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THE MEDIATING EFFECT OF AGENCY COSTS ON THE NEXUS BETWEEN OWNERSHIP STRUCTURE AND CORPORATE RISK AMONG FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE, KENYA

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ABSTRACT

Ownership structure of a firm is important in corporate governance since it affects the incentives of managers and thereby the efficiency of the firm and corporate risks. The nature of firm ownership can influence the level of agency costs, which in turn affects the level of corporate risk. Agency costs, arising from the inherent conflict of interest between shareholders and management, present a complex challenge to corporate decision-making. The current topic is of significant relevance to both the theoretical framework of corporate finance and the practical concerns of corporate governance. Understanding the nuances of how agency costs influences the relationship between ownership structure and corporate risk is pivotal in addressing the potential misalignments that can be detrimental to shareholder interests. Agency costs arise from the separation of ownership and control in a corporation, where shareholders (owners) delegate decision-making authority to managers (agents). Changes in ownership structure are often driven by efforts to address agency problems, improve corporate governance, and align the interests of managers with those of shareholders. The relationship between ownership structure and corporate risk is influenced by how ownership structure affects agency costs. By implementing effective monitoring mechanisms, aligning incentives, reducing information asymmetry, and fostering a market for corporate control, ownership structures can influence the level of agency costs and, consequently, the uncertainty and variability associated with a company's financial performance and the potential impact on its value(corporate risk). Managers, seeking to maximize their own interests, may engage in risk-taking behavior that does not align with the risk preferences of shareholders. If the incentive structure is poorly designed or does not adequately tie executive compensation to company performance, managers may have little motivation to manage risk prudently. Ineffective incentive structures can contribute to increased corporate risk. Effective corporate governance, proper alignment of incentives, transparency, and strong risk management practices are essential for mitigating the impact of agency costs on corporate risk and ensuring the long-term sustainability of the firm. This research focused on three key theories: agency theory, the mean

variance-portfolio theory, and stakeholder theory. Key variables analyzed include ownership structure, which was operationalized in terms of managerial ownership, foreign ownership, government ownership and corporate ownership. Agency costs was measured using total annual operating expense to total annual revenue while corporate risk was estimated based on volatility of firm's earnings (standard deviation of return on asset, SDROA). The study was guided by the positivist approach. Causal survey research design was adopted. The study population was sixty (64) firms at NSE as at 31st December 2021. Secondary data was collected within a span of 11 years; 2011 to 2021. The regression model of ownership structure on corporate risk was significant. The findings further indicate that agency costs has a significant mediating effect on the relationship between ownership structure and corporate risk among firms listed at the Nairobi Securities Exchange.

Keywords: *Corporate Risk, Agency Costs, Ownership Structure, Nairobi Securities Exchange*

1. INTRODUCTION

Corporate governance and risk management are pivotal elements of financial economics that play a crucial role in shaping the behavior and outcomes of modern corporations (Hitt, Ireland & Hoskisson, 2012). Ownership structure of a firm is important in corporate governance since it affects the incentives of managers and thereby the efficiency of the firm and corporate risks (Hastori, et al., 2015). Shareholders of a firm can exert influence on the board and managers (Beasley, 1996). Corporate risk-taking is a multifaceted phenomenon, influenced by various factors, and it is imperative to comprehend how agency costs factor into this equation (Andries et al., 2020; Chinelo & Iyiegbuniwe, 2018; Fama & Jensen, 1983).

Agency costs, arising from the inherent conflict of interest between shareholders and management, present a complex challenge to corporate decision-making (Lehn, Patro & Zhao, 2009). In the realm of corporate finance, agency theory postulates that managers, acting as agents on behalf of shareholders, may sometimes prioritize their own interests over those of the shareholders (Donaldson & Davis, 1991). This inherent misalignment of interests can create circumstances where corporate executives may be tempted to engage in risky decisions, potentially leading to adverse consequences for shareholders (Merton, 1977). The current topic is of significant relevance to both the theoretical framework of corporate finance and the practical concerns of corporate governance.

Studies have shown that ownership structure and agency costs influence corporate risks. For instance, Paligorova (2010) established that corporate risks was being influenced by ownership structure. When firm managers engage in activities that are in conflict with the desires of owners of the firms, agency costs arise. To minimize agency costs, the firm is compelled to create an independent board in order to monitor firm activities. Khan et al. (2020) examined corporate governance quality, ownership structure, agency costs, and firm performance in China. It was realized that dividend payment, board size, board independence, board diversity, board meeting, CEO duality, Big Four auditor, managerial ownership, managerial compensation, institutional investors, number of established commissions, and separation of control rights and cashflow rights were significantly influencing corporate governance quality index. Another study by Shan (2015), who created a governance index for Chinese listed enterprises, served as the foundation for the corporate governance variables data. Agency cost was found to be negatively related to firm performance using both fixed effects and dynamic

panel generalized techniques of moment estimation. Most research in corporate governance have dwelled more on the role of boards than the roles of shareholders or firm owners. The linkage between ownership structure and corporate risk is partially studied and existing scholarly findings are contentious hence the need for this study. This research delved into the multifaceted relationship between ownership structure, agency costs and corporate risk, with the aim of offering insights that can enhance corporate governance practices and bolster investor protection.

