CORPORATE GOVERNANCE AND CORPORATE DISTRESS; A SURVIVAL ANALYSIS OF LISTED FIRMS IN SRI LANKA

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ABSTRACT

This study investigates the association of different corporate governance characteristics and accounting variables with the survival likelihood of distressed firms listed on the Colombo stock exchange between 2019 and 2021 by selecting 100 firms as a sample via the purposive random sampling technique, where 50 firms are financially distressed. The Altman Z-score method was used to identify financially and non-financial distressed firms. Cox Proportional hazard regression was employed to test the determinants of the survival likelihood of distressed firms, and the results show no relationship between corporate characteristics and the survival likelihood of financially distressed firms. At the same time, accounting variables such as ROA, Firm size, and Leverage are significant determinants of the survival likelihood of distressed firms in Sri Lanka.

KEYWORDS: *Financial Distress, Survival, Corporate governance characteristics, Accounting variables*

1. INTRODUCTION

Sri Lanka has a remarkable history of numerous corporate scandals such as Pramukha Savings, Golden Key Credit Card Company, and the bankruptcy of Vanic Incorporation, Lanka Marine Services Ltd., Sri Lanka Insurance Corporation, etc., the collapse of these firms has created unstable nature to their stakeholders (Samaraweera et al., 2021). Moreover, the study reveals that business failures occur due to the unethical act of board members and poor corporate governance systems. Most businesses experience a period of financial trouble for a substantial amount of time prior to filing for insolvency. Therefore, in credit risk management, financial distress is a helpful indicator of predicting bankruptcy and the accuracy of financial trouble. it can give investors and creditors an early warning of the firm's possibility of losses (Zhou, 2022).

The current study addresses the corporate governance environment's role in companies' ability to recover from bankruptcy and eventually survive. Most of the previous studies only considered the financial ratios, and macroeconomic variables on survival (Tinoco, 2013). Notably, this study follows the survival analysis techniques by considering various corporate governance attributes on the survival likelihood of distressed firms. Thus, Survival analysis is mainly used in the science and engineering field but it can also be applied in the financial accounting discipline, especially in financial distress (Laitinen, 2005).

The current study extends the literature by examining the extent to which corporate governance characteristics differentiate financially distressed firms that subsequently fail from those that recover. According to Yurtoglu (2022), two primary channels of board characteristics can most significantly affect the predictability of bankruptcy. First, the financial information of the company can reveal the current financial condition of the company. Effective boards can always confirm the accuracy of the financial data and information to their interested parties to disclose the true condition of the firm. Second, the boards can enhance the efficiency of management's response to distress by properly exercising their major roles.

The study operationalizes the corporate governance environment by testing whether corporate characteristics are associated with the ultimate survival of financially distressed firms.

1.1 Research problem

In recent years the importance of corporate governance has been awakened due to the collapse of many high-profile companies in Sri Lanka. Predicting the firms' failure probability or survival is a more significant issue among the stakeholders. (Astebro,2012). Rather than going for bankruptcy a firm can follow a survival measurement technique to identify the reason or determining factor to overcome the distress. The empirical question is whether the board's efficiency, functions, and financial variables confirm future survival.

1.2 Research Objective

To find out which corporate governance attribute (Board Size, Board Independence, Board Meetings, Board Expertise, Audit Size, Audit Independence, Audit Meetings, Audit Expertise, Firm

size, Age, return on assets (ROA, Leverage, Dividend Yield) influence on leading to firm failure or the survival.

1.3 Research Question
1. Which corporate governance characteristics differentiate the corporate failure or survival of the companies?

The rest of the paper is structured as follows: To lay the groundwork for choosing the independent variables, the second part gives a literature review. The empirical data and statistical techniques are covered in the third portion of the paper. The empirical findings are presented in the fourth part. The study is concluded in the last part, which also makes some recommendations for future research.

2. LITERATURE REVIEW
Previous studies (Mili, 2023, Gerged, 2022, Mariano, 2021) found that corporate governance elements are connected with financial distress. However, they failed to assess whether the elements are connected with the systematically different financial outcomes for the distressed firm. (Khatib, 2022) extend the literature by providing evidence that the financial performance of the company can be predicted by corporate characteristics. Hence, the previous studies prove that elements of corporate governance have a considerable impact on financially distressed firms.

According to (Laitinen, 2005) the study confirms that the increasing trend of equity ratio, cash flow, and quick ratio is the most important indicator of financial variables on financial instability. It has been demonstrated that the stratum elements of business size, industry, and age have an impact on the financial distress process. The finding of the study is contrary to the concerns expressed by (Abdel Khalik 1993).

(Lipton and Lorsch, 1992) argue that eight or nine members of the board are more effective when the board exceeds this size, it becomes difficult for all the board members to express their ideas and opinions in the limited time available at board meetings, so usually, if the board has eight members so that would be effective. Standard board composition measures include the independent non-executive director's ratio (Rashid, 2011).

