

Research Article 03

Ownership Structure and Firm Performance with Moderating Role of Financing Decisions: Evidence from Listed Companies in Sri Lanka

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Abstract

The aim of this study is to examine the impact of ownership structure on the firm performance of listed companies in Sri Lanka. This investigation also intends to examine the moderating effect of financing decisions on the relationship between the ownership structure and the firm performance. This study was confined to listed companies using a sample of 100 companies in Sri Lanka with 900 firm-year observations from 2013 to 2021. Quantitative method and deductive approach were employed. Data were collected from the audited annual financial statements of the listed firms in CSE. The statistical techniques of Pearson's correlation and panel data regression were used to analyze the association between the ownership structure and the firm performance. The findings of this study reveal that managerial ownership has a positive impact on the firm performance in terms of return on assets. Furthermore, financing decisions have a direct negative impact on return on assets and it moderates the nexus between institutional ownership and return on assets. When the firm's debt level decreases, the effect of institutional ownership on return on assets will be more favourable to the listed companies. Similarly, financing decisions moderate the nexus between managerial ownership and return on assets. The coefficient of interaction affirms a negative and statistically significant effect of the interaction between financing decisions and managerial ownership. Moreover, it is found that financing decisions moderates negatively the nexus between foreign ownership and Tobin's Q. The study recommends that the companies can use the less level of debt because it decreases the performance of companies in Sri Lanka. They should rely more on their internal source of finance. Furthermore, it is suggested that the listed firms may focus on prudent debt management and engage carefully in evaluating and controlling their debt levels to avoid adverse effects on performance. The firms can issue the shares to managers as it helps to reduce the agency cost and increase the firm performance. This study has broad and comprehensive practical implications which are beneficial for policymakers.

Keywords: Firm performance, foreign ownership, institutional ownership, managerial ownership, ownership concentration

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Introduction

Sri Lanka has undergone much political and economic turmoil in recent decades, and this has produced various macroeconomic anomalies. In comparison to many other emerging markets in Asia, Sri Lanka provides a unique business environment because of its historical inheritance, the 30-year civil war and other socioeconomic influences. Inconsistencies at the macroeconomic level create a challenging environment for Sri Lankan corporate governance, which was inherited from British colonial rulers who dominated the country for over four centuries. Due to this historical background, and coupled with other unique economic and political features, the governance structure of Sri Lankan organizations is greatly influenced by the neo-liberal reinforcement of good governance practices (Alawattage & Wickramasinghe, 2004). The research is needed on how the various ownership structures of Sri Lankan firms operate within these paradoxical conditions, and how they manage to achieve higher performance and investor confidence in order to maximize shareholder wealth.

As in many other emerging markets in Asia, the ownership of Sri Lankan companies is highly concentrated, with a presence of controlling shareholders in most enterprises (Samarakoon, 1999). As per the Colombo Stock Exchange (CSE) listing rules, a public listed company must satisfy a specified public float in its issued share capital at the time of its initial listing and thereafter. In order to be quoted on the CSE, a company must have a minimum public holding of 25 percent of the total number of shares, and these must be in the hands of a minimum number of 1,000 public shareholders (CSE listing rules, 2013). However, this requirement has not been properly monitored or enforced, and the minimum public shareholding of some companies falls short of the required float. Together with the above-mentioned historical, economic, and political influences, this has produced concentrated ownership in most Sri Lankan companies. The study by Senaratne and Gunaratne (2007), which examines the ownership structure of listed companies in Sri Lanka, reveals that the ownership of Sri Lankan companies is characterized by certain features, such as the controlling shareholder is usually another corporate entity; family ownership as the ultimate owners is widely prevalent; a pyramid ownership structure, cross-holdings and participation in management by controlling shareholders are used extensively; and a large community of arm's-length institutional shareholders is absent. Therefore, corporate control in Sri Lanka often lies in the hands of a few individuals, families, or corporate groups who hold the majority of ownership.

The effect of ownership structure and concentration on a firm's performance is an important issue in the literature of finance theories. There are tons of studies in the corporate governance (CG) literature that have focused on the direct relationship between ownership structure and firm performance. However, the findings of these studies are rather inconclusive and misleading (Tam & Tan, 2007). Furthermore, over the past 11 years, the market performance of listed companies in Sri Lanka has fluctuated substantially during the period from 2010 to 2020 (CSE report).

The extant empirical studies show that most of the prior studies have been focused on investigating the association between ownership structure and firm performance in developed countries. However, there is a dearth of studies that show the association between ownership structure and firm performance in emerging market economies.

Moreover, based on the previous evidence, the findings on ownership structure and firm performance are inconclusive. In light of the various and mixed evidence available and the lack of literature from the Sri Lankan perspective, the study intends to bridge the gaps recognized in the literature and examine the impact of ownership structure on the firm performance of listed companies in Sri Lanka.

Predominantly in the Sri Lankan context, there are only limited investigations into moderating effects. The financing decisions play a significant moderating effect in the association between ownership structure and firm performance. Most of the previous studies measure firm performance based on accounting-based indicators. But, accounting-based measures are widely regarded as valid indicators of firm performance and most of the previous studies did not take it into consideration. The majority of the prior studies have focused on accounting-based firm performance in analyzing the effect of ownership structure on firm performance. Very few studies have focused on both accounting and market returns in analyzing such associations. The current study concentrates on both accounting (ROA) and market-based (Tobin's Q) performance.