1.1 STATEMENT OF THE PROBLEM

Listed firms at NSE operate in increasingly dynamic, complex, and unpredictable business environment, and therefore, understanding factors that lead to corporate risks is critical .The effect of ownership structure on corporate risk remains contentious among scholars and policymakers. Amihud and Lev (1981) and Boubakri et al. (2013) argue that ownership structure has positive effect on corporate risk while Langit and Adhariani (2017) argue that ownership structure has negative relationship on corporate risk. Chun and Lee (2017) and Padachi (2016) claim that ownership structure has insignificant effect on corporate risk.

The absence of consensus on the relationship between ownership structure and corporate risk of listed firms can also imply the existence of other significant variables that impact the relationship, probably corporate governance issues like the agency costs thus presenting a conceptual argument. The controversies among scholars could also be attributed to business operational differences of firms, contextual operations of the firms or regulatory differences of the studied firms based on country. Mukaria (2021) studied the influence of agency costs and firm size on the relationship between ownership structure and firm value. Firm value was used as dependent variable and agency cost was operationalized as audit fees and non-executive directors' remuneration. The current study has corporate risk as dependent variable and measures agency costs as operating expense to annual revenue.

The central problem this research aims to address is the intricate interplay between agency costs and corporate risk. Agency costs, rooted in the separation of ownership and control, have been identified as a fundamental determinant of corporate behavior and performance. These costs can manifest in various ways, including excessive executive compensation, empire-building by management, and short-termism in corporate decision-making (Mutende, 2018). Such behaviors can have profound implications for the risk-taking stance of corporations, as well as the strategies they employ to manage risk.

Understanding the nuances of how agency costs influences the relationship between ownership structure and corporate risk is pivotal in addressing the potential misalignments that can be detrimental to shareholder value and economic stability. Moreover, it has broader implications in the context of public policy, as it contributes to the discourse on the need for effective corporate governance mechanisms to strike a balance between safeguarding investors' interests and promoting corporate growth. The research conducted within this framework provide an in-depth insights into the influence of agency costs on corporate risk, ultimately contributing to a more nuanced understanding of the dynamics at play in the world of corporate finance and governance.

1.2 RESEARCH OBJECTIVE

To determine the effect of agency costs on the relationship between ownership structure and corporate risk among firms listed at the Nairobi Securities Exchange, Kenya.

1.3 RESEARCH HYPOTHEIS

There is no significant mediating effect of agency costs on the relationship between ownership structure and corporate risk among listed firms at NSE, Kenya.

2. THEORITICAL REVIEW

This research focused on three key theories which helped in gaining a holistic understanding of the complex relationship between ownership structure, agency costs and corporate risk. They included agency theory, the mean variance-portfolio theory, and stakeholder theory. These theories provided the conceptual framework necessary to explore how agency costs influence corporate behavior, risk management practices, and the welfare of various stakeholders. They necessitated the examination of the research objective from multiple angles, offering a comprehensive perspective on the topic.

Agency Theory

Agency theory is directly relevant to this research since it explains the principal-agent relationship between shareholders (the principals/owners) and corporate management (the agents) (Jensen & Meckling, 1976). In the context of agency costs, it helps us understand the inherent conflicts of interest. Shareholders aim to maximize the value of their investment, while management may pursue personal interests or prioritize their own financial well-being (Fama & French, 1993). In the study, agency theory was used to show how agency costs, driven by these conflicts, lead to actions by management that may increase corporate risk. It helps in understanding why agency costs exist and how they influence risk-taking behavior (Adams & Mehran, 2003). For example, managers may engage in risky ventures to boost short-term profits and their own compensation.

The mean variance-portfolio theory

The mean variance-portfolio theory explains the manner in which risk averse investors establish a portfolio that maximizes their expected returns according to a particular level of risks (Markowitz, 1959). Mean-variance analysis is a tool used by investors to make investment decisions. Investors can use mean-variance analysis to determine which investment offers the greatest return at the lowest risk or the lowest risk at the highest return.

Stakeholder Theory

While agency theory primarily focuses on shareholders and management, stakeholder theory broadens the scope to consider all parties affected by corporate decisions. This theory is applicable when a company want to evaluate how agency costs impact a broader range of stakeholders (Black & Scholes, 1973). In the current research, stakeholder theory was used to explore how agency costs might lead to risk-taking that affects not only shareholders but also employees, customers, suppliers, and the broader community (La Porta, et al., 2000). For example, high-risk strategies influenced by agency costs might lead to negative consequences

for employees, such as layoffs or reductions in wages, which can have broader social implications.

