The impact of managerial and institutional ownership on firm profitability: Evidence from Egypt

Dina Khaled Mohamed Elamir
Faculty of Business Administration, Future University in Egypt

Farid Moharram
Faculty of Commerce, Ain Shams University, Egypt

Keywords
Ownership Structure, Managerial Ownership, Institutional Ownership, Agency Theory, Firm Performance, Egyptian Listed companies

Abstract
This study aims to investigate the impact of managerial and institutional ownership on the profitability performance of Egyptian listed firms. The research uses data from a sample of 59 companies listed on the Egyptian Stock Exchange, specifically (EGX 100) from 12 main sectors (real estate, food and beverages, construction materials, travel, textile and durables, energy and support services, health care, media, shipping and transportation services, industrial goods and services, and automobiles) for 5 years period from 2017 to 2021. The study uses a panel regression model to test the research hypotheses. The findings revealed that institutional ownership has an insignificant impact on return on equity (ROE). While Managerial ownership has a significant positive impact on return on equity (ROE) Moreover, the main findings of the study showed that a high level of managerial ownership may inspire managers to work in the best interests of shareholders as well as serve as a positive monitoring replacement to eliminate agency conflicts.

Introduction

Corporate governance has been an important research area, which deals with different mechanisms that are used to control the corporation to maximize shareholder's (owners) wealth. Corporate governance is the framework of rules, procedures, and processes that control and manage a company's operations (Bonna, 2012). Also, it involves the responsibility of maintaining balance among all of the stakeholders involved in the company, including shareholders, management, consumers, suppliers, investors, government, and the community. The main objective of corporate governance is to guarantee transparency, accountability, equity, and moral behavior in a company's management and decision-making procedures (Kiradoo, 2020).

The ownership structure is considered one of the corporate governance mechanisms that contribute to reducing agency problems as well as increasing the role of shareholders in monitoring managerial actions and limiting their opportunistic behavior leading to increasing the value of the company and shareholders' wealth (Rashid, 2020; Karaca & Eksi, 2011). However, ownership structure's role in controlling managerial actions depends on ownership structure types as indicated by the study of (Kumar & Zattoni, 2015) the types of ownership structure play a vital role in determining financial performance. Besides, the Ownership structure is characterized by concentrated ownership, managerial ownership, institutional ownership, governmental ownership, family ownership, and controlling minority structure (Arshad, 2015).

Managerial ownership exists when a large percentage of company shares are owned by the company's board of directors. In other words, it occurs when an internal party of the company's managerial structure holds a large portion of its shares and is best informed about its position (Soliman et al., 2013). As indicated by the study (Szudejko, 2018) managers are more affected by the financial consequences of their decisions such as wasting shareholder/company wealth when the company has higher managerial ownership. Hence, they have less incentive to manipulate reported financial information (Dharwadkar et al., 2000). Additionally, it has long been recognized that this type of ownership generates greater alignment between shareholders' and managers' interests as well as mitigating agency problems between the two parties (Abdelsalam et al.; (Prusty & Al-ahdal, 2021). Therefore, managerial ownership is an important solution to agency problems (Juhmani, 2013).

Institutional ownership exists when a large percentage of company shares are owned by institutions, such as banks, insurance companies, pension funds, and investment funds which invest money on behalf of others (Wanda, 2022). This ownership type is distinguished from other ownership structures by a set of features, as it has a control power over management which reduces the opportunistic behavior of managers and works to improve the company value (Ha et al., 2019; Saleh et al., 2010). In addition to this, they are active investors who are best armed with the skills, knowledge, and resources to monitor and control the management activities of the company where they have invested efficiently and effectively. Besides, institutional investors are important to a well-functioning governance system independent of the financial and independent interest to view the company management and policies unbiasedly. Accordingly, institutional investors require timely and reliable information that allows them to better monitor the companies' activities (Saleh et al., 2010).

2. Literature Review and Hypothesis Development

2.1 Ownership structure

The relationship between ownership structure and performance has generated a lot of interest in the field of corporate governance. According to (Ahmed, 2017) ownership structure is defined as an internal control mechanism that refers to the percentage of shares held by managers (managerial ownership), institutions (institutional ownership), government (state ownership), foreign investors (foreign ownership), family (family ownership), and others. Foreign shareholders, Institutional investors, Managerial ownership, and the largest shareholders are four key topics for ownership structure research. Furthermore, one of the most distinguishing features of joint stock companies is the separation of ownership from management, where the rights of owners to control and make decisions are delegated to a specialized group of managers who have the competence and experience in managing companies (Heracleous, 2001).