Ownership structure and firm performance are the two important ingredients for a firm to sustain in the market for a prolonged time. Ample research has statistically proven the significant impact of ownership structure on firm performance (Bhakar et al., 2024). Ergo, this study aims to critically review and analyze the mechanisms of ownership structure on firm performance of listed companies in Sri Lanka. Therefore, the main objective of the study is to examine the impact of ownership structure on the firm performance of listed companies in Sri Lanka. This study also explores the moderating effect of financing decisions on the relationship between ownership structure and firm performance.

Literature Review

The relationship between ownership structure and firm performance has been the central topic of various scholars, academics, and policymakers for a long time. This relationship depends on various types of ownership that handle investment strategies other than the investment horizons that may affect firm performance (Kuo et al., 2020). Yasser et al. (2017) argued that the direction of this relationship is due to variances in monitoring those that the shareholders can undertake.

Alkurdi et al. (2021) examined the effect of ownership structure on financial performance using accounting and market indicators in the Jordanian market and revealed that ownership structure can enhance the level of financial performance. Furthermore, the existence of various groups of ownership helps to increase the investors' satisfaction and assists shareholders in predicting the firms' performance to select the optimal investment opportunities. Moreover, Din et al. (2021) found that institutional ownership exerts a significant positive impact on return on equity and market to book ratio, which suggests that institutional investors play a significant role in improving the financial performance of the sample Pakistani. Abdullah (2018), showed that managerial ownership had a positive impact on output in Jordan. But, the results, however, surprisingly found no effect of foreign ownership on performance. Furthermore, Ogabo et al. (2021) found that there is a significant positive impact of managerial ownership on firm performance without any entrenchment effect at

managerial ownership above 5% of companies in the United Kingdom. Darko et al. (2016) indicated that female board representation and ownership concentration have a positive effect on the performance of listed companies on the Ghana stock exchange.

Rashid (2020) demonstrated that foreign ownership and director ownership have a significant positive influence on both accounting and market-based firms' performance, while institutional ownership exhibits a positive influence only on accounting-based performance (return on assets) in the listed public limited companies of Bangladesh. In terms of a mediating effect, the findings indicate that board independence and size partially mediate the association between ownership structure and firm performance. Moreover, Kao et al. (2018) revealed that ownership structure, family ownership, institutional ownership, foreign ownership, and blockholder ownership are all positively associated with the firm value of Taiwanese listed firms.

However, Aluchna and Kaminski (2017) analyzed the relationship between ownership structure and financial performance in the context of the largest Central European stock market and found a negative association between return on assets and ownership concentration by the majority shareholder, which is consistent with block holders' justification for expropriation.

However, Yasser and Mamun (2014) showed no significant association between ownership concentration and accounting-based performance, market-based performance measures, and economic profit. Al-Saidi and Al-Shammari (2015) also investigated the ownership concentration, ownership composition, and performance of the Kuwaiti-listed non-financial firms. They revealed that overall concentration ownership by large shareholders showed no impact on firm performance. Shawtari (2018) showed that the banking models are significant performance indicators. Further, the evidence indicates that the impact of ownership types is inconclusive in all measures of performance.

Furthermore, Aboagye-Otchere and Boateng (2023) investigated the nexus between financing decisions, ownership type, and financial performance of listed non-financial companies in Ghana. Findings indicated that long-term debt funding directly affects return on assets, return on equity, and Tobin's Q negatively. Again, total debt funding posits a positive link with return on equity and Tobin's Q. Moreover, the direct relationship between ownership type, financing decision, and accounting-based performance measure (ROE) was insignificant but significant with market-based performance measure.

Ali et al. (2022) found a negative but statistically significant relationship of leverage on firm performance with both ROA and ROE. Similarly, managerial ownership, institutional ownership and family-owned ownership have negative but statistically significant relationships with performance on listed companies Pakistan stock exchange. But, Kirimi et al. (2022) demonstrated that a negative association between state ownership and net interest margin, negative association between management ownership and both net interest margin and earnings per share, negative association between institutional ownership and return on assets and a negative association between foreign ownership and earnings per share. Al-Thuneibat (2018) revealed that there is a negative impact of institutional and foreign ownerships on the performance and positive impact of concentrated and managerial ownerships. The results also showed

that there is a positive impact of the financial leverage on the relationship between ownership structure and firm performance. The findings of the study provide implications to the regulators, investors and managers in Jordan to take into consideration the environment-specific factors when developing corporate regulations and encourage concentrated and managerial ownership because they have positive impact on performance.

In Sri Lankan context, Manawaduge and De Zoysa (2013) demonstrated a strong positive relationship between ownership concentration and accounting performance measures. Furthermore, the findings of the study show that ownership structure does not have a significant distinguishable effect on performance. Samarawickrama et al. (2021) revealed that higher ownership concentration improves firm performance using data gathered from 2015 to 2019 from 66 firms listed under banks, diversified financials, and insurance sectors in the Colombo Stock Exchange. Dyarathne and Kumari (2020) identified that institutional ownership and foreign ownership are positively associated with financial performance while individual ownership and ownership concentration are negatively correlated with financial performance.