2.1 EMPIRICAL REVIEW

Khan et al. (2020) examined corporate governance quality, ownership structure, agency costs, and firm performance in China. The goal of the study was to determine how ownership structure and corporate governance quality affected the relationship between agency costs and firm performance. The dependent variable was firm performance. Ownership structure, agency cost, and corporate governance quality were evaluated as independent variables. Earnings per share (EPS) and return on assets (ROA) were used to measure firm performance. The ratio of administrative expenses to sales, free cash flow, earnings management, and spending on research and development were used to measure agency costs. Using the corporate governance quality index, corporate governance quality was evaluated. Dividend payment, board size, board independence, board diversity, board meeting, CEO duality, Big Four auditor, managerial ownership, managerial compensation, institutional investors, number of established commissions, and separation of control rights and cashflow rights were the variables used in the construction of the corporate governance quality index index. Agency cost is found to be negatively related to firm performance.

Corporate governance and ownership concentration was also found to improve firm performance. The study discovers positive effects on the agency-performance relationship when corporate governance and ownership concentration are taken into account as a moderating variable. Additionally, the study looked into how ownership type affected the relationship between agency costs and firm performance. It was discovered that non-state ownership positively moderates the relationship between agency cost and firm performance. When the state ownership is taken into account as a moderating variable, however, the agency cost maintains its negative sign. However, the research concentrated on Chinese listed companies, whose constituted boards may be different from those in Kenya, creating a gap in the study's context. Opportunistic managers frequently abuse organizational resources for their own gain rather than increasing shareholder wealth. The value of the firm can be increased by reducing the conflict of interest between the principles and the agents through sound governance procedures and ownership structures according to Khan(2020).

A study of agency costs, ownership structure, and mechanisms for corporate governance was conducted by Singh and Davidson in 2003.The National Association of Securities Dealers Automatic Quotation System (NASDAQ), the American Stock Exchange (AMEX), formed the sample of companies were examined. They looked at companies with annual sales of at least $100 million. Both regulated utilities and companies in the financial services sector were excluded. The ownership structure is the study's test variable or independent variable and is quantified as 1) inside ownership, which is the percentage of total equity owned by management and board members, and 2) the percentage of total equity owned by outside block holders (those with equity stakes greater than or equal to 5% of total equity). The dependent variable was agency cost. They used a variety of indicators to gauge agency costs. The ratio of annual sales to total assets served as the first indicator of agency costs, while the ratio of operating expenses to total sales served as the second. Size of the board of directors, the

percentage of independent outsiders on the board, the percentage of insiders (business executives) on the board, leverage (defined as the ratio of debt to total assets), and firm size (defined as the log of annual sales) were used as control variables. The size of the board of directors, the proportion of independent outsiders to insiders (company executives) on the board, the leverage (ratio of debt to total assets), and the firm size calculated as the log of yearly sales are among the control variables. For each sample year, there were 118 firms, for a total of 236 enterprises in the pooled sample. They discovered that management ownership does not prevent discretionary spending but did have a positive relationship with asset utilization. Outside block ownership might only have a modest impact on agency cost reduction. However, having independent outsiders on a board does not seem to shield the company from agency costs. Even in the face of other agency deterrent mechanisms, managerial ownership considerably reduces agency conflicts in large publicly listed firms.

Ang et al. (2000) investigated agency costs and ownership structure in the United States of America. They took a sample of 1,708 small businesses. The agency cost was the dependent variable. Annual operating expenses to annual sales and annual sales to total assets were used to calculate agency cost Common ownership, managerial alignment, external monitoring, capital structure, and control variables were among the four groupings of independent variables. Their empirical methodology is based on two key assumptions concerning agency costs: First, agency costs can be calculated as the difference between the efficiency of a firm with imperfect alignment and the efficiency of a firm with perfect alignment. A company managed by a 100 percent owner incurs no agency costs. The research revealed the following: First, when a third party manages a firm, the agency costs increase. The study also discovered that agency costs correlate negatively with the manager's ownership stake. Third, they discovered that if there are more nonmanager shareholders, agency costs rise. Fourth, they discovered that, to a lesser extent, banks' use of external monitoring results in a reduction in agency costs, which is a good externality. Agency cost are higher in firms where the managers do not own all of the stock, and they rise as the owner-manager's equity stake decreases.