Board expertise mentions the board members' experience and expertise inthe social environment, reporting, and decision-making as per that the directors could offer their valuable insights based on their experience being on the board of the company (Dahya et al. 1996) as measured by the qualification and experience of the board of directors as per that the directors have met the minimum qualification of MBA or more than that.

The company's board of directors usually holds a board meeting at certain times to discuss the company's policies and strategies. This meeting is essential to develop the policies and strategies, as Hoque at el. (2009) reported, meeting helps make some crucial decisions for the company.

several audit community members on the board of an audit committee, so at least three non-executive directors whom at least two should be independent (Rahman et al., 2019). This audit committee's independence is crucial because the auditors get support from the audit committee for any circumstance (Al Farooque at el. 2019). Audit committee expertise explains that the audit committee board should be with some audit and finance experts because this will help the company achieve the company's goal and objective (Alqatamin at el. 2018, Qeshtaa at el. 2020), typically, CA members, CIMA, and ACCA members should be included in to the committee. The audit committee meeting is crucial for the companies and board manager operating committees. Hence, this committee oversees the financial reports and disclosure, and this regular meeting will help reduce the agency problem and some other vital issues shorted out (Garas at el. 2018, Qeshtaa at el. 2020). through this meeting, the committee takes part of the all-important decisions.

2.2 Theoretical background
Agency theory, steward theory, resource dependence theory, credit risk theory, packing order theory, and stakeholder theory are mostly focusing on corporate governance and organizational behavior, and financial distress (Merton 1974). These theories highlighted that the board composition and diversity of board have a significant part in the company's success as well as failure (Yurtoglu, 2022). Several factors may contribute to interrupting the board function (Tirole, 2010).

2.3 Hypothesis
The study examines the association between corporate governance characteristics and financial characteristics with the time of survival likelihood of financially distressed firms.

H1- There is no association between corporate governance characteristics and financial characteristics with the time of survival likelihood of financially distressed firms.

3. METHODOLOGY AND SAMPLING DESIGN
There are numerous other techniques that have been applied to the prediction of business failure. The current study will follow the Cox Proportional Hazards Model as suggested by (Shumway, 2001). Studies indicated that applying the Cox model to a large set of data would be valuable research and comparing it to other models (Gepp, 2008).

Samarakoon and Hasan (2003) evidenced that the Altman Z-Score method is an appropriate distress-predicting tool for Sri Lankan companies but up to the search there are no studies available regarding survival analysis for distress firms in Sri Lanka.

The current study compares the differences between logit analysis and survival analysis in assessing the financial risk of Sri Lankan Listed companies. hence, the study reveals the use of the survival curve and the financial hazard rate.

3.1 Sample selection

As of 31st January 2022, 280 firms are listed in Colombo Stock Exchange under 19 categories. After excluding the banking finance and insurance sector, the present study will consider the data from 2019 to 2021 in three fiscal years. The data will be collected from the published annual reports of the companies. Based on the availability of the data 100 companies from different sectors have been selected to carry out the study on which about 50 percent of the companies experienced financial distress. Which is confirmed by Altman Z- score model.

3.2. Variables
3.2.1 Dependent Variable

The Financial Distress of the firm will be identified by following Altman predictive tool. If the firm distressed =1 otherwise 0

3.2.2 Independent Variables
3.2.2.1. Corporate governance variables

1. Board size: The total number of executive and non-executive board members in the board of directors considers the board size.
2. Board Independence: The total independent directors are a percentage of the total number of directors on the board.
3. Board Expertise: In the board the number of members with financial or/and accounting qualifications for firm.
4. Board Independence: The total independent directors are a percentage of the total number of directors on the board.
5. Audit Committee size: A number of members in the audit committee.
6. Audit Committee Independence: A number of independent non- executive directors on the Audit Committee.
7. Audit Committee Expertise Number of members with Finance or/and Accounting qualifications in the audit committee.
8. Audit Committee Meetings: Number of audit committee meetings held during the period.

9. Firm size: Firm Size is measured in terms of total assets for a particular period. The natural logarithm of total assets at the end of the year.
10. Age: Natural logarithm of the number of years a firm has been in operation after incorporation.
11. Return on assets (ROA): The net income earnings for the current period as a percentage of total assets utilized.
12. Sales growth:
13. Leverage: Total liabilities scaled by total assets at the end of the year.
14. Dividend Yield: Sales growth is the amount a company derives from sales compared to a previous period.

4. DATA ANALYSIS

This study employs the proportional hazards model developed by Cox (1972). The study estimated the following Cox Proportional Hazard regression to study going concern assessments.

Financial distress= b_1 log of total assets+ b_2 log of years+ b_3 total assets/ total sales+ b_4 sales growth + b_5 leverage +b_6 dividend yield+b_7 board size + b_8 board independence+b_9 board expertise + b_{10} board meeting + b_{11} audit committee size+ b_{12} audit committee independence+ b_{13} audit committee expertise + b_{14} audit committee meetings + e

SPSS statistical software was used to analyze the data. There are standard statistics carried out to check the significance of the model.

hazard ratio above 1 indicates a covariate that is positively associated with the event probability, and thus negatively associated with the length of survival.