2.2 Ownership Structure Types

The type of ownership structure significantly changes the perception of the company's purpose (Kallamu, 2016) in which different owners may have different objectives and decision-making horizons and thus, it is valuable to study the different types of owners (Kirchmaier & Grant, 2005). Besides, the type and concentration of ownership may affect mechanisms that attempt to align management interests with owners' interests. The right alignment of the two parties may increase the chances of implementing effective corporate governance and consequently improve the company's performance, efficiency, cost of capital, and value (Larcker, et al., 2011). As stated by the studies of (Gaur, 2015; Zouari and Kallamu 2016; Heracleous, 2001), concentrated and dispersed ownership structures are the most common types of ownership as well as controlling minority structures. The ownership structure of joint stock companies can be classified based on several perspectives.

2.2.1 Managerial ownership and Firm profitability

Managerial ownership exists when a large percentage of company shares are owned by the company's board of directors. In other words, it occurs when an internal party of the company's managerial structure holds a large portion of its shares and is best informed about the company's position (Soliman et al., 2013). As indicated by the study of **(**Szudejko, 2018) managers are more affected by the financial consequences of their decisions such as wasting shareholder/company wealth when the company has higher managerial ownership. Hence, they have less incentive to manipulate reported financial information (Dharwadkar et al., 2000). Additionally, it has long been recognized that this type of ownership generates greater alignment between shareholders' and managers' interests as well as mitigating agency problems between the two parties (Abdelsalam et al.; (Prusty & Al-ahdal, 2021). Therefore, managerial ownership is considered an important solution to agency problems (Juhmani, 2013). In contrast, this type of ownership intensifies the problem of information asymmetry between management and shareholders due to the management's dominance over the company's authority. Moreover, a decline in the performance level of the company appears because of the management's pursuit to achieve its interests at the expense of other shareholders' interests without fear of punishment as a direct reflection of the protection effect granted to them by their ownership (Ahmed, 2017). Furthermore, outside shareholders may find it difficult to monitor managerial

actions at a higher level of managerial ownership as their greater ownership provides them the power to control the company and resist pressure from outside parties directly (Soliman et al., 2013).

The researcher intends to investigate the study by formulating the following hypothesis:

H1: There is a significant relationship between Managerial ownership and Firm Profitability.

2.2.2 Institutional ownership and firm performance

Institutional ownership exists when a large percentage of company shares are owned by institutions, such as banks, insurance companies, pension funds, and investment funds which invest money on behalf of others (Wanda, 2022). This ownership type is distinguished from other ownership structures by a set of features, as it has a control power over management which reduces the opportunistic behavior of managers and works to improve the company value (Ha et al., 2019**;** Saleh et al., 2010). In addition to this, they are active investors who are best armed with the skills, knowledge, and resources to monitor and control the management activities of the company where they have invested efficiently and effectively. Besides, institutional investors are important to a well-functioning governance system independent of the financial and independent interest to view the company management and policies unbiasedly. Accordingly, institutional investors require timely and reliable information that allows them to better monitor the companies' activities (Saleh et al., 2010).

On the contrary, the study of **(Bhattacharya & Graham, 2009)** indicated that institutional ownership existence may limit the effectiveness of the Board of directors through shareholder control over managerial decisions and directing them to serve their interests leading to a lack of board of directors' independence. Moreover, institutional investors may target speculation, which means that they act as traders and not owners and accordingly, focus on short-term performance.to examine the Egyptian stock market by testing the research hypothesis as follows:

H2: There is a significant relationship between Institutional Ownership and Firm Profitability.

2.3 The Relationship between Ownership Structures and Agency Theory

Agency theory is a significant concept that examines the relationship between ownership arrangements and the impact of different ownership types on problems and costs. Therefore, the next part will explain the definition and assumptions of agency theory, along with various types of agency problems and costs. Furthermore, it will investigate the influence of diverse ownership structure types on agency problems and costs in the following manner:

2.3.1 Agency Theory

Agency costs are a type of internal cost that results from the actions of agents acting on behalf of clients. Agency costs are usually the result of core inefficiencies, frustrations, and confusion. Accordingly, Conflict of interest between shareholders and management. Agency costs are paid to the agent. However, the agency problem is one of the oldest problems that have been going on since then. Development of an organization. Each organization may suffer from this problem in diverse ways and it cannot be ignored (Paniagua et al., 2018).