Nguyen et al. (2020) looked into how corporate governance affected agency costs in 281 listed firms on the Ho Chi Minh Stock Exchange (HOSE) in Vietnam from 2013 to 2018. They considered a wide range of board characteristics and ownership structures. Firms that did not maintain the necessary ratios during the course of the entire time were excluded from the research. Due to their extensive corporate governance and capital structure, financial institutions were also excluded. To avoid the issue with extreme values, they finally removed outliers. Finally, 281 firms satisfied the criteria. Asset turnover served as a proxy for the dependent variable, agency cost. Ownership structure (Management ownership, Government ownership, and Foreign ownership) and board characteristics (Board size, CEO and Chairman duality, Board independence) were independent variables. Leverage (debt to equity), firm size, and firm performance (ROA) served as the control variables. Three statistical methods are used in the research methodology: random effects model (REM), fixed effects model (FEM), and ordinary least squares (OLS). Through Stata and Microsoft Excel, the researchers employed the correlation test, F-value, and T test to confirm the statistical significance of each variable. According to the findings, there is a negative correlation between board independence and board size, with agency cost being represented by an asset turnover proxy. Additionally, agency

costs rise in proportion to management and governance ownership levels. Additionally, agency costs are reduced as a company expands, has more creditor control, and performs better overall.

According to Mutende (2018), the relationship between free cash flow (FCF) and firm performance of NSE listed firms is influenced by agency costs and firm characteristics. The study made use of secondary panel data from 60 NSE-listed companies. Secondary data covered the years 2006 through 2015. There were both basic and multiple regression analyses used. The findings show that free cashflow has a positive, statistically significant effect on firm performance and that agency costs also has a positive, statistically significant intervening effect on this relationship. A descriptive cross-sectional study approach was used. Under the intervening influence of free cash flows, agency costs has a positive effect on firm performance. The present analysis identified the role of agency costs in mediating the relationship between company risk and ownership structure.

Chinelo and Iyiegbuniwe (2018) investigated how ownership structure and corporate governance help manufacturing companies listed on the Nigerian Stock Exchange from 2007 to 2017 reduce agency costs. To calculate agency costs, they employed the proxy agency cost index. This is based on the idea that agency costs can be observed through ineffective asset utilization (due to sub-optimum investments), excessive production costs and wasteful managerial behavior (resulting in higher expenses), and insufficient management effort (resulting in lower revenues and earnings). Regression with a multivariate fixed effect was used to analyze the data. The research discovered that management ownership and operational costs had an influence on agency costs. In the presence of agency costs, the present research assessed how ownership structure affects corporate risks. Regression with a multivariate fixed effect was used to analyze the data. Governance and ownership-related characteristics including management ownership, ownership concentration, board size, director compensation, and board independence are included as independent variables. Leverage, operating expenses, and free cash flow were all used as control variables. The findings demonstrate that increased managerial ownership, operating costs, and free cash flow significantly affected agency cost. The study focused on ownership structure and corporate governance while current study focuses on ownership structure and corporate risk. Poor corporate governance lead to corporate risks.

Bradford et al (2018) investigated the relationships between equity ownership, agency costs, and performance of 4,928 newly founded, tightly owned US businesses between 2004 and 2008. The results of the OLS regression analysis was that a reduction in agency costs caused by an increase in owner-manager equity ownership leads to a higher level of corporate value. This is consistent with the idea that CEOs possess enhanced knowledge about potential future outcomes and that businesses implement governance practices that maximize value. However, the research only took into account management ownership for US start-up enterprises and relied on the amount of hours worked as the primary factor for determining a principle owner-manager. The current study uses the amount of shares owned by managers to determine management ownership.

2.2 CONCEPTUAL FRAMEWORK

Figure 1 shows the relationship among ownership structure as the independent variable, agency costs as mediator, and corporate risk as the dependent variable. Agency costs arise when firm managers engage in activities that are in conflict with firm owners' desires. To minimize agency costs, the firm is compelled to set up an independent board to monitor firm activities. Key variables to be collected and analyzed include ownership structure, which was operationalized in terms of managerial ownership, foreign ownership, government ownership and corporate ownership. Agency costs was measured using proxies like total annual operating expense, and annual revenue. While corporate risk was estimated based on volatility of firm's earnings (stand deviation of return on asset, SDROA).

