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OWNERSHIP PATTERNS AND RISK PROFILES IN SRI LANKAN PUBLICLY TRADED COMPANIES

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Abstract:
Corporate governance has emerged as a critical concern in the wake of numerous corporate scandals and global financial crises. A series of major corporations across the United States, Europe, and Asia faced unprecedented challenges during these crises, leading to widespread repercussions. In the context of Sri Lanka, a country with its own share of business catastrophes, particularly in the Banking and Finance Industry from the late 1980s through to 2008, the importance of corporate governance has been underscored by scholars and experts. Researchers have attributed corporate collapses and financial crises to the inadequate implementation of corporate risk governance measures. Drawing on the foundational work of Jensen and Meckling (1976), it is evident that corporate governance, encompassing elements such as board structure, compensation structure, and ownership structure, plays a pivotal role in determining various aspects of a firm, including its risk profile, cash flows, size, and regulatory compliance. The interplay between these variables significantly influences a firm's overall risk and performance. Moreover, it has been highlighted that different ownership structures have varying implications, with the potential to either mitigate or exacerbate agency conflicts within organizations. In response to the far-reaching impacts of crises and corporate collapses, regulatory frameworks have been established in countries like the United Kingdom and the United States. These frameworks prioritize the roles of corporate governance and risk management in enhancing financial stability. For instance, the Financial Reporting Council (FRC) in the UK released guidelines in 2011 under "Boards and Risk," emphasizing the importance of corporate governance and risk management. Similarly, the Sarbanes–Oxley Act of 2002 in the USA introduced corporate governance reforms that provide explicit guidance on internal control mechanisms and board attributes aimed at improving corporate accountability and reducing the risk of firm insolvency. However, in the context of Asian countries, including Sri Lanka, there has been a notable absence of regulatory frameworks that address the role of corporate governance and risk management, particularly within the purview of Boards and Risk. Ownership structures, encompassing various types of shareholders, including individual, family, state, professional, government, foreign, and public investors, are integral to the corporate landscape. Ownership structures are intrinsically linked to firm risk-taking behavior, with significant implications for a company's risk profile and strategy. This research seeks to delve deeper into the relationship between corporate governance, ownership structures, and corporate risk-taking, providing insights that can inform future regulatory frameworks and corporate practices in Sri Lanka and other Asian countries. By understanding the intricate dynamics at play, organizations can better navigate the evolving landscape of corporate governance and risk management.

Keywords: Corporate Governance, Risk Management, Ownership Structure, Financial Crises, Regulatory Frameworks

1. Introduction

The necessity of corporate governance became very crucial with many corporate scandals and financial crisis took place around the world in recent times (Kaur & Gill 2008). A number of large American, European and Asian companies collapsed during the financial crisis that took place all over the world (Wei &Geng, 2008). In Sri Lankan

perspective, business catastrophes took place in the late 1980s and in the early 1990s through to 2008, especially in the Banking and Finance Industry (Heenetigala, 2011; Mapita et al., 2015). Researchers connected the reason for the corporate collapses and financial crisis are failure of effective adaptation of corporate risk governance. As per Jensen and Meckling (1976) corporate governance measures like board structure, compensation structure and ownership structure determines the risk, cash flows, firms‟ size and regulations of the firm and further they argued that these variables have strong influence on the firm‟s risk. Further, they explicit that different ownership structures have different implications according to their tendency to resolve or aggravate agency conflicts. Risk and performance like two side of the coin, hence owners tend to avoid risk part and seek the other side which is main reason for the risk governance to the corporate board. From the impact of crisis and collapse UK has been initiated the regulatory framework with the concern on the role of corporate governance and risk management published in Financial Reporting Council (FRC,2011) under Boards and Risk. Simultaneously, In USA, corporate governance reforms which form part of the Sarbanes–Oxley Act (2002) provide specific guidance on internal control mechanisms and board attributes to improve corporate accountability and reduce the risk of firm insolvency. However, no any regulatory framework has been initiated in Asian countries perspectives including Sri Lanka with shade of Boards and Risk. Shareholders are the owners of corporations (Monks & Minow 1995) and they are different types (Connelly et al. 2010) such as individual, family, state, and professional, government, foreign and public (La Porta, De Silanes & Shleifer ,1999; Gollakota& Gupta, 2006). Owner structure directly influence on the firm risk. Ownership structure has been identified as an important factor in shaping corporate risk taking (Amihud & Lev, 1981; May, 1995; Boubakri et al., 2013).