The agency problem could increase because of the separation of ownership and control, as the principles (shareholders) make the agents (managers) the representative party of decision-making, the interests of the principles and agents are not aligned so the principle-agent problem (agency conflict) arises. According to (Florackis, ,2015) there are two types of agency problems those canaries which are the moral hazard (hidden actions) and information asymmetry (hidden information). provided evidence that the agency problems result in activities that are contradictory to the principles' interests, thus the agency cost will increase. According to agency cost theory, the governance attribute of monitoring and advisory roles in terms of controlling and directing management activities improves firm performance in a variety of ways, including agency cost reduction **(**Mohamed & Badawi 2013).

3 Research Design and Methodology

3.1 Research Conceptual Framework

The following figure shows the conceptual framework of the research which clarifies the relationship between the independent variables and the dependent variable:

Data

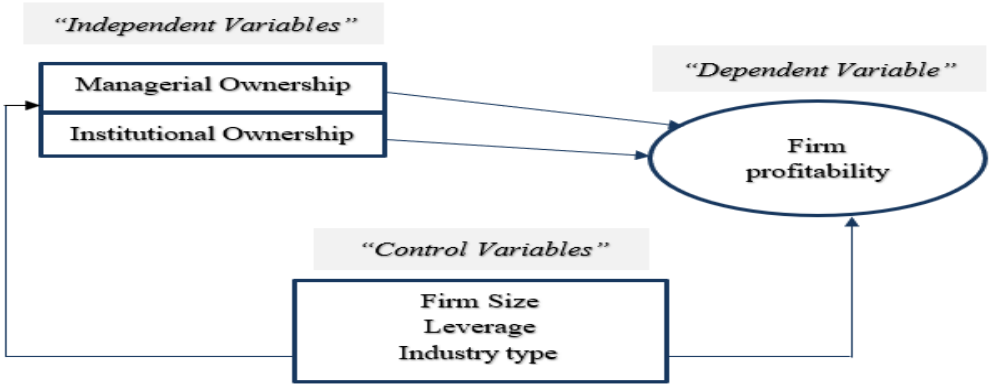

Figure 1: Conceptual Model.
Source: Developed by the Researcher.

Collection and Study Sample

The research data was collected from the Mubashir Egypt website (https://www.mubasher.info/countries/eg/stock-prices) and the Egyptian Stock Exchange website (https://www.egx.com.eg/en/ListedStocks.aspx), and the company websites. The data was gathered using the company's annual reports including corporate governance reports, BOD reports, and financial statements. The research population consists of EGX100 from 2017 to 2021. The study sample includes 59 Egyptian companies that are listed on the Egyptian Stock Exchange and the total number of observations is 295 observations. However, the other companies have been excluded due to the missing data. Banks, insurance companies, and businesses in the financial services industry are not included in the study sample due to the unique nature that regulates their institutions; they must adhere to certain criteria and regulatory regulations. The study will use a pooled panel model to analyze the data.

3.2 Research Model

The following equations will represent the relationship between the independent and dependent variables:

Model (1) to test the effect of Managerial ownership on Firm Profitability (H1):

$$ROE = \alpha + \beta_1\, MO_{it} + \beta_2\, size_{it} + \beta_3\, LEV_{it} + \beta_4\, IT_{it} + \varepsilon_{it}$$

Model (2) to test the effect of Institutional ownership on Firm Profitability (H2):

$$ROE = \alpha + \beta_1\, IO_{it} + \beta_2\, size_{it} + \beta_3\, LEV_{it} + \beta_4\, IT_{it} + \varepsilon_{it}$$

3.3Variables Measurement

Table 1: clarifies the measurement of the variables as follows:

Variables	*Abbreviation*	*Measurement*	*Ref.*
Independent variables			
Managerial Ownership	MANOWN	Percentage of shares held by board of directors / total number of firms' shares.	(Asiriuwa et al., 2019) (Alves, 2012)
Institutional Ownership	INSOWN	Percentage of shares held by institutional investors / total number of firms' shares.	(Alghadi et al., 2021) (Alkordi et al., 2017)
Dependent variables			

Return on Equity	ROE	Net income divided by shareholders equity of the firm.	(Kusuma, 2021a)
Control Variables			
Firm Size	SIZE	The natural logarithm of total assets	(Asiriuwa et al., 2019) (Saleem Salem Alzoubi, 2016)
Leverage	LEV	Total liabilities / total assets.	(Soliman, 2019) (Mohd et al., 2015)
Industry Type	IT	Dummy Variable 1: Manufacturing companies 0: Other (Service Companies)	(Asiriuwa et al., 2019)

Source: developed by the researcher

4 Findings and results

4.1 Testing the first hypothesis

The researcher uses the panel regression model steps to test the first hypothesis which states that: There is a significant relationship between managerial ownership and firm profitability. The dependent variable firm profitability was measured by return on equity (ROE). The following pooled panel model is to test the first measurement of firm profitability which is Return on equity.