Based on the empirical evidences regarding the ownership structure and firm performance with moderating effect financing decisions, the following hypotheses were formulated,

- H₁: Ownership concentration has a significant impact on firm performance of listed companies.
- H₂: Institutional ownership has a significant impact on firm performance of listed companies.
- H₃: Managerial ownership has a significant impact on firm performance of listed companies.
- H₄: Foreign ownership has a significant impact on firm performance of listed companies.
- H₅: Financing decisions moderate the relationship between ownership concentration and firm performance of listed firms in Sri Lanka.
- H₆: Financing decisions moderate the relationship between institutional ownership and firm performance of listed firms in Sri Lanka.
- H₇: Financing decisions moderate the relationship between managerial ownership and firm performance of listed firms in Sri Lanka.
- H₈: Financing decisions moderate the relationship between foreign ownership and firm performance of listed firms in Sri Lanka

Conceptual Framework

Figure 1 shows the conceptual framework for ownership structure and firm performance with financing decisions of this study. Ownership structure encompasses ownership concentration, institutional ownership, foreign ownership and managerial ownership whereas Tobin's Q and ROA are proxies for firm performance. Furthermore, this figure shows that moderating variables, namely financing decisions influence the relationship between ownership structure and firm performance.

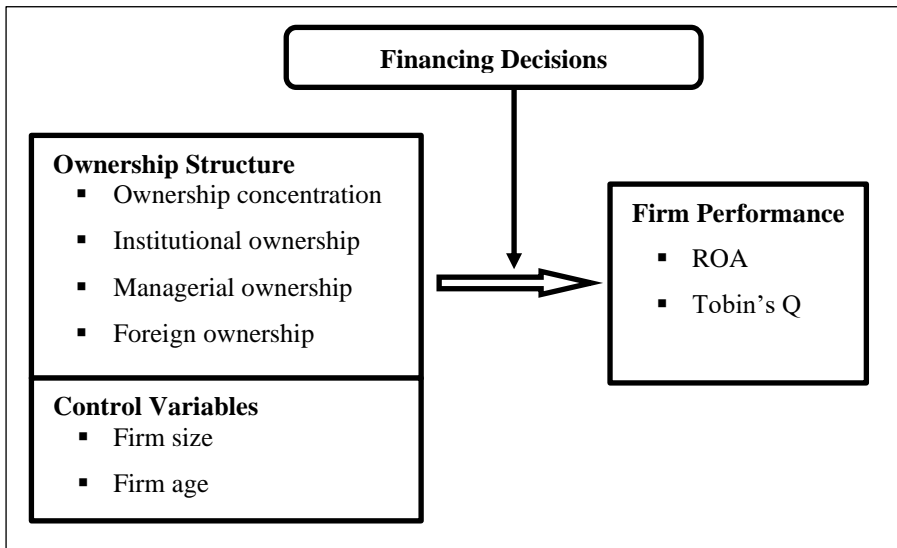


Figure 1: Conceptual Framework
Source: Developed by the researcher (2023)

Research Methodology

The research aligned with positivism concentrates on recognizing the explanatory associations and causal relationships through a quantitative approach. This study employs the deductive approach as it is needed to examine the causal associations among the variables so as to test hypotheses and, then, generalize the findings rather than create new theories. This research was based on the quantitative method to gather the panel data so as to ascertain the impact of ownership structure on the firm performance of listed organizations. Thereafter, the causal association between ownership structure and firm performance with the moderating role of financing decisions was examined using panel data regression analysis to test the hypotheses.

Sample and Data Collection

Secondary data needed for the research were gathered from the annual reports of the listed firms. This data was utilized for the present study during the nine years of 2013-2021 to measure ownership structure, firm performance, and financing decisions of listed companies in Sri Lanka. Ownership structure data required for the study includes shares held by major shareholders, institutions, foreigners, and managers. To enhance data quality and reliability, data which include ownership structure and firm performance was extracted from firms' audited annual reports.

In this study, out of twenty business sectors only eight sectors were selected based on the relative importance of the business sectors to the growth and development of the country. Capital goods lead the way amongst the leading listed companies in Sri Lanka

in 2019/20 with their cumulative income representing 23 percent of the LMD 100's (Sri Lanka's leading listed companies) combined revenue and 24 percent of shareholders' funds. Food, beverage, and tobacco are third in line with their cumulative top line of 655 billion rupees accounting for 17 percent of the LMD 100's aggregate income. The sector also reigns supreme in terms of its share of the LMD 100's market capitalization. Materials, consumer durables and Apparel, Utilities, Retailing, Energy, and Consumer Services are also considered as major economic sectors to cover the length and breadth of quoted companies in Sri Lanka. The banking, insurance, and finance sectors (highly leveraged) were eliminated due to their unique characteristics. The sample company from selected sectors must meet the standard criteria of (i) The firm should be listed on the CSE between the period of 2013 to 2021; (ii) The information needed for the study should be available and accessible for the period of 2013 – 2021. Based on the criteria, hundred companies belonging to eight sectors are included in the sample.