However, the relationship between ownership structure and corporate risk taking remains unexplored in Sri Lankan perspective. Senaratne and Gunaratne (2008) found that ownership is concentrated in most Sri Lankan listed companies with the presence of controlling shareholders. As per them, Concentrated ownership, Institutional ownership and Executive (Management ownership) are the main elements for Sri Lankan companies, however the impact of concentrated ownership with firm‟s risk remain unexplored. This study sheds on the light on gap, and examine of empirical study on ownership structure and firm risk. The next section of the paper discusses the literature related to ownership type and risk of firm. Then the hypotheses are developed and the theoretical framework is presented. Next, the methodology is outlined after in which the analysis and discussion of findings are presented. This is followed by the conclusions of the study with implications and suggestions for future research.

2. Review of Literatures and Hypothesis development

An owner called “principal” is the shareholder who invested with the view of profit and “Agent” who has been appointed by principal to act on behalf, this is agency theory, advanced by Jensen and Meckling (1976). These two parties have incongruence interest; due to that agency cost arises. Agency cost is an economic phenomenon concerning the fee to a „principal‟ when the principal chooses or hires an „agent‟ to act on its behalf (Jensen & Meckling,1976). Agency theory in the viewpoint of ownership structure and firm risk is first developed by Berle and Means (1932) and then theorized by Monsen and Downs (1965) and Monsen et al., (1968). They argue that principalagent separation leaves possibility for conflicting goals to arise. In terms of risk-taking, owner takes greater incentives and rewards than the managers do and therefore favor riskier projects to maximize the value rooted in their equity holding. Conversely, managers often have both the preference and incentive to pursue strategies and practices that benefit themselves at the expense of shareholders. Managers may engage in short-run cost augmenting activities to enhance their non- salary income and/or they may indulge their need for power, prestige, and status by attempting to maximize corporate size and growth rather than corporate profits (Chun. S & Lee. M, 2017). Obviously, As per Fama (1980) managers will choose to invest in less risky investment to protect their employability in the firm. Thus, managers may pursue non-value-maximizing strategies unless they have proper incentives or face appropriate pressure such as pressures from director board. Therefore, Agency theory clearly defines the association with the ownership structure and firm risk seeking behavior. There are many studies available to depict the relationship

between institutional ownership, management ownership and concentrated ownership structure and risk of the firm which are outlined below.

2.1 Management Ownership and firm risk

Management ownership structure means the equity holding percentage by the executives of the board. The executive directors‟ ownership is measured as the percentage of equity hold by all the executive directors/Management on the board which include voting rights and capital percentage. The voting rights that come with holding equity in the firm make directors with large holdings of firm equity have the ability to influence decisions. Board members with large ownership cannot be easily discharged because they have voting rights and this influence can keep them in their jobs (Wright et al., 1996). Executive directors are compensated in terms of equity, as well as salary, whereas NEDs are compensated with director fees for their work and may be compensated with firm equity. This is where executives owning shares. To align the interests of the executive directors with the shareholders who want maximum returns, they are compensated with firm equity. Agency theorists believe that directors having ownership in the firm can influence them to maximize returns on shares and reduce agency costs (Jensen and Meckling, 1976). More ownership in the capital would encourage directors to invest in more value enhancing activities which ultimately go with risky project (Jenkins and Seiler, 1990). Hitt, Hoskisson and Ireland (1994) states that rewarding to managers with firm equity, would help them to invest in initiatives that increase the long-term value of the firm. CEOs with greater stockholdings may have stronger incentives to take risky projects, suggesting that there may be a positive association between CEO ownership and performance variability (Cheng, 2007).Wright et al. (1996) find positive relation between equity ownership and firm risk when executives hold low equity investment whereas, the relationship shows negative when management‟s investment is high. Further, they explicate that investors desire growth oriented risk taking whereas some situation investor want to reduce risk in order to protect the investment. Board of directors are making financial decision whether to go with risky project or not mainly because of their wealth portfolio. The benefits and costs because of their position and the potential for entrenchment. If the board member‟s invested mainly in the firm, then they may try to minimize risk by avoiding riskier projects (Wright et al., 1996). Most of the risk related literature consist the positive relation between managerial ownership and managerial risk-taking. Some studies are highlighted here.