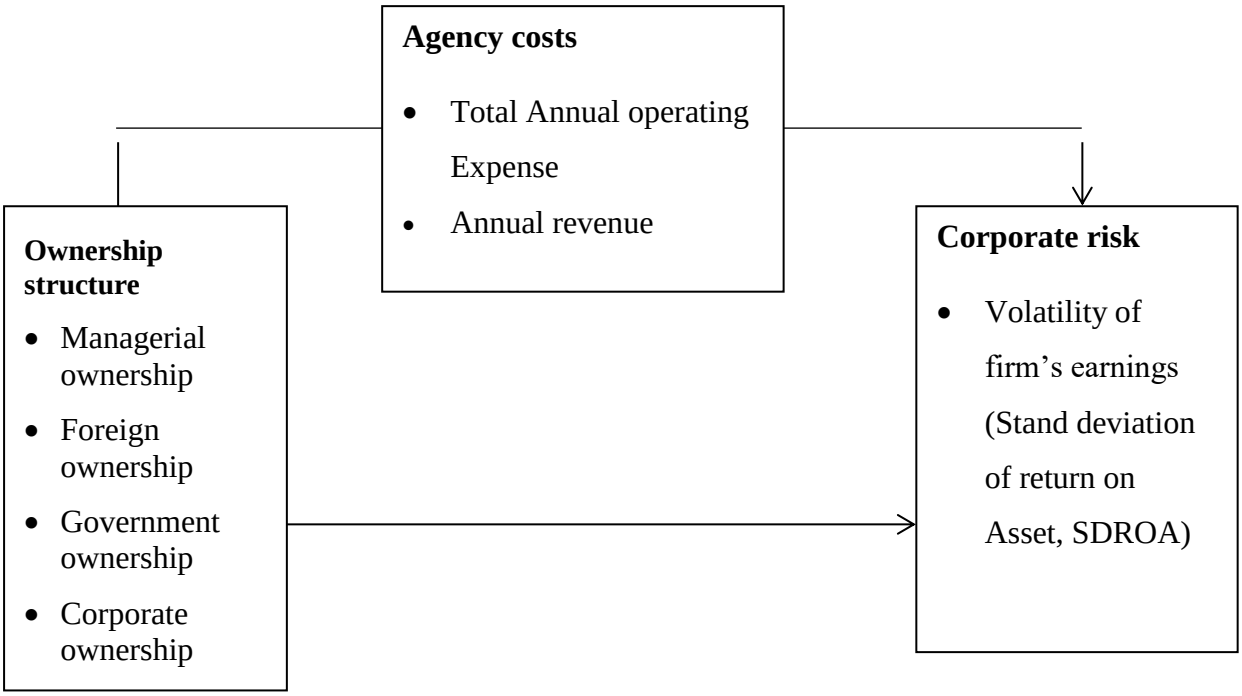

Figure 1: Conceptual Framework

3. RESEARCH METHODOLOGY

Causal survey research design was adopted for this study because the study intended to establish the cause-effect relationships between the variables under investigation. The research involved the collection of financial and governance data from publicly traded companies, ensuring diversity across various industries and company sizes. The study population was sixty (64) firms at Nairobi Securities Exchange, Kenya(NSE), as at 31st December 2021 .The population comprised 6 agricultural firms, 1 automobile firm, 12 banks, 5 construction & allied firms, 12 commercial and services firms, 5 energy & petroleum firms, 6 insurance firms, 5 investments firms, 1 investment services firm, 8 manufacturing & allied firms, 1 telecommunication firm, 1 real estate firm and 1 exchange traded funds (NSE, 2021). Firms listed at NSE comprised of foreign owned and locally owned firms (NSE, 2021). Foreign ownership limits was lifted in 2015 so foreigners can own over 75% of NSE listed firms.

Secondary data was collected across the 64 firms and overtime hence panel data. Secondary data was extracted from NSE yearbooks. Panel data obtained covered a span of 11 years; 2011 to 2021. Descriptive analysis was carried out. The heart of this research lies in the quantitative analysis of data. Statistical software package STATA was utilized to perform regression analyses, controlling for confounding variables, and testing hypotheses regarding the impact of ownership structure and agency costs on corporate risk.

4. RESULTS AND DISCUSSIONS

Results

The study used Panel data for 64 companies covering a span of 11 years; 2011 to 2021 resulting to 704 observations. However, due to missing data, unbalanced panel data set was used in analysis. A total of 647 observations were used arising from the companies that listed or delisted during the study period and thus did not cover the entire study period. The findings are presented in tables and graphs matched up to the specific objectives. In summary, the section presents descriptive statistics, diagnostic tests, correlation and regression statistics.

The results obtained from the data analysis was thoroughly interpreted and discussed. This included addressing the statistical significance of findings, implications to theories, and the extent to which agency costs mediated the influence of ownership structure on corporate risk.

Descriptive Findings for Ownership Structure

The descriptive statistics for ownership structure was assessed using managerial share ownership, foreign share ownership, government share ownership, corporate ownership and diffuse ownership. The descriptive statistics of ownership structure are as shown in Table 1.