In summary,

- HR = 1: No effect
- HR < 1: Reduction in the hazard
- HR > 1: Increase in Hazard

5. RESULTS

Table: 01 Descriptive Statistics

	Variable	Low	High	Mean	Std. Dev.
A	**Corporate governance Variables**				
01	Board Size	4	16	8.5000	2.2658
02	Board Independence	0.1250	0.7500	0.4100	0.1269
03	Board Expertise	0.1250	1	0.6940	0.2136
04	Board Meetings	1	13	5.0433	2.7459
05	Audit Committee size	2	6	3.2633	0.7455
06	Audit Committee independence	0.3333	1	0.7483	0.1901
07	Audit Committee Expertise	0.2000	1	0.5483	0.2300
08	Audit Committee Meetings	1	17	4.5300	1.7279

B	Accounting Variables				
09	Firm size	14.5204	25.9204	22.0137	1.8458
10	Age	4	146	44.1500	30.8475
11	ROA	-0.0482	0.1466	0.0372	0.0574
12	Leverage	0	0.7890	0.2243	0.2727
13	Sales Growth	-0.2980	0.2725	0.0109	0.1672
14	Dividend Yield	0	0.0840	0.0259	0.0295
15	Altman_Z-Score	0.3065	6.2411	2.3772	1.8184

Part A of Table 1 represents the descriptive statistics for the corporate governance variables and accounting variables of the company. Board size represents the number of directors. Board Size ranged from 4 to 16 members with a mean of 8.5. the study measured board independence as the total independent directors are a percentage of the total number of directors on the board. Board independence has a mean of 41%. the measure of Board Expertise considered the proportion of the total board members with accounting relate qualifications it results that the mean 69% of board members having the accounting background. The number of Board meetings results that high with 13 low with 1 and the mean value is 5.

The audit committee size ranged from 2 to 6 members with a mean of 3. Audit independence has a mean value of 74%. the measure of Audit Expertise considered the proportion of the total audit committee members with audit and accounting relate qualifications it results mean value of 54%. Audit committee meetings ranged between 1-17

Part B of Table 01 illustrates the descriptive analysis for the Accounting variables the mean value of the firm size logarithm of assets is 22. Age of the firm ranges from 4 to 146. ROA results that -4% to 17% and the mean value is 3%. Leverage ratio ranged from 0 to 0.78 and standing with the mean value of 0.22. descriptive result of the sales growth results that -0.0298 to 0.2725 and the mean value is 0.0109. dividend yield revels that the rage from 0 to 0.084 with the mean of 0.0259.

Table 02 Cox Proportional Hazard Regression

Determinants	Hazard Ratio	P Value
Corporate Characteristics		
Board Size	-0.058	0.178
Board independence	0.227	0.725
Board Expertise	-0.546	0.176
Board Meetings	0.056	0.059
Audit Committee Size	-0.116	0.345
Audit Committee independence	-0.457	0.298
Audit Committee Expertise	0.544	0.125
Audit Committee Meetings	0.051	0.279
Accounting Variables		
Firm Size	0.103	0.284
Age	-0.015	0.043
Return on Asset	-0.397	0.034
Leverage	0.210	0.020
Sales growth	0.067	0.527
Dividend Yield	-1.469	0.280

According to the results, none of the corporate attributes support the firm to overcome financial distress. Hence, in the case of corporate attributes, no significant impact is found on financial distress.

On the other hand, Accounting variables proved that the financial distress of the company can be associated with accounting indicators. Notably, ROA is significantly associated with a likelihood of survival (Hazard ratio= 0.397, p value= 0.034). this reveals that when a company focuses more attention on the efficient use of its assets could overcome financial distress.

Likewise, the Age of the firm is significantly associated with the likelihood of survival (Hazard ratio= 0.015, p value= 0.043). this indicates that more experience firms could strategically manage to recover from the distress condition. Similarly, leverage has a significant impact on the survival of the firm (Hazard ratio=0.21, p value= 0.02). when a company main a lower leverage would be lower risk to invest in that company.

Other remaining accounting variables such as firm size, growth, and dividend yield are inconclusive determinants of the firm

which are already in distress. The results are contradictory to the finding of (Parker, 2002)

6. CONCLUSION

There is literature proving that the inefficiency of corporate governance was the reason for many corporate disasters in Sri Lanka. To answer the research question that the impact of corporate characteristics and financial variables on firm survival. The study followed Cox proportional Hazard regression survival analysis technique using three financial year of data gathered from 100 companies based on purposive random sampling. The study measured the various corporate governance characteristics and financial variables on the survival likelihood of distressed firms.

The results illustrate that corporate governance characteristics cannot influence the likelihood of survival of the distressed firm. But accounting variables such as ROA, Age, and Leverage are the significant determinants of survival. Hence, Firm size, Sales growth, and Dividend Yield are not significant determinants of the survival of the distressed firm. In the future, the study may include macroeconomic variables and other financial ratios, and other corporate governance characteristics for further study.

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