Laeven and Levine (2009) did study with bank sample and find that, if there are powerful owners, they prefer to face high risk, in addition to this, they find that large executive equity owners have stronger inducement for risk than non-shareholding executives. In another study, CEOs have a high proportion of investment in equity reveal high performance (Sanders & Hambrick, 2007). On the other hand, some line of studies shows if compensation is more sensitive with stock return volatility, then executives tend to avoid risky projects in order to avoid high risk and claims for compensation. (Coles, Daniel, & Naveen, 2006). No studies were found that associated board executive equity ownership to firm risk using a Sri Lankan-based data sample. The literature mostly supports the view that equity ownership by executive directors will be positively related to firm risk. Therefore this hypothesis as follows:

H1: Management shareholding is positively related to firm risk

2.2 Institutional owners and firm risk

One of the important issues emerging from the recent financial crisis is the alleged negative role played by institutional investors leading up to and during the crisis period. Some researchers preserve that institutional investors exacerbated the crisis by pressuring financial institutions for short-term profits and increasing the risk-taking behavior (Callen & Fang, 2013). Institutional investors can be any entity such as a mutual fund, pension fund, and investment bank, insurance company or any other company that has a large amount of money to invest. These firms can be very knowledgeable about the firms they invest in and can have a strong voice to influence decisions owing to the percentage of stock held in the firm (Sudha et al., 2016). Institutional investor could be in two category one is monitoring institutional investors and other one is short-termism institutional investors. Monitoring institutional investors, by virtue of their large shareholdings, have the incentive to collect information and monitor management because they reap greater benefits than smaller investors from monitoring the organization such as

firm growth, R&D investment, executive compensation, management (earnings forecast) disclosures, CEO turnover, antitakeover amendments, and corporate governance (Callen & Fang ,2013). Actually, prior studies provides experimental indication of this „„short-termism"" view. This proof suggests that institutional investors trade heavily based on current earnings news, place excessive emphasis on short-term performance, and fail to serve as monitors in correcting CEO over compensation (Cheng et al., 2010; Cella et al., 2011).

Most of Agency theorists predict that institutional investors having substantial holdings of equity in a firm will monitor management to protect their investment and ensure a good return (Monks and Minow, 1995). But, Cheng et al. (2011) find that institutional investors may be interested in short-term profits and, therefore, encourage managers" risk-taking behavior. Wright et al. (1996) and Hutchinson et al. (2015) find that these investors may encourage boards to take higher risks to achieve higher returns. Callen and Fang (2013) also shows that temporary institutional investor ownership increases the firm risk. According to Manconi and Yasuda (2012), one of the motives for this behavior can be the cost of monitoring management because of which the institutional investor would opt to sell the stock. The recent literature mostly supports the positive relationship between the percentage of substantial institutional holdings and firm risk. Based on the empirical finding and theoretical support, it assumes to be positive association with firm risk. To test the above argument in Sri Lankan context, the below hypothesis developed, H2: The percentage of substantial holding by institutional investors is positively related to firm risk

2.3 Concentrated Ownership and firm risk

Jensen and Meckling (1976) argue that large concentrated shareholders can have an impact on corporate risk taking. La Porta et al. (2000) express that the concentrated ownership structure of large firms in emerging countries is known as the root cause of agency conflicts in the firm. Jensen and Meckling(1976) argue that representatives of majority shareholders could motivating for higher performance because it eradicate agency problems between the principal and the agents. Concentrated ownership is uncommon in UK and USA on the other hand European countries as well as in Latin America, Southeast Asia and Africa; firms are typically controlled by few powerful investors (Wei &Geng 2008). In developing countries, stake holding is also highly concentrated (La Porta et al. 2000). In most Sri Lankan listed companies ownership is concentrated in the hands of a controlling shareholder, who enjoys much higher controlling rights over cash flow and widely held entities are rare as in most other Asian countries (Senaratne & Gunaratne 2008; Mapita et al., 2015). Wright et al. (1996) argues that due to managerial significant effect, concentrated owners may protect the prevailing private privileges by taking a conventional approach to investment policy, because managers can engage in relationship-investment making their replacements difficult for outside investors. Gedajlovic and Shapiro (2002) and Hu and Izumida (2008) found that Japanese firms whose ownership structure is more concentrated deliver higher operating returns. Claessens and Djankov (1999) demonstrate that these firms achieve a higher productivity. Shleifer and Vishny (1986) argue that large shareholders have the means to steer firms towards high-risk and highreturn projects.

According to Hill and Snell (1989), large shareholders also dissuade firms from embarking on unrelated diversification strategies. As a result, firms with concentrated ownership remain more focused, which contributes to their higher performance, but also explains why they tend to display a higher idiosyncratic risk. This issue is potentially more severe in Sri Lanka with relatively less effective corporate governance system, which results in a lack of the mechanisms to constrain the private benefits of controlling shareholders and managers. The literature mostly supports the view that concentrated ownership will be positively related to firm risk. Therefore this hypothesis as follows. H3: Concentrated ownership is positively related to firm risk

3. Methodology

3.1 Sample Selection

The population of the study is 293 companies listed in the Colombo Stock Exchange (CSE) representing twenty industry sectors. The sample is comprised of the 69 firms listed in the Colombo Stock Exchange for the 20102017 financial years. Banking and finance sector was omitted from the sample due to the fact that obeying to the Governance mechanisms is mandatory for Banking and Finance companies while for other companies is non

mandatory. It is voluntary with several mandatory rules and also some companies were excluded due to data unavailability. Therefore to protect the consistency of the conditions under which the research is carried out companies from Banking and Finance sector was ignored from the sample. Data collection was mainly based on annual reports of the companies in the sample. The unit of analysis was a firm-year. The present study was based on secondary data, which is based on the published audited annual reports of the companies.