Table 1: Descriptive Statistics of Ownership Structure

	N	Mean	Minimum	Maximum	Std. D	Skewness	Kurtosis
Managerial share ownership	647	0.207	0.132	0.413	0.032	3.421	7.305
Foreign share ownership	647	0.495	0.272	0.524	0.090	2.764	9.704
Government share ownership	647	0.213	0.010	0.648	0.097	4.287	8.225
Corporate ownership	647	0.501	0.227	0.621	0.033	2.740	6.935
Diffuse ownership	647	0.628	0.561	0.883	0.080	3.042	7.244

The results showed that managerial share ownership as measured by ratio of managerial ownership to total ownership had a mean of 2.07 with a minimum of 0.132 and maximum of 0.413. The standard deviation from the mean was 0.032 with a Skewness value of 3.421 and Kurtosis of 7.305. The results further indicate that foreign share ownership as measured by

ratio of ratio of foreign ownership to total ownership had a mean of 0.495 with a minimum of 0.272 and maximum of 0.524. The standard deviation from the mean was 2.764 with a Skewness value of 3.02 and Kurtosis of 9.704. Government share ownership as measured by ratio of government ownership to total ownership had a mean of 0.213 with a minimum of 0.010 and maximum of 0.648. The standard deviation from the mean was 0.097 with a Skewness value was 4.287 and Kurtosis at 8.225.

Corporate ownership as measured by ratio of corporate ownership to total ownership had a mean of 0.501 with a minimum of 0.227 and maximum of 0.621. The standard deviation from the mean was 0.033 with a Skewness value was 2.740 and Kurtosis at 6.935. Diffuse ownership as measured by ratio of diffuse ownership to total ownership had a mean of 0.628 with a minimum of 0.561 and maximum of 0.883. The standard deviation from the mean was 0.080 with a Skewness value was 3.042 and Kurtosis at 7.244. The implication of the ownership structure plays a crucial role in determining the way public listed companies operate, as it influences key aspects such as decision-making processes, management incentives, and firm performance. From the findings, the indicators of ownership structure; managerial share ownership, foreign share ownership, government share ownership, corporate ownership, diffuse ownership are expected to affect corporate risk in diverse ways as their means differ independently.

Descriptive Statistics for Agency Costs

The descriptive statistics for agency cost was measured as the ratio of operating expenses to annual revenue. The descriptive statistics of ownership structure are as shown in Table 2.

Table 2: Descriptive Statistics of Agency Cost

Variables	N	Mean	Minimum	Maximum	Std. Dev.	Skewness	Kurtosis
Agency Cost	647	0.690	0.090	0.898	0.139	3.615	5.674

The results indicate that agency cost as measured by ratio of operating expenses to annual revenue had a mean of 0.690 with a minimum of 0.090and maximum of 0.898. The standard deviation from the mean was 0.139 with a Skewness value of 3.615 and a Kurtosis of 5.674. The existence of agency cost is a major concern for public listed companies, as it can negatively impact the company's financial performance and overall reputation.

Correlation and Regression Analysis

Conducting correlation analysis was deemed essential in evaluating the degree of correlation between the variables under investigation. The Pearson's correlation was utilized to analyze the composite score of each variable. Correlation analysis was used to test the association between variables as indicated in Table 3,while regression was used to test the causal effect among variables.

Correlation between Ownership Structure and corporate risk

The findings of the study revealed a significant and positive correlation between managerial ownership and corporate risk in companies listed on the Nairobi Securities Exchange (r = -0.744, p = 0.000). The study found a statistically significant negative correlation (r = -0.751, p = 0.000) between foreign ownership and corporate risk in firms that are listed at the Nairobi Securities Exchange. The findings suggest a positive and statistically significant correlation between corporate risk and government ownership for companies listed on the Nairobi Securities Exchange (correlation coefficient = 0.743, p-value = 0.000). The study found a significant and negative correlation (r = -0.755, p = 0.000) between corporate ownership and corporate risk in firms that are listed at the Nairobi Securities Exchange. The findings of the study revealed a positive and statistically significant correlation (r = 0.743, p = 0.000) between diffuse ownership and corporate risk for companies that are listed on the Nairobi Securities Exchange. The results suggest that an increase in foreign ownership, corporate ownership, and diffuse ownership is associated with a reduction in corporate risk.

Table 3: Correlation Analysis

	Corporate risk	**Managerial ownership**	**Foreign ownership**	**Government ownership**	**Corporate ownership**	**Diffuse ownership**	**Ownership Structure**	**Agency cost**
Corporate risk	1.000							
Managerial ownership	.744**	1.000						
	0.000							
Foreign ownership	-.751**	-0.534	1.000					
	0.000	0.000						
Government ownership	.743**	.440**	-0.447	1.000				
	0.000	0.000	0.000					
Corporate ownership	-.755**	-0.542	.556**	-0.349	1.000			
	0.000	0.000	0.000	0.000				
Diffuse ownership	-.767**	-0.454	.445**	-0.433	.565**	1.000		
	0.000	0.000	0.000	0.000	0.000			
Ownership Structure	-.754**	-.540**	.547**	-.447**	.348**	.463**		
	0.000	0.000	0.000	0.000	0.000	0.000	1.000	
Agency costs	.755**	.439**	-0.435	.553**	-0.469	-0.567	-.557**	1.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Source: Author

Correlation between Ownership Structure and Agency Costs

The results indicate that ownership structure is positively and significantly related to agency costs among firms listed at the Nairobi Securities Exchange (r = 0.463**, p = 0.000). The level of relationship between ownership structure and agency costs was 46.3%. The findings therefore, imply that increase in ownership structure leads to an increase in agency costs by that margin.