Operationalization

Table 1: Operationalization

Concept	Variables	Indicator	Measurements
Ownership structure	Ownership concentration	The proportion of shares owned by major investors (top 10 major investors).	Number of shares owned by major investors / total number of shares
	Institutional ownership	The proportion of shares owned by institutional investors.	Number of shares owned by institutions / total number of shares.
	Foreign ownership	The proportion of shares owned by foreign investors.	Number of shares owned by foreigners / total number of shares.
	Managerial ownership	The proportion of shares owned by directors.	Number of shares owned by directors / total number of shares.
Firm performance	Return On Assets (ROA)	The proportion of net profit after tax to total assets.	Net profit before tax / Total assets
	Tobin's Q	Market capitalization	(The book value of total assets + the market value of equity – the book value of equity) / total assets
Control variables	Firm size	Total assets	Natural logarithm of total assets
	Firm age	Years	Number of years since the company was founded
Moderating variable	Financing decisions	The proportion of debt	Long-term debt / Total assets

Source: Based on previous literature

Model Specification

The research develops the number of regression models for conducting the empirical analysis. For analyzing the impact of ownership structure on firm performance with a moderating role in financing decisions, the developed regression models are as follows,

$$ROA = \beta_0 + \beta_1 OWCN + \beta_2 INOW + \beta_3 MAOW + \beta_4 FROW + \beta_5 FSIZ + \beta_6 FAGE + \beta_7 OWCN * FINDE + \beta_8 INOW * FINDE + \beta_9 MAOW * FINDE + \beta_{10} FROW * FINDE + ei \dots \dots \dots (1)$$

$$Tobin's Q = \beta_0 + \beta_1 OWCN + \beta_2 INOW + \beta_3 MAOW + \beta_4 FROW + \beta_5 FSIZ + \beta_6 FAGE + \beta_7 OWCN * FINDE + \beta_8 INOW * FINDE + \beta_9 MAOW * FINDE + \beta_{10} FROW * FINDE + ei \dots \dots \dots (2)$$

Where, $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ – Regression co-efficient; OWCN - Ownership concentration; INOW - Institutional ownership; FROW - Foreign ownership; MAOW - Managerial ownership; FINDE - Financing decisions; FSIZ - Firm size; FAGE - Firm age; e_i - Error term.

Results and Interpretations

Descriptive Statistics of Variables

Table 2: Descriptive Analysis

	OWCN	INOW	MAOW	FROW	FIRM SIZ	FIRMAG	FINDE	ROA	TOBINS' Q
Mean	0.77	0.71	0.08	0.08	9.48	40.49	0.41	0.05	1.45
Median	0.82	0.81	0.01	0.01	9.45	35.00	0.37	0.03	0.92
Maximum	0.98	0.99	0.72	0.93	11.12	154.0	0.99	0.71	8.96
Minimum	0.04	0.00	0.00	0.00	6.36	1.00	0.00	-0.40	0.01
Std. Dev.	0.18	0.24	0.16	0.19	0.66	27.59	0.28	0.10	1.44

Source: Eviews output (2023)

Table 2 shows that the average ownership concentration represents 77.2 % of the total shareholding of the firms with a standard deviation of ownership concentration of 0.18. The average institutional ownership shows 0.71 in the total shareholding of the companies which means about 72% of the listed companies are controlled by institutional investors. The result indicates that the average managerial ownership represents 8.8 % of the total shareholding of the firms. The standard deviation of managerial ownership is 0.16. The average foreign ownership represents 8.8 % of the total shareholding of the firms. The standard deviation of foreign ownership is 0.19.

The mean value of firm size for the listed companies is 9.48 with a minimum value of 6.36 and the maximum value of 11.12. The maximum age of the selected companies is around 154 years with a minimum age of 1 year and a median age of 35 years. The average age of listed firms is around 40 years. Financing decisions of the companies represent a maximum value of 0.99 and a mean value of 0.41. As per Table 2, the mean value of ROA is 5.4%. The mean value for Tobin's Q is 1.45 which implies that the market value is higher than the company's recorded assets in Sri Lanka over the period of nine years

Multicollinearity

Multicollinearity arises when two or more explanatory variables are highly correlated with each other, which distorts the findings of the regression (Hair et al., 2009).

Table 3: Results of the Multicollinearity Test

Variable	Coefficient Variance	Centered VIF
Constant	0.0018	NA
Ownership concentration	0.0002	1.086
Institutional ownership	0.0001	1.527
Managerial ownership	0.0004	1.466
Foreign ownership	0.0002	1.012
Firm size	0.0000	1.072
Firm age	0.0000	1.041

Source: Eviews output (2023)

Table 3 shows VIF values for the explanatory variables and control variables. The multicollinearity occurs, if the VIF for any variable is more than 10, or if the tolerance value of any variable is less than 0.1 (Gujarati, 2003). As seen in Table 3, the value of VIF for all variables is at acceptable levels ranging from 1.527 to 1.012, well below the threshold VIF value of 10, indicating the absence of a multi-collinearity problem.

Homoscedasticity

Homoscedasticity refers to "having the same scatter". In homoscedasticity, the error term is similar across all values of explanatory variables. Heteroscedasticity means that the error term varies across values of an explanatory variable.

The Breusch-Pagan Test is a test for heteroscedasticity of errors in regression. To conclude whether the null hypothesis of homoscedasticity is rejected or not, using the resulting F statistic is enough. The F-test examines the joint significance of all the included independent variables. If these are not jointly significant (p value is not less than 0.05 levels), then the null hypothesis cannot be rejected and assume homoscedasticity. Hence, in this study, heteroskedasticity does not seem to be a problem for financial performance.