3.2 Variables

This section presents the dependent, independent, and control variables used in the econometric analysis.

3.2.1 Independent Variable

Ownership variable refer as independent variables such as institutional ownership (IO), managerial ownership (MO) and concentrated ownership (CO). Institutional ownership is measured as the total percentage of substantial (greater than 3 per cent) ownership of equity in a firm by institutions such as pension funds, mutual funds, investment banks and companies (Callen & Fang, 2013; Sudha et al., 2016). Management‟s ownership is measured as the percentage of equity hold by all the executive directors on the board which include voting rights and capital percentage (Sanders & Hambrick, 2007; Coles et al., 2006 and Sudha et al., 2016). The concentrated ownership (CO) is measured by using the Herfindahl Index 5 (HI5). The first five largest shareholders and shareholding percentage are taken into consideration in the Herfindhal Index and got the squared sum of it (Nguyen, 2011; Khan, 2005)

3.2.2 Dependent Variable

This study determines firm risk as dependent variable and measures based on accounting, market and mix of tem. In this study use the two folders of measurement using accounting and market data which ensures that the results of the study are robust. Firm risk measures used in this study are total risk, asset return risk and financial risk. Total Risk is measured by the standard deviation of the firm's daily stock returns for each fiscal year. It is measured as the standard deviation of the rate of return on equity for the company, and is expressed as a rate of return per month computed from the (continuously compounded) equity rates of return for the company's equity. The standard deviation is a measure of historical volatility, and is used by investors to gauge the amount of expected volatility. This measure encompasses both systematic and unsystematic risk. Total risk can be explained as the extent of the stock volatility and measured by previous studies as the standard deviation of equity returns for each fiscal year (Laeven & Levine, 2009; Wright et al., 1996; Hutchinson; 2001; Nguyen, 2011; Pathan, 2009; Sudha et al., 2016).

The standard deviation of this ratio (Pit / Pit -1) times the square root of the number of days of trade activity (250 days) gives the annualized volatility of equity return for each stock. Asset return risk is used as an alternative risk measure which represents the variance of the asset returns. Following (Flannery & Rangan, 2008; Pathan, 2009; Sudha et al., 2016), volatility of asset returns or asset return risk will be computed as the ratio of market value of equity to market value of total assets times the standard deviation of the daily stock returns. This will be annualized by multiplying the resulting value by the square root of the approximate number of trading days in the year. Further, ARR is computed as the standard deviation of the daily stock returns times the ratio of market value of equity to market value of total assets times square-root of the approximate number of trading days in the year which is 250. Financial risk which represents the accounting data used by (Eling & Malank, 2011).

These are commonly used measures to assess firm risk. To measure, logarithm of the ratio of total assets to total shareholder equity is used. Total assets are defined as the sum of current and non-current assets. Total shareholder equity is composed of common equity, minority interest, and preferred equity.

3.2.3 Control Variable

There are some control variables used in this study that are considered to affect either the firm's risk taking or the measurement of that risk, such as firm size, Firm Performance and Leverage. Firm size is used to control for difference in size of the firms. Large size of the firm may have better access to capital markets and borrow at better conditions (Ferri and Jones, 1979), therefore large leverage firms would be able to diversify and invest more. Hence, it predicts that larger firms will be associated with less firm risk. Firm performance as a control variable, as it is possible that the firms change risk taken depending on the performance of the firm. If a firm does not meet the

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targeted firm performance in the prior year, managers in an attempt to meet targeted performance figures for the current year will take more risk in terms of investment choices. Therefore, it is predicted that low performance of the prior year will be associated with higher firm risk.