4.2 Model Diagnostics:

The following table (2) illustrates the diagnostics of the three-panel models to determine the most appropriate model for forecasting financial performance.

Table (2): The pooled panel model diagnostics for the first hypothesis.

Test	**Purpose**	**Test-statistic result**	***P-value***	**Fitted panel model**
F-test	Comparing between Pooled panel and Fixed Effect Panel	F = 6.52039	0.67932025	Pooled panel
Breusch- Pagan test	Comparing between Pooled panel and Random Effect Panel	LM = 1.974	0.51574030	Pooled panel
Hausman test				

Source: Prepared by the researcher depending on E-views software output.

From the previous table (2) it is observed that the pooled linear panel model is the most fitted model to explain the impact of the independent and control variables on the dependent variable. Since the results of both the F-test and the Breusch-Pagan test revealed that the pooled linear panel model is the most appropriate; therefore, it is unnecessary to apply the Hausman test.

4.3 Pooled Panel

The following table (3) presents the pooled panel linear regression model for managerial ownership as an independent variable and return on equity as a dependent variable as well as firm size, leverage, and industry type as control variables to obtain the most fitted linear relation that can forecast the company's performance in the long run.

Table (3): The pooled panel model of ROE for the first hypothesis.

Model	*Pooled Panel*	Dependent variable		ROE
Independent variables	***Coefficient***	***t-ratio***	***p-value***	**Significance**
Constant	−22.0042	−1.891	0.0596	**Insignificant**
Managerial Ownership	7.59847	2.013	0.0450	**Significant**
Firm's Size	1.42937	2.588	0.0101	**Significant**
Leverage	−0.432520	−0.7018	0.4833	**Insignificant**
Industry Type	1.52203	0.6298	0.5293	**Insignificant**
F-test	3.505454	*p-value*		0.008172
Adjusted R-squared		3.2964%		

Source: Prepared by the researcher depending on E-views software output.

From Table (3) it is concluded that:

- The overall pooled panel model is significant as the overall F-test for significance has a value of 3.505454 and a *P-value* of 0.008172 which is less than 0.05, with an adjusted R-squared value of 53.2964% which means that Managerial Ownership and firm's size explain the change in the ROE by 3.2964%.
- Managerial Ownership has a direct and significant impact on ROE.
- Industry Type has a direct and insignificant impact on ROE.
- Leverage has an inverse and insignificant impact on ROE.
- Firm size has a direct and significant impact on ROE.

4.4 Variance Inflation Factor (VIF) Test:

The following table (4) presents the (VIF) test for identifying how much the variance of one independent variable is influenced by its association with another independent variable of the first hypothesis as follows:

Table (4): VIF of the independent and control variables for the first hypothesis.

Variable	VIF
Managerial Ownership	1.015
Firm's Size	1.039
Leverage	1.012
Industry Type	1.025

Source: Prepared by the researcher depending on E-views software output.

From the above table (4), it is indicated that no variable suffers from multi-collinearity because the VIF values don't exceed 10.0.

4.5 Robustness check test

The researcher will apply a robustness check test to verify this model to be applied to any other sample from the study population.

Table (5): The robustness check test for the first hypothesis

Test	**Purpose**	**Test-statistic result**	***P-value***	**Fitted panel model**
F-test for joint regressors' significance	The regressors' are jointly significant with the panel model	F = 12.5562	<0.0001	Verified

Welch test for intercepts of different groups	Cross sections and time have a common intercept or one of them performed by different intercepts	F = 1.4856	0.75232	Cross sections and time have a common intercept

Source: Prepared by the researcher depending on E-views software output.

From the robustness check test, it was found that:

- The F-test for joint regressors' showed a significant impact of the dependent variable and constant on the dependent variable as its *p-value* is less than 0.05.
- Welch test for intercepts of different groups showed that Cross sections and time have a common intercept which verified that the pooled panel model is the most appropriate linear regression model for this relation.
-

4.6 Testing the second hypothesis:

The researcher will use the panel regression model steps to test the second hypothesis which states that: There is a significant relationship between Institutional ownership and firm profitability. The following pooled panel model is to test the measurement of firm profitability which is the return on equity (ROE).