Table 4: Breusch-pagan Test for Homoscedasticity

Tobin's Q	Statistic	Details	P Value
F-statistic	1.888465	Prob. F	0.0803
Obs*R-squared	11.26378	Prob. Chi-Square	0.0806
Scaled explained SS	144.1328	Prob. Chi-Square	0.000
Enterprise Value			
F-statistic	1.869885	Prob. F	0.0834
Obs*R-squared	11.15466	Prob. Chi-Square	0.0837
Scaled explained SS	10.33909	Prob. Chi-Square	0.111

Source: Eviews output (2023)

Unit Root Test

The augmented Dickey-Fuller (ADF) test is employed to identify the presence of the unit root in the variables in this study. It is an essential statistical tool to check whether a series of data is stationary or not before employing it in a regression model.

Table 5: Augmented Dickey-Fuller (ADF) Test for the Variables

Variables	Level	
	t-statistic	Prob.*
Ownership concentration	-11.9367	0.000
Institutional ownership	-11.2631	0.000
Managerial ownership	-8.7402	0.000
Foreign ownership	-8.5147	0.000
Firm size	-7.5849	0.000
Firm age	-5.4742	0.000
Financing decisions	-10.9256	0.000
ROA	-11.3199	0.000
Tobin's Q	-10.5917	0.000

Source: Eviews output (2023)

Correlation Matrix

Table 6 depicts the correlation coefficient between ownership structure and firm performance measured by ROA and Tobin's Q for listed companies. In the following table 6, ownership concentration ($r=0.113$, $p < 0.01$) and institutional ownership ($r=0.134$, $p < 0.01$) have a statistically positive relationship with ROA at 0.01 significant level. But, ownership concentration ($r=0.012$, $p= 0.706 > 0.05$) and institutional ownership ($r=-0.041$, $p= 0.208 > 0.05$) are not associated with Tobin's Q. Furthermore, managerial ownership is not correlated with ROA of listed firms in Sri Lanka. But, there is a negative relationship between managerial ownership and Tobin's Q of listed firms in Sri Lanka. However, foreign ownership is negatively related to firm performance measured by ROA and Tobin's Q.

Table 6: Correlation Matrix for Ownership Structure and Firm Performance

Variables	Ownership Concentration	Institutional Ownership	Managerial Ownership	Foreign Ownership	Firm Size	Firm Age	Financing Decisions
Institutional ownership	0.227 (0.000)						
Managerial ownership	-0.011 (0.721)	-0.511 (0.000)					
Foreign ownership	-0.0387 (0.245)	0.041 (0.2188)	-0.019 (0.565)				
Firm size	-0.021 (0.521)	0.196 (0.000)	0.023 (0.483)	0.176 (0.000)			
Firm age	0.056 (0.091)	0.0413 (0.215)	-0.135 (0.000)	-0.070 (0.034)	0.061 (0.065)		
Financing decisions	-0.058 (0.079)	-0.098 (0.003)	0.036 (0.267)	0.036 (0.271)	-0.257 (0.000)	-0.065 (0.049)	
ROA	0.113 (0.000)	0.134 (0.000)	-0.010 (0.7432)	-0.071 (0.0325)	0.230 (0.000)	0.024 (0.462)	-0.111 (0.000)
Tobin's Q	0.012 (0.706)	-0.041 (0.208)	-0.088 (0.008)	-0.109 (0.001)	-0.377 (0.000)	-0.107 (0.001)	0.158 (0.000)

Source: Eviews output (2023)

Control variables, firm size is positively correlated with ROA ($r = 0.230$, $p < 0.01$). But it is negatively correlated with Tobin's Q ($r = -0.377$, $p < 0.01$) at 0.01 significant levels. Moreover, firm age is negatively correlated with only Tobin's Q ($r = -0.107$, $p < 0.01$) at 0.01 significant levels. Furthermore, financing decisions negatively correlated with ROA ($r = -0.111$, $p < 0.01$). But it is positively correlated with Tobin's Q ($r = 0.158$, $p < 0.01$) at 0.01 significant levels.

Panel Data Analysis

Panel regression analysis is conducted in order to examine the impact of ownership structure on firm performance measured by ROA and Tobin's Q. Table 7 represents the results of panel data regression analysis to examine the impact of ownership structure on ROA with the moderating effect of financing decisions of listed companies in Sri Lanka.

The result of the Hausman specification test is reported in Table 7. It indicates that the fixed effects model is better than the random effects model, owing to the fact that the null hypothesis can be rejected since the estimated chi-square value is statistically significant at 0.01 level.