3.2.4 Definition of variables Table

Table 01: Definition of variables

Variables	**Presign**	**Measures**	**Source**
Independent variables			
Management Ownership(MO)	+	Equity ownership of all the executive board members as a percentage of the outstanding shares	(Sanders&Hambrick, 2007; Coles et al., 2006 and Sudha et al., 2016)
Institutional Ownership (IO)	+	Percentage of total of substantial institutional investors holding more than 3% of shares in the firm	(Callen & Fang, 2013; Sudha et al., 2016)
Concentrated Ownership (CO)	+	Herfindahl Index 5 (HI5). The first five largest shareholders and shareholding percentage. The Herfindhal Index and got the squared sum of it	Nguyen, 2011; Khan, 2005
Dependent Variable			
Total risk (TR)		The standard deviation of the daily stock returns in each year	(Laeven&Levine, 2009; Wright et al., 1996, Hutchinson ,2001;Nguyen, 2011; Pathan, 2009; Sudha et al., 2016)
Asset return risk (ARR)		The standard deviation of the daily stock returns times the ratio of the market value of equity to market value of total assets times square root of trading days	(Flannery &Rangan (2008); Pathan (2009) &Sudha et., al (2016)
Financial Risk (FR)		Logarithm of the ratio of total investments to total shareholder equity	(Eling&Malank ;2011).
Control Variable			
Performance	-	The return on assets for the firm for the previous year	(Cheng, 2008)
Firm size	-	The natural logarithm of total assets	(Pathan,2009; Sudha et al., 2016).
Financial leverage	-	Total debt over assets	(Sudha et al., 2016)

3.3 Regression Model

The empirical model use to estimate the relationship between ownership structure and firm risk represented in below equation. **Risk** = β_1+ β_2 (Institutional Ownership)$_{i,t}$+ β_3 (Managerial Ownership)$_{i,t}$+ β4 (Concentrated Ownership)$_{i,t}$ + β_5(ROA)$_{i,t}$+ β_6(Size)$_{i,t}$+ β_7 (LEV)$_{i,t}$ + ε $_{i,t}$Where, ROA for performance, FZ is for firm size and LEV is financial leverage. $_i$ stands for the firm and varies from 1 to n; $_t$ is the year and varies from 2010 to 2017; β1 is the constant that does not vary over time; β_1 to β_7 are the coefficients in the regression; ε $_{i,t}$ it is the residual variable that varies with time; and natural log board size will be used.

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4. Results

4.1 Descriptive Statistics

Table 4.2 shows descriptive statistics of the study. Total Risk (TR) is 1.49 with the maximum value of 7.64 and minimum value of 0.42. The average TR shows 1.49 which is more than 1 implies that Sri Lankan companies experience higher level of total risk. The mean value of the ARR is 1.96 with the maximum value of 43.97 and minimum value of 0.0008. Standard deviation has recorded 3.58 meanwhile average shows 1.96 which is more than one as a result TR is validated through ARR hence, both mean depicted the same trend. Financial risk (FR) represents the accounting data. The mean value of the FR is 1.16 with the maximum value of 20.01 and minimum value of 0.0005. Standard deviation has recorded 1.75. The average 1.16 shows that Sri Lankan companies are recorded the risk which is more than one. FR is calculated purely from the accounting data whereas TR calculated from the market data meanwhile ARR calculated with two folder coverage market and accounting data. From the summary descriptive statistics it confirms that listed companies in Sri Lanka shows TR, ARR and TR are positive at the same time mean value more than one. The mean MO of listed companies in Sri Lanka is 8percent which is greater than the UK results which is reported by (Sudha et al., 2016) and but it shows the more similar results to the Japan perspective (Sun, 2017). The minimum MO reported is -0.08 percent and maximum 70 percent and standard deviation shows 17.7 percent. The mean of IO shows 71 percent whereas this is very higher when compared to UK results which is 34.14 percent (Sudha et al., 2016) and Japan results which was 27.5 percent (Sun, 2017) at the same time standard deviation shows 27 percentage with the maximum of 99 percentage minimum of 0 percentage. The mean of CO shows 3333.6 which higher than the USA, Japan results. Standard deviation shows 2050 whereas maximum reported 9222.3 and minimum reported 270.8.

Variables	Mean	Median	Maximum	Minimum	Standard Deviation
Dependent Variables					
Total Risk	1.49	1.25	7.64	0.42	0.74
Asset Return Risk	1.96	0.92	43.97	0.0008	3.58
Financial Risk	1.16	0.71	20.01	0.0005	1.75
Independent Variables					
Management ownership %	0.08	0.003	0.70	-0.008	0.177
Institutional ownership %	0.71	0.82	0.99	0.00	0.27
Concentrated ownership	3336.2	2877.5	9222.3	270.8	2050.13
Control Variables					
ROA (%)	0.07	0.05	0.72	-0.07	0.08
Firm size (Ln)	22.42	22.33	26.34	18.23	1.49
Leverage (Ratio)	0.16	0.13	0.74	0.00	0.14

Table 2: Descriptive Statistic

4.2 Correlation

Table 3 represents the Pearson‟s correlation for all the variables in the study. It examined the association between ownership variables and risk variables. There is a positive correlation between management ownership and TR, at the same time management ownership shows negative relationship between ARR and FR. Institutional ownership reports negative relationship between TR, on the other hand shows positive association between ARR and FR. There is a positive association between concentrated ownership and TR, by the way shows negative association between ARR and FR.