4.7 Pooled Panel:

The following table (6) presents the pooled panel linear regression model for institutional ownership as an independent variable and return on equity as a dependent variable as well as firm size, leverage, and industry type as control variables to obtain the most fitted linear relation that can forecast the company's performance in the long run.

Table (6): The pooled panel model of ROE for the second hypothesis.

Model	*Pooled Panel*	Dependent variable		ROE
Independent variables	***Coefficient***	***t-ratio***	***p-value***	**Significance**
Constant	−22.5101	−1.933	0.0543	**Insignificant**
Institutional Ownership	−9.84487	−1.831	0.0681	**Insignificant**
Firm's Size	1.65245	2.999	0.0029	**Significant**
Leverage	−0.237650	−0.3796	0.7045	**Insignificant**
Industry Type	3.324130	0.5458	0.5856	**Insignificant**
F-test	5.114358	*p-value*		0.011057
Adjusted R-squared			3.0652%	

Source: Prepared by the researcher depending on E-views software output.

From Table (6) it is concluded that:

- The overall pooled panel model is significant as the overall F-test for significance has a value of 5.114358 and a *P-value* of 0.011057 which is less than 0.05, with an adjusted R-squared value of 3.0652% which means that the firm's size explains the change in the ROE by 53.0652%.
- Institutional ownership has an inverse and insignificant impact on ROE.
- Industry Type has a direct and insignificant impact on ROE.
- Leverage has an inverse and insignificant impact on ROE.

Size has a direct and significant impact on ROE

4.8 Variance Inflation Factor (VIF) Test:

The following table (7) presents the (VIF) test for determining how much the variance of one independent variable is influenced by its association with another independent variable of the second hypothesis as follows:

Table (7): VIF of the independent and control variables for the second hypothesis.

Variable	VIF
Institutional Ownership	1.035
Firm's Size	1.032
Leverage	1.041
Industry Type	1.023

Source: Prepared by the researcher depending on E-views software output.

Based on the above table (7), it is indicated that no variable suffers from multi-collinearity since the VIF values don't exceed 10.0.

4.9 Robustness check test:

The researcher will apply a robustness check test to verify this model to be applied to any other sample from the study population.

Table (8): The robustness check test for the second hypothesis

Test	Purpose	Test-statistic result	*P-value*	Fitted panel model
F-test for joint regressors' significance	The regressors' are jointly significant with the panel model	F = 11.9556	<0.0001	Verified
Welch test for intercepts of different groups	Cross sections and time have a common intercept or one of them performed by different intercepts	F = 1.6322	0.611878	Cross sections and time have a common intercept

Source: Prepared by the researcher depending on E-views software output.

From the robustness check test, it was found that:

- The F-test for joint regressors' showed a significant impact of the dependent variable and constant on the dependent variable as its *p-value* is less than 0.05.
- Welch test for intercepts of different groups showed that Cross sections and time have a common intercept which verified that the pooled panel model is the most appropriate linear regression model for this relation.

5 Discussions and conclusions

Table (9): The Results of Hypotheses Testing

No.	Hypotheses	Regression result (significant/insignificant)	Relationship nature	Decision (accept/reject)
H_1	There is a significant relationship between managerial ownership and firm profitability.	Significant	Positive	Accepted
H_2	There is a significant relationship between institutional ownership and firm profitability.	Insignificant	-	Rejected

Source: Developed by the Researcher

The findings indicated that managerial ownership has a significant positive impact on firm profitability. The researcher explained the findings and indicated that a high level of managerial ownership

may inspire managers to work in the best interests of shareholders as well as serve as a positive monitoring replacement to eliminate agency conflicts. From the applied study it is concluded that managerial ownership has a significant positive impact on ROE.

Moreover, the empirical findings indicated that institutional ownership has an insignificant impact on firm profitability. The researcher stated that companies with a high percentage of institutional ownership tend to exhibit much better governance practices, leading to improved corporate governance quality. From the applied study it is found that institutional ownership has an insignificant impact on ROE

6 Research Limitations

The research has several limitations that could be presented as follows:

- The research focused only on two types of ownership structure including managerial ownership and institutional ownership due to their popularity in the Egyptian market and doesn't include other types of ownership structure (e.g., governmental ownership, family ownership, and controlling minority structure).
- The research is limited to a sample of listed companies on the Egyptian Stock Exchange as it was the available data for the research during the period from 2017 to 2021 to achieve research objectives.
- The study sample includes listed companies on the Egyptian Stock Exchange other than banks, insurance companies, and financial institutions as they have a special nature that governs their entities as well as their compliance with some standards and legal requirements.