Table 7: Regression Coefficient Ownership Structure for Return on Assets

	Fixed Effects			Random Effects		
	Coeff	t Statistic	Prob.	Coeff	t Statistic	Prob.
<i>Main Effects</i>						
Constant	0.034	0.445	0.656	-0.076	-1.152	0.249
OWCN	0.019	0.867	0.386	0.023	1.147	0.251
INOW	-0.002	-0.144	0.884	0.011	0.669	0.503
MAOW	0.095	2.675	0.007	0.063	2.124	0.033
FROW	-0.059	-1.404	0.160	-0.049	-1.626	0.104
Firm size	0.007	1.039	0.299	0.014	2.241	0.025
Firm age	-0.0007	-1.175	0.240	-0.000	-0.427	0.668
FINDE	-0.099	-6.546	0.000	-0.078	-5.735	0.000
<i>Combined Effects</i>						
OWCN*FINDE	-0.022	-0.534	0.592	-0.019	-0.486	0.626
INOW*FINDE	-0.011	-3.248	0.001	-0.049	1.254	0.210
MAOW*FINDE	-0.185	-2.590	0.009	-0.169	-2.529	0.011
FROW*FINDE	-0.118	-1.314	0.189	-0.127	-1.519	0.128
R-squared	0.648			0.0583		
Adjusted R-squared	0.599			0.0477		
F statistic	13.3497			5.5045		
Prob(F-statistic)	0.0000			0.0000		
Chi.Sq. Statistic				22.1602 (0.0143)		

Source: Eviews output (2023)

As seen in table 7, the results of the fixed effects model show that the adjusted R-squared value is 0.599, indicating that 59.95% of the observed variation in ROA can be explained by the differences in ownership structure such as ownership concentration, institutional ownership, managerial ownership and foreign ownership as well as control variables of firm size and firm age. Moreover, ownership concentration ($\beta=0.019$, $P>0.05$) institutional ownership ($\beta=-0.002$, $P>0.05$) and foreign ownership ($\beta=-0.059$, $P>0.05$) have not shown produced any significant impact on ROA. The regression coefficient for managerial ownership stands at 0.095 with t statistics of 2.675 at 0.05 significant levels ($p<0.05$). It can be stated that managerial ownership has a positive impact on ROA. Hence, the larger managerial ownership will increase the ROA and vice versa.

Moving to the moderating effect, it is found that financing decisions have a negative and significant direct impact on ROA and it also moderates the nexus between institutional ownership and ROA. The coefficient of interaction between financing decisions and institutional ownership ($\beta= -0.011$, $p < 0.05$) exposes a negative and statistically

significant effect on ROA. It denotes that a firm's debt level has a negative effect on the relationship between institutional ownership and ROA. Likewise, financing decisions moderate the nexus between managerial ownership and ROA. The coefficient of interaction between financing decisions and managerial ownership ($\beta = -0.185, p < 0.01$) affirms a negative and significant effect on ROA. It means that a firm's debt level has a negative effect on the relationship between managerial ownership and ROA. Moreover, financing decisions have not shown any significant moderating effect on other ownership variables. Control variables such as firm size and firm age have not shown any significant effect on ROA.

Table 8 represents the results of panel data regression analysis to examine the impact of ownership structure on Tobin's Q with the moderating effect of financing decisions of listed companies in Sri Lanka.

Table 8: Regression Coefficients of Ownership Structure for Tobin's Q

	Fixed Effects			Random Effects		
	Coefficient	t Statistic	Prob.	Coefficient	t Statistic	Prob.
<i>Main Effects</i>						
Constant	6.164	6.702	0.000	5.170	4.652	0.000
OWCN	0.241	0.857	0.391	0.255	0.812	0.416
INOW	0.062	0.251	0.801	0.036	0.130	0.896
MAOW	0.481	1.169	0.242	1.478	2.877	0.004
FROW	-0.377	-0.935	0.349	-0.148	-0.245	0.806
Firm size	-0.501	-5.460	0.000	-0.351	-3.266	0.001
Firm age	-0.006	-2.008	0.044	-0.018	-2.174	0.029
FINDE	0.183	0.955	0.339	0.093	0.431	0.666
<i>Combined Effects</i>						
OWCN*FINDE	0.537	0.879	0.379	0.656	1.141	0.254
INOW*FINDE	0.160	0.272	0.785	0.014	0.025	0.979
MAOW*FINDE	-1.685	-1.645	0.100	-1.490	-1.585	0.113
FROW*FINDE	-0.757	-2.873	0.004	-2.179	-1.844	0.065
R-squared				0.6246		
Adjusted R-squared				0.5728		
F statistic				12.0617		
Prob (F-statistic)				0.000		
Chi.Sq. Statistics				24.6445 (0.0061)		

Source: Eviews output (2023)

As per the Hausman specification test, the fixed effects model is better than the random

effects model, owing to the fact that the null hypothesis can be rejected since the estimated chi-square value is statistically significant at 0.01 level. As seen in Table 8, the results of the fixed effects model show that the adjusted R-squared value is 0.5728, indicating that 57.28% of the observed variation in Tobin's Q can be explained by the differences in ownership structure such as ownership concentration, institutional ownership, managerial ownership, and foreign ownership as well as control variables of firm size and firm age. Ownership concentration, institutional ownership, managerial ownership, and foreign ownership have not shown any significant impact on Tobin's Q. Control variables, firm size ($\beta = -0.501$, $t = -5.460$, $p < 0.05$) and firm age ($\beta = -0.006$, $t = -2.008$, $p < 0.05$) have a significant negative impact on Tobin's Q of listed companies in Sri Lanka.

Moving on to the moderating effect, it is found that financing decisions moderate the nexus between foreign ownership and Tobin's Q. The coefficient of interaction ($\beta = -0.757$, $p < 0.05$) between financing decisions and foreign ownership exposes a negative and significant effect on the Tobin's Q. It denotes that firm's debt level has a negative effect on the relationship between foreign ownership and Tobin's Q.