Table 3: Correlation between variables

	TR	ARR	FR	MO	IO	CO	ROA	FZ	LEV
TR	1								
ARR	0.517*	1							

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FR	0.164*	0.869*	1						
MO	0.073*	-0.031	-0.058	1					
IO	-0.067*	0.026	0.059	-0.62*	1				
CO	0.133*	-0.014	-0.066	-0.179*	0.329*	1			
ROA	-0.047	0.144*	0.266*	-0.094*	0.083*	0.05	1		
FZ	-0.383*	-0.24*	-0.145*	-0.101*	0.213*	-0.194*	-0.181*	1	
LEV	-0.227*	-0.195*	-0.16*	-0.054	-0.048	-0.232*	-0.287*	0.405*	1

This table shows the Pearson‟s pair-wise correlation between all the independent and dependent variables used in the empirical model. *denotes that correlation is significant at the 0.05 level

4.3 Regression Results and Discussion.

The Table 4 depicts the results of estimation model 01, model 02 and model 03. The Hausman test rejects the validity of using the random effect model, so the estimation results of fixed effect models are presented. The pre-sign indicates the prediction as made in the hypotheses. Results revealed that the overall models are significant at 95% confidence interval level. R-squared value of all models around 56 percent shows the amount of variation in the dependent variable is explained by the independent variables in the models.

Table 4: Estimation Results of Determinants of firm risk and ownership structure

Explanatory Variables	**Pre-sign**	**Total Risk (01)**	**Asset Return Risk(02)**	**Financial Risk(03)**
Constant		11.435(7.240)***	50.326(7.064)***	19.991(5.738)***
Management Ownership	+	-1.187(-2.770)***	-4.157(-2.150)**	-1.122(-1.1875)
Institutional Ownership	+	0.059(0.229)	4.108(3.508)***	1.7706(3.0920)***
Concentrated Ownership	+	0.00004(0.101)	0.0001(0.964)	0.0001(1.150)***
ROA		-0.408(-0.858)	0.5015(0.2337)	1.4583(1.390)
Firm size		-0.444(-6.063)***	-2.3635(-7.1500)***	-0.938(-5.805)***
Leverage		0.620(1.811)**	1.498(0.970)	0.392(0.519)
R-squared		0.5065	0.5637	0.5663
Adjusted R-squared		0.4287	0.4949	0.4980
F-statistic		6.5148	8.2008	8.2885
Prob (F-statistic)		0.000	0.0000	0.0000
No of firms		69	69	69
No of observation		552	552	552

Note: This table shows the results from the estimation of the empirical model using generalized least square–fixed effects method; the dependent variables of total risk, asset return risk and financial risk are used alternatively in the empirical model. The model fit is also reported; along with the coefficient the t-statistic is reported in parentheses;

the superscripts of *, ** and **** statistical significance to 10%, 5% and 1% respectively.

As per the finding, it shows that management ownership is related negatively and significantly with risk variables measures such as total risk, asset return risk and financial risk. However, financial risk does not show significance association with management ownership. So, it shows the evidence to reject the hypothesis one (H1).Results depict that managers are expected to take less risk as their managerial ownership increases. This result shows contradicting finding with UK, US and Japan studies. In the UK studies, the results shows higher board executive

equity ownership is related positively and significantly with total risk (Sudha et al., 2016), In line with this finding, Saunders et al. (1990) found that, in US banks where managers held a higher proportion of equity, there was significantly higher risk-taking behavior and Sun (2017) shows Managers ownership are positive and statistically significant association with firm‟s risk.

It may be that executive directors with a higher proportion of investment have no incentive to increase firm risk to try and maximize returns for themselves, due to uncertainty of return and job security. It is found that the percentage of ownership held by institutional investors is positively and significantly related to both financial risk and asset return risk, but total risk also associated positively with institutional owners with no significant relation. It shows the evidence to accept the hypothesis two (H2). This result confirms finding from past studies of (Callen & Fang, 2013; Cheng et al., 2011; Hutchinson et al., 2015). Further, finding confirm that institutional ownership is positively related with firm risk. The result shows of concentrated ownership with total risk, asset return risk and financial risk are positive. The finding shows significant positive association with financial risk. The results consistent with the finding of these studies, (Shleifer &Vishny, 1986; Wright et al., 1996). It may be large shareholders have the motivations and power to steer firms towards adopting value-enhancing strategies that are associated with higher risk. The control variables were significantly influence the firm risk (Firm size and leverage). Larger firms (Firm size) are associated significantly and negatively with total risk, asset return risk and financial risk. It may be for very large firms, a wrong choice in investment may not affect the stock price.