Correlation between Agency Costs and corporate risk

The results indicate that agency cost is positively and significantly related to corporate risk among firms listed at the Nairobi Securities Exchange (r = 0.755, p = 0.000). The level of relationship between agency costs and corporate risk was 75.5%. The findings therefore, imply that increase in agency costs leads to an increase on corporate risk. Achieving organizational goals and monitoring interactions between stakeholders, such as the board of directors and shareholders, can both be done with the help of good corporate governance. If there is a strong corporate governance system in place, the agency problem and the agency cost will reduce thus leading to reduced corporate risk.

The Mediating Effect of Agency Costs on the Relationship between Ownership Structure and Corporate Risk

The study tested the mediation effect of agency costs on the relationship between ownership structure and corporate risk among firms listed at the Nairobi Securities Exchange. This effect was assessed, and results explained using coefficient of determination (R-Square) and the regression coefficients. Stepwise regression technique of Baron and Kenny (1986) was used. The analysis was done in 4 models/steps as follows:

Step i. $CR_{i\,t} = \beta_0 + \beta_1 OS_{it} + \varepsilon_i$

Step ii. $AC_{it} = \beta_0 + \beta_1 OS_{it} + \varepsilon_i$

Step iii. $CR_{it} = \beta_0 + \beta_1\, AC_{it} + \varepsilon_i$

Step iv. $CR_{it} = \beta_0 + \beta_1 . OS_{it} + \beta_2 . AC_{it} +$

Step one predicted the relationship between ownership structure and corporate risk as indicated in Table 4.

Table 4: Regression Results for Ownership Structure and Corporate Risk

Corporate Risk	Coef.	Std. Err.	Z	P>|z|
Ownership Structure	-0.742	0.025	-29.140	0.000
Constant	0.883	0.014	62.730	0.000
Wald chi2(1)	848.87			
Prob > chi2	0.000			
R-squared	0.5682			

The fitted regression model was:

$CR_{it} = 0.883 – 0.742OS_{it}$

In step one, the regression model of ownership structure on corporate risk among firms listed at the Nairobi Securities Exchange was significant with β = -0.742, p = 0.000<0.05. Step two predicted the relationship between ownership structure and agency costs as indicated in Table 5.

Table 5: Regression Results for Ownership Structure and Agency Cost

Agency Cost	Coef.	Std. Err.	z	P>|z|
Ownership Structure	-0.753	0.026	-29.420	0.021
Constant	0.882	0.014	61.630	0.000
Wald chi2(1)	865.3			
Prob > chi2	0.000			
R-squared	0.574			

The fitted regression model was:

$AG_{it} = 0.882 – 0.753OS_{it}$

In step two, the regression model of ownership structure on agency cost was significant with β = -0.753, p = 0.021<0.05. Step three predicted the relationship between agency cost and corporate risks as indicated in Table 6.

Table 6: Regression Results for Agency Cost and Corporate Risk

Corporate Risk	Coef.	Std. Err.	z	P>|z|
Agency cost	0.7465	0.026	29.260	0.030
Constant	0.1339	0.014	9.420	0.000
Wald chi2(1)	856.15			
Prob > chi2	0.000			
R-squared	0.5703			

The fitted regression model was:

$CR_{it} = 0.1339 + 0.7465AC_{it}$

In step three, the regression model of agency cost and corporate risk was significant with β = 0.7465, p = 0.030<0.05.Step four predicted the relationship between ownership structure and agency cost on corporate risk as indicated in Table 7.

Table 7: Regression Results for Ownership Structure and Agency Cost on Corporate Risk

Corporate Risk	Coef.	Std. Err.	z	P>|z|
Ownership Structure	-0.420	0.035	-11.910	0.000
Agency Cost	0.427	0.035	12.070	0.025
Constant	0.505	0.034	14.980	0.000
Wald chi2(2)	1184.93			
Prob > chi2	0.0000			
R-squared	0.6479			

The fitted regression model was:

$CR_{it} = 0.505 - 0.420OS_{it} + 0.427AC_{it}$

In step four, the regression model of ownership structure and agency cost on corporate risk was significant with $\beta_1 = -0.420$, $p = 0.000<0.05$, $\beta_2 = 0.427$, $p = 0.025<0.05$.Intervention occurs if ownership structure predicts corporate risk, ownership structure predicts agency cost, agency costs predicts corporate risk and still ownership structure predicts corporate risk when agency cost is in the model.