References

Abdelsalam, O., El-Masry, A., & Elsegini, S. (2008). Board composition, ownership structure, and dividend policies in an emerging market. *Managerial Finance*, *34*(12), 953–964.

Ahmed, N., & Hadi, O. A. (2017). Impact of Ownership Structure on Firm Performance in the MENA Region: An Empirical Study. *Accounting and Finance Research*, *6*(3), 105.

Arshad, R. (2015). Does Ownership Structure Matter for Publicly Listed Companies Performance in Malaysia? UUM Journal of Legal Studies, *6*.

Bonna, A. K. (2012). The Impact of Corporate Governance on Corporate Financial Performance. (Book).

Dharwadkar, B., George, G., & Brandes, P. (2000). Privatization in Emerging Economies: An Agency Theory Perspective. *Academy of Management Review*, *25*(3), 650–669.

Florackis, C. (2008). Agency costs and corporate governance mechanisms: evidence for UK firms. *International Journal of Managerial Finance*, *4*(1), 37–59.

Gaur, S. S., Bathula, H., & Singh, D. (2015). Ownership concentration, board characteristics, and firm performance. *Management Decision*, *53*(5), 911–931

Ha, N. M., & Hiep, P. (2019). The effect of institutional ownership on listed companies' performance in Vietnam. *International Journal of Economics and Business Research*, *17*(3), 317.

Heracleous, L. (2001). What is the Impact of Corporate Governance on Organisational Performance? *Corporate Governance: An International Review*, *9*(3), 165.

Juhmani, O. I. (2013). Ownership Structure and Corporate Voluntary Disclosure: Evidence from Bahrain. *International Journal of Accounting and Financial Reporting*, *3*(2), 133.

Kallamu, B. S. (2016). Ownership structure, independent directors, and firm performance. *E3 Journal of Business Management and Economics*, *7*(1), 019–028.

Karaca, S. S., & Eksi, I. H. (2011). The Relationship between Ownership Structure and Firm Performance: An Empirical Analysis over Istanbul Stock Exchange (ISE) Listed Companies. International Business Research, 5(1).

Kiradoo, G. (2020). Impact of Corporate Governance on the Profitability and the Financial Performance of the Organization. (Book).

Kirchmaier, T., & Grant, J. (2005). Corporate Ownership Structure and Performance in Europe. *SSRN Electronic Journal*.

Kumar, P., & Zattoni, A. (2015). Ownership Structure, Corporate Governance and Firm Performance. *Corporate Governance: An International Review*, *23*(6), 469– 471.

Larcker, D., & Tayan, B. (2011). *Corporate Governance Matters*. FT Press. (Book).

Mohamed, E. K. A., Basuony, M. A., & Badawi, A. A. (2013). The impact of corporate governance on firm performance in Egyptian listed companies. *Corporate Ownership and Control*, *11*(1), 691–705.

Paniagua, J., Rivelles, R., & Sapena, J. (2018). Corporate governance and financial performance: The role of ownership and board structure. Journal of Business Research, 89, 229–234

Prusty, T., & Al-ahdal, W. M. (2021). Can Ownership Structure Influence Firm Performance? A Study Of Non-Financial Listed Companies Of UAE. *Corporate Governance Insight*, *3*(1), 65–80.

Rashid, M. M. (2020). "Ownership structure and firm performance: the mediating role of board characteristics." Corporate Governance: The International Journal of Business in Society, 20(4), 719–737.

Saleh, M., Zulkifli, N., & Muhamad, R. (2010). Corporate social responsibility disclosure and its relation to institutional ownership. *Managerial Auditing Journal*, *25*(6), 591–613.

Soliman, M. S., El Din, M. B., & Sakr, A. (2013). Ownership Structure and Corporate Social Responsibility (CSR): An Empirical Study of the Listed Companies in Egypt. *SSRN Electronic Journal*.

Szudejko, M. (2018). The Agency Problems of Institutional Investors. *CFA Digest*, *48*(1).

Wanda, J. A. (2022). Moderating Role of Institutional Ownership Structure on the Relationship Between Market Value to Book Value Ratio and Stock Price Volatility of Companies Listed on the Nairobi Securities Exchange in Kenya. *Journal of Business Management and Economic Research*.