Firms with higher financial leverage take less risk; this can be due to the fact that firms face the burden of repayment and, therefore, taking lesser risk in listed companies in Sri Lanka. Firm performance (ROA) shows negative association with total risk at the same time positive association with assets return risk and financial risk. This finding aligns with the study of Sudha et al (2016) with UK sample. Therefore the ROA, Firm size and leverage significantly impact the risk of the companies listed in Sri Lanka.

5. Conclusion

This paper examines the relationship between ownership structures and firm risk in listed companies in Sri Lanka. Using panel date set of sixty nine companies over the sample period of 2010 to 2017. There are three types of ownership structures identified such as management ownership, institutional ownership and concentrated ownership which are the common features of Sri Lankan companies‟ ownership structure. The negative association was hypothesized between ownership structures and firm risk. The finding of the study reveals that the management ownership shows negative and significant association with firm risk which is the interesting and uncommon finding when compare with earliest literatures. On the other hand, institutional and concentrated ownership structures show positive relation with firm risk which is the similar finding and consistent with past studies on developed countries‟ sample. This finding emphzise that, the clear relation with ownership structures and risk taking abilities of companies in Sri Lanka. These finding highlights the optimal ownership structure to gear up the corporate performance via mitigate the corporate risk. By using this finding, policy makers and regulators could draw the attention of appropriate mix of ownership to prevent the financial humiliations in future. Nevertheless, this study has certain restrictions. The scope of the study was limited to 69 listed companies in Sri Lanka. Therefore, future researchers can expand the study by using a larger sample of companies. In addition, the current study used only an eight-year time span from 2010 to 2017, which can also be expanded. Further, this study eliminates companies in the banking and financial sectors like banks, finance companies, leasing companies, insurance companies, investment companies and fund management companies due to their unique corporate governance regulations. Therefore, it would be useful if future researchers undertake studies on those companies as well and focus on sector wise studies separately to further explore the relationships studied in this paper.

References

Acharya, V. V., Amihud, Y., & Litov, L. (2011). Creditor rights and corporate risk-taking. Journal of Financial Economics, 102(1), 150-166.

Amihud, Y., & Lev. B. (1981). Risk reduction as a managerial motive for conglomerates mergers. Bell Journal of Economics, 12, 605-617. https://doi.org/ 10.2307/3003575

Berle, A. A. Jr. & Means, G. G. (1932). The Modern Corporation and Private Property, New York: Macmillan.

Boubakri, N., Cosset, J. C., &Saffar, W. (2013). The role of state and foreign owners in corporate risk-taking: Evidence from privatization. Journal of Financial Economics, 108(3), 641-658.

Callen, J.L. and Fang, X. (2013), "Institutional investor stability and crash risk: monitoring versus short termism?",Journal of Banking & Finance, Vol. 37, pp. 3047-3063

Cheng, J., Elyasiani, E. and Jia, J.J. (2011), "Institutional ownership stability and risk taking: evidence from the lifehealth insurance industry", Journal of Risk and Insurance, Vol. 78 No. 3, pp. 609-641.

Cheng, S. (2008). Board size and the variability of corporate performance. Journal of Financial Economic, 87, 157-176

Claessens, S., Djankov, S., 1999. Ownership concentration and corporate performance in the Czech Republic. Journal of Comparative Economics 27, 498–513.

Coles, J., Daniel, N., & Naveen, L. (2006). Managerial incentives and risk-taking. Journal of Financial Economics,79, 431-468

Connelly, BL, Hoskisson, RE, Tihanyi, L &Certo, T (2010), „Ownership as a form of corporate Governance", Journal of Management Studies, vol. 47,no. 8, pp. 1561-1589.

Chun, S., & Lee, M. (2017). Corporate ownership structure and risk-taking: evidence from Japan. Journal of Governance & Regulation, 6(4), 39-52.

Fama, E. F. (1980). Agency problems and the theory of the firm. Journal of Political Economy, 88, 288-307. https://doi.org/10.1086/260866.

FRC (2011), Boards and Risk, available at: www.frc.org.uk/images/uploaded/documents/Boards%20 and%20Risk%20final.

