economic Research*, 26(3): 133-150
- Gordon, K. & Pohl, J. (2011), “Environmental Concerns in International Investment Agreements: A Survey”, *OECD Working Papers on International Investment*, 2011/01, OECD Publishing.
- Goyal, A., & Pedro, S. C. (2003). Idiosyncratic risk matters! *Journal of Finance*, 58, 975-1008.
- Gujarati, D. (2003). *Basic Econometrics*. 4th ed. New York: McGraw Hill, 638-640.
- Haryono, U & Paminto, A. (2015) Corporate Governance and Firm Value: The Mediating Effect of Financial Performance and Firm Risk. *European Journal of Business and Management*. 7 (35) 18-24.
- International Finance Corporation. (2012). Corporate governance in East Asia and the Pacific, *IFC Advisory Services in East Asia and the Pacific*, News Letter No. 1 - December 2012
- Shao, J. (2003). “Mathematical Statistics,” Springer, New York, 2003. doi:10.1007/b97553
- Jensen, M., & Meckling, W. (1976). Theory of the firm: managerial behaviour, agency costs and ownership structure”. *Journal of Financial Economics*, 3, 305-360.

- Kang, J.H., Chen, H.M., Lin, C.H., & Wei, T.J. (2015). The effects of corporate governance on idiosyncratic risk: Evidence from Taiwan Financial Institutions. *Journal of Asia-Pacific Conference on Global Business, Economics, Finance and Social Science*, 535, 1-21.
- Kirkpatrick, G. (2009). The corporate governance lessons from the financial crisis. *OECD Journal: Financial Market Trends*, 96, (1), 1-30.
- Kothari, C. (2004). *Research methodology: methods and techniques*. U.S.A: New Age international.
- Lai, K. H., & Cheng, T. E. (2003). Initiatives and outcomes of quality management implementation across industries, *The International Journal of Management Science*, 31(2), 141–154.
- Levin, A., Lin, C.F. & Chu, C.S. J. (2002). Unit root tests in panel data: Asymptotic and finite-sample properties. *Journal of Econometrics*, 108, 1–24.
- Li, D., & Liy, E. X., (2016). Corporate governance and costs of equity: Theory and evidence. *Journal of Management Science*, 64 (1).
- Lin, C.H, Chen, H.M. Wang, L.H. (2010). The effects of corporate governance on idiosyncratic risk. *Journal of Management*, 27(5), 409-435.
- MacKinnon, D.P., Fairchild, A.J., & Fritz, M.S. (2007). Mediation analysis. *Annual Review of Psychology*, 58, 593-614.
- Mang'anyi, E. E. (2011). Ownership structure and corporate governance and its effects on performance: A Case of Selected Banks in Kenya. *International Journal of Business Administration*, 2(3), 2– 18.
- Markowitz, H. (1952). Portfolio selection. *Journal of Finance*, 7, 77-91.
- Melis, A., Carta, S., & Gaia, S. (2012). Executive director remuneration in blockholder-dominated firms: How do Italian firms use stock options? *Journal of Management and Governance*, 16(3), 511-541.
- Muller- Kahle, M. I., & Lewellyn, K. B. (2011). Did board configuration matter? The case of US subprimes lenders', Corporate governance: *An International Review*, 19, (5)405-417.
- Pandya, H. (2011). Corporate governance structures and financial performance of selected Indian Banks. *Journal of Management & Public Policy*, 2(2), 4-21.
- Schwab, C. (2019). Annual Report 2019 (NYSE:SCHW) Published: September, 2019.
- Taslim, M.B. (2017). Determinants of a firm profitability in food and beverage industry: an empirical analysis on oriental food industry holding Berhad. *Researchgate*, 1-16.

- Vagneur K. (2016). *Corporate Governance*. Edinburgh Business School. www.ebsglobal.net accessed on 20th December, 2019.
- Vozlyublennaia, N. (2013). Do firm characteristics matter for the dynamics of idiosyncratic risk? *Journal of International Financial Markets, Institutions and Money* 27, 35–46.
- Weber, M., Weber, E. U., & Nosi_C, A., (2012). Who takes risks when and why: Determinants of changes in investor risk taking, *Review of Finance*, 17, 847- 883.
- Wei, S., & Zhang, C. (2006). Why did individual stocks become more volatile? *Journal of Business*, 79, 259–92.
- Xu, Y. X. & Malkiel, B. G. (2003). Investigating the behaviour of idiosyncratic volatility. *Journal of Business*, 76(4), 613-644.