The results indicate that in step one, the regression model of ownership structure on corporate risk was significant. In step two, the regression model of ownership structure on agency cost was significant. Similarly, in step three, the regression model of agency cost and corporate risk was significant. Likewise, in step four, the regression model of ownership structure and agency cost on corporate risk was significant. The results indicate that steps 1, 2, 3 and 4 were met as the *P*-values were below 0.05. Therefore, the study rejected the null hypothesis that there is no significant mediating effect of agency costs on the relationship between ownership structure and corporate risk among firms listed at the Nairobi Securities Exchange.

Discussion

The regression analysis conducted in the fourth step revealed a statistically significant relationship between ownership structure and agency cost, and corporate risk. The findings suggest that the aforementioned steps, namely steps 1 through 4, were successfully achieved as evidenced by the P-values falling below the threshold of 0.05. Thus, the research findings have refuted the null hypothesis that posits the absence of a significant mediating impact of agency costs on the relationship between ownership structure and corporate risk in the context of companies enlisted at the Nairobi Securities Exchange.

The results are in line with the study conducted by Hastori et al. (2015) which examined the relationship between ownership structure, corporate governance, and agency costs in 54 agro-industrial companies in Indonesia. The study revealed that the degree of agency costs in a firm has an effect on the level of firm risks. The effectiveness of independent directors in mitigating agency costs is not supported by empirical evidence, whereas agency costs are influenced by the ownership structure. The findings are consistent with the research conducted by Mutende (2018) which examined the impact of agency costs, free cash flows, and firm structure on performance. The study revealed that agency costs have a positive effect on firm performance when free cash flows are taken into consideration as an intervening factor.

The results are also congruent with the research conducted by Chinelo and Iyiegbuniwe (2018) pertaining to the relationship between ownership structure and agency cost. The study utilized the agency cost index as a metric for measuring agency cost and determined that agency costs are influenced by both operating expenses and managerial ownership. The study conducted by Andries et al (2020) aimed to evaluate the impact of corporate governance, ownership structure, and firms' risk-taking behavior on the growth of non-financial firms across ten countries. The research revealed a u-shaped correlation between corporate governance (measured through a comprehensive index) and firm risk-taking behavior.

5. CONCLUSIONS

The research findings indicate that the relationship between managerial ownership, government ownership, and corporate risk is positive. The empirical evidence suggests that firms characterized by a higher degree of ownership concentration exhibit a tendency to encounter lower levels of risk in comparison to those firms that possess a dispersed ownership structure. The aforementioned phenomenon can be explained by the notion that in cases where a sole shareholder possesses a substantial portion of a company's shares, they are capable of wielding a heightened degree of authority and sway over the organization's choices, thereby diminishing the probability of engaging in venturesome conduct. Moreover, firms characterized by a greater level of ownership concentration may reap advantages from the convergence of interests between shareholders and management, thereby resulting in more informed decision-making and diminished risk. It is noteworthy that the correlation between ownership structure and corporate risk is not invariably unambiguous and can be impacted by diverse factors, including market circumstances and the distinct attributes of the enterprise.

The research findings indicate a positive and statistically significant correlation between agency cost and corporate risk for companies listed on the Nairobi Securities Exchange. There exists a positive correlation between agency cost and corporate risk, whereby an increase in the former leads to a corresponding increase in the latter. The reason for this phenomenon is that as agency costs escalate, the degree of misalignment between the interests of shareholders and management intensifies, resulting in greater ambiguity in results and augmented risk for the organization. Effective corporate governance practices and internal controls are crucial for companies to efficiently manage their agency costs. By aligning the interests of shareholders and management, the probability of risk is reduced and the likelihood of success for the company is increased.

6. RECOMMENDATIONS

On ownership structure, the study recommends on spreading ownership among a large number of shareholders to reduce the risk of one shareholder having too much control and potentially making decisions that are not in the best interest of the company. Having a clear separation between ownership and management can reduce the risk of conflicts of interest and ensure that decisions are made in the best interest of the company. The study also proposes on institutional ownership where having a significant portion of ownership held by institutional investors, such as pension funds or insurance companies, can reduce risk as these investors are typically long-term oriented and have a stake in the stability and success of the company.

On agency cost, the study suggests that the firms should have systems in place that monitor and control the behavior of employees and agents. This helps to reduce agency costs by reducing the likelihood of unethical or harmful behavior. Good communication is essential to reducing agency costs. The firms should ensure that everyone is aware of the company's objectives and that they understand the risks and benefits associated with their actions. The firms should make sure that everyone knows what their role is and what is expected of them. This reduces the risk of agency costs by reducing the likelihood of misunderstandings and conflicts. The firms should develop and maintain a strong corporate culture that values ethical behavior and accountability. This can help to reduce agency costs by reducing the likelihood

of unethical or harmful behavior. The firms should offer incentives to employees and agents based on their performance. This will help to reduce agency costs by motivating employees and agents to act in the best interests of the company.

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