Flannery, M. and Rangan, K. (2008), "What caused the bank capital build-up of the 1990s", Review of Finance, Vol. 12 No. 2, pp. 391-429.

Gollakota, K & Gupta, V 2006, „History, ownership forms and corporate governance in India", Journalof Management History, vol. 12,no. 2, pp. 185-198.

Gedajlovic, E. R., Shapiro, D. M. (2002), Ownership and firm profitability in Japan.

Academy of Management Journal 45(3), 565-575. https://doi.org/10.2307/3069381

Heenatigala, K 2011, Corporate governance practices and firm performance of listed companies in SriLanka (Doctoral dissertation), Victoria Law School,Victoria University, Melbourne.

Hill, C., Snell, S., 1989. Effects of ownership structure and control on corporate productivity. Academy of Management Journal 32, 25–46.

Hutchinson, M., Seamer, M. and Chapple, L. (2015), "Institutional investors, risk/performance and corporate governance", The International Journal of Accounting, Vol. 50 No. 1, pp. 31-52.

Hutchinson, M. (2001). Firm risk, corporate governance and firm performance. Governance and corporate social

responsibility in the new millennium : Governance and Social Responsibility Conference : proceedings of the 2001 Conference (pp. 1-16). Burwood, Vic.: School of Accounting and Finance,Deakin University

Hu, Y., Izumida, S., 2008. Ownership concentration and corporate performance: a causal analysis with Japanese panel data. Corporate Governance: An International Review 16, 342–358.

Jensen, M &Meckling, WH 1976, „Theory of the firm: managerial behavior, agency costs, andownership structure", Journal of Financial Economics, vol. 3,no. 4, pp. 305–360.

Kaur, P & Gill, S 2008, The effects of ownership structure on corporate governance and performance: An empirical assessment in india(Research Project), University Business School, Panjab University,Panjab.

Khan, T. (2005) Company Dividends and Ownership structure Evidence from UK Panel Data,Nufeld College, Oxford, OX11NF, UK..

Laeven, L., & Levine, R. (2009). Bank governance, regulation and risk-taking. Journal of Financial Economics,93(2), 259-27

La Porta, R, De-Silanes, FL, Shleifer, A &Vishny, R 2000, „Investor protection and corporategovernance", Journal of Financial Economics, vol. 54 , no. 2, pp. 471-517.

Mapitiya, G., Ajward, A. R., & Seneratne, S. (2015). Ownership Concentration and Degree of Compliance with

Corporate Governance Best Practices of Public Listed Companies in Sri Lanka. NSBM Journal of Management, 01(01)

May, D. O. (1995). Do managerial motives influence firm risk reduction strategies?.The Journal of Finance,50(4), 1291-1308

Monks, RA &Minow, N 1995, Corporate Governance. Blackwell Publishing Ltd, Victoria.

Monsen, R., Downs, A. (1965). A Theory of large managerial firms. Journal of Political Economy, 73, 221-236. https://doi.org/10.1086/259012

Monsen, R., Chiu, J., & Cooley, D. (1968). The effect of separation of ownership and control on the performance of the large Firm. Quarterly Journal of Economics, 83, 435-451. https://doi.org/10.2307/ 1879516

Nguyen, P. (2011). Corporate governance and risk-taking: Evidence from Japanese firms. Pacific-Basin Finance Journal, 19, 278-297

Pathan, S. (2009). Strong boards, CEO power and bank risk-taking. Journal of Banking and Finance, 33(07), 13461350

Sanders, W., & Hambrick, D. (2007). Swinging for the fences: The effects of CEO stock options on company risk taking and performance. Academy of Management Journal,50, 1055–107

Saunders, A., Strock, E. and Travlos, N.G. (1990), "Ownership structure, deregulation, and bank risk-taking", Journal of Finance, Vol. 45 No. 2, pp. 643-654.

Senaratne, S., &Gunaratne, P. (2008). Corporate governance development in Sri Lanka: prospects and problem. Journal of Management.

Shleifer, A., Vishny, R., 1986. Large shareholders and corporate control. Journal of Political Economy 94, 461–488.

Sudha, M., Ibrahim, S., &Archbold, S. (2016). Boards attributes that increase firm risk – evidence from the UK. Corporate Governance, 16(02), 233 – 258.

Wei, G, &Geng, M 2008, „Ownership structure and corporate governance in China: some currentissues", Managerial Finance, vol. 34,no. 12, pp. 934-952.

Wright, P., Ferris, S., Sarin, A., & Awasthi, V. (1996). Impact of corporate insider, blockholder, and institutional equity ownership on firm risk-taking. Academy of Management Journal, 39, 441-463.