As per Tables 7 and 8, ownership concentration has not shown any significant impact on ROA and Tobin's Q. Hence, Hypothesis H₁ is not supported by findings. Institutional ownership has not shown any significant impact on ROA and Tobin's Q. Hence, Hypothesis H₂ is not supported by findings. Moreover, the larger managerial ownership will increase the ROA and vice versa. But it has no significant impact on Tobin's Q. Hence, H₃ is supported by finding in terms of ROA. This outcome is congruent with the findings of previous research (Ogabo et al., 2021; Alabdullah, 2018). Moreover, foreign ownership has no significant impact on ROA and Tobin's Q. Therefore, Hypothesis H₄ is not supported by findings.

According to Tables 7 and 8, financing decisions do not moderate the relationship between ownership concentration and firm performance (measured by ROA and Tobin's Q) of listed firms in Sri Lanka. Hence, Hypothesis H₅ is not supported with findings. Financing decisions moderate the relationship between institutional ownership and firm performance in terms of ROA. Hence, Hypothesis H₆ is supported by findings in terms of ROA. Financing decisions moderate the relationship between managerial ownership and firm performance terms of ROA. So, Hypothesis H₇ is supported by findings in terms of ROA. Finally, financing decisions moderate the relationship between foreign ownership and firm performance in terms of Tobin's Q. Therefore, Hypothesis H₈ is supported by findings in terms of Tobin's Q.

Conclusion and Recommendations

The study explores the impact of ownership structure on firm performance with the moderating effect of financing decisions of listed companies in Sri Lanka. This study concludes that ownership concentration, institutional ownership and foreign ownership have no significant direct impact on return on assets while managerial ownership has a positive impact on return on assets. Firm size and firm age have not shown any significant impact on return on assets of listed companies in Sri Lanka. Financing decisions has a negative and significant direct impact on return on assets. It has a

moderating effect on the relationship between institutional ownership and return on assets. Similarly, financing decisions moderate the nexus between managerial ownership and return on assets. Furthermore, ownership concentration, institutional ownership, managerial ownership, and foreign ownership have no significant impact on Tobin's Q of listed companies in Sri Lanka. Firm size and firm age have a significant negative impact on Tobin's Q of listed companies in Sri Lanka. Moreover, it is concluded that financing decisions moderate the nexus between foreign ownership and Tobin's Q. Moreover, financing decisions have not shown any significant moderating effect on other variables.

The research findings have provided a significant contribution regarding ownership structure and its impact on firm performance. However, the study was carried out, and the findings are interpreted under the limitations. Firstly, this study solely focuses on the firms listed on the CSE. Due to practical reasons, the study overlooked non-listed organizations. Secondly, the scope of the study is confined to only 100 listed companies of eight business sectors in CSE based on their relative importance and availability of the data in Sri Lanka. Thirdly, this study mainly focuses only on the ownership structure. Nevertheless, this study does not consider the perceptions and attitudes of investors. Fourthly, restrictions of the research study come from the nature of data collection due to the limitation on the source of secondary data such as listed companies' annual reports that are available in CSE. The data involving the period of only nine years (2012-2020) were used for the survey. Moreover, this research deliberately excludes listed bank, finance, and insurance companies, as they are well standardized according to the regulations and their governance structure is significantly different from non-financial firms. Hence, it indicates that the research findings could not be generalized to financial institutions.

Based on the findings of the study, the recommendations are suggested to enhance the performance of listed firms in Sri Lanka. Sri Lanka is viewed as a developing economy, with CG structures still at an evolving level. Hence, this study recommended reviewing the corporate governance code yearly. This review may increase the role of ownership structure in mitigating management expropriation, and as a result, centralized control will help minimize the agency conflict. In addition, regulators and policymakers can develop rules and codes to guide the ownership structure to improve the level of firm performance.

As an incentive mechanism, managerial ownership has a positive impact on firm performance. Therefore, listed firms can issue the shares to the managers. With the increase of managerial ownership, the objective function of managers and shareholders with residual claims is gradually consistent. Therefore, managerial ownership helps to reduce the agency cost and increase the firm performance. However, this function is only effective within a certain range. If the management holds too many shares, they will have more power to control the enterprise, and the effective constraints on them will be weakened. At this time, managers will maximize their welfare by pursuing self-interest goals rather than corporate value goals at the cost of the interests of other shareholders. Therefore, listed companies should establish a restraint mechanism matching the equity incentive mechanism. Based on the findings, if the firm increases the debt level, the interest cost will be increased and the performance of company will be reduced. The study recommended that the companies should use the less level of debt

because it decreases the performance of companies in Sri Lanka. The companies should more rely on their internal source of finance because it is the cheaper and reliable source of finance. Furthermore, it may be suggested that the listed firms may focus on prudent debt management and engage carefully in evaluating and controlling their debt levels to avoid adverse effects on performance.

The organization can encourage the institutions to use the equity capital and maintain debt capital at minimum level since it has unfavorable moderating effects on the association between ownership structure (institutional ownership, managerial ownership and foreign ownership) and firm performance. Furthermore, internal CG mechanisms should be substantially improved by the government. Finally, research findings offer useful information to the Sri Lankan government. As a result, the Sri Lankan authority would determine the existing gap between advanced country practices and Sri Lankan practices, allowing them to develop new strategies, plans, and processes in an attempt to improve Sri Lankan practices until they are as efficient as advanced country standards.

References

Aboagye-Otchere, F., & Boateng, P. Y. (2023). Financing decision, ownership type and financial performance of listed non-financial companies in Ghana. *Cogent Business & Management*, 10(1), 1-20.

Alabdullah, T. T. Y. (2018). The relationship between ownership structure and firm financial performance: Evidence from Jordan. *Benchmarking: An International Journal*, 25(1), 319-333.

Alawattage, C. & Wickramasinghe, D. (2004) Governance in Dialects: Their Regimes and Roles of Accounting in Sri Lanka, Fourth Asia Pacific Interdisciplinary Research in Accounting Conference, Singapore.

Ali, A., Shah, A., & Jan, F. A. (2015). Leverage, ownership structure and firm performance: evidence from Karachi stock exchange. *Journal of Management Info*, 2(2), 1-7.

Ali, J., Tahira, Y., Amir, M., Ullah, F., Tahir, M., Shah, W., ... & Tariq, S. (2022). Leverage, ownership structure and firm performance. *Journal of Financial Risk Management*, 11(1), 41-65.

Alkurdi, A., hamad, A., Thneibat, H., Elmarzouky, M., & Ntim, C. G. (2021). Ownership structure's effect on financial performance: An empirical analysis of Jordanian listed firms. *Cogent Business & Management*, 8(1).

Al-Saidi, M., & Al-Shammari, B. (2015). Ownership concentration, ownership composition and the performance of the Kuwaiti listed non-financial firms. *International Journal of Commerce and Management*, 25(1), 108-132.

Al-Thuneibat, A. (2018). The relationship between the ownership structure, capital structure and performance. *Journal of Accounting, Business and Management (JABM)*, 25(1), 1-20.

Aluchna, M., & Kaminski, B. (2017). Ownership structure and company performance: a panel study from Poland. *Baltic Journal of Management* 12, 485-502.

Bhakar, S., Sharma, P. & Kumar, S. (2024). Ownership Structure and Firm Performance: A Comprehensive Review and Empirical Analysis. *J Knowl Econ*. <https://doi.org/10.1007/s13132-024-01893-1>.

CSE (2013). https://www.cse.lk/listing_rules.do

Darko, J., Aribi, Z. A., & Uzonwanne, G. C. (2016). Corporate governance: the impact of director and board structure, ownership structure and corporate control on the performance of listed companies on the Ghana stock exchange. *Corporate Governance* 16(2), 259-277.

Din, S. U., Khan, M. A., Khan, M. J., & Khan, M. Y. (2021). Ownership structure and corporate financial performance in an emerging market: a dynamic panel data analysis. *International Journal of Emerging Markets*, 17(8), 1973-1997.

Dyarthne, B. M. I. U., & Kumari, J. S. (2020). Ownership structure and firm's financial performance: Sri Lankan evidence. *Journal of Management Matters*, 7(2). 67-78.

Kao, M. F., Hodgkinson, L., & Jaafar, A. (2018). Ownership structure, board of directors and firm performance: evidence from Taiwan. *Corporate Governance: The international journal of business in society* 19(1), 189-216.

Kirimi, P. N., Kariuki, S. N., & Ocharo, K. N. (2022). Ownership structure and financial performance: Evidence from Kenyan commercial banks. *Plos one*, 17(5), e0268301.

Kuo, K., Lu, W., & Dinh, T. (2020). Firm performance and ownership structure: dynamic network data envelopment analysis approach. *Managerial and Decision Economics*, 41(4), 608–623.

Manawaduge, A., & De Zoysa, A. (2013). The structure of corporate ownership and firm performance: Sri Lankan evidence. *Corporate Ownership & Control*, 11(1), 723-734.

Ogabo, B., Ogar, G., & Nuipoko, T. (2021). Ownership structure and firm performance: the role of managerial and institutional ownership-evidence from the UK. *American Journal of Industrial and Business Management*, 11(7), 859-886.

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.

Samarakoon, L. P. (1999). The ownership structure of Sri Lankan companies. *Sri Lankan Journal of Management*, 4, 143-171.

Samarawickrama, D., Wanniarachchige, M. K., & Weerasinghe, K. D. T. N. (2021).

Effect of Ownership Concentration on Firm Performance: Evidence from Sri Lankan Financial Sector. *Journal of the University of Ruhuna*, 9(1), 28-38.

Senaratne, S., & Guneratne, P. S. M. (2007). Ownership structure and corporate governance of Sri Lankan listed companies. In *Proceedings of International Conference on Business Management*. Faculty of Management Studies and Commerce, University of Sri Jayewardenepura Sri Lanka.

Shawtari, F. A. M. (2018). Ownership type, bank models, and bank performance: the case of the Yemeni banking sector. *International Journal of Productivity and Performance Management*. 67(8), 1271- 1289.

Yasser, Q. R., & Al Mamun, A. (2015). Effects of ownership concentration on firm performance: Pakistani evidence. *Journal of Asia Business Studies*. 9(2), 162-176.

Tam, O. K., & Tan, M. G. S. (2007). Ownership, governance and firm performance in Malaysia. *Corporate Governance: An International Review*, 15(2), 208-222.

Yasser, Q., Mamun, A., & Hook, M. (2017). The impact of ownership structure on financial reporting quality in the east. *International Journal of Organizational Analysis*, 25(2), 178–197.