

Corporate Governance, Financial Ratios, Political Risk and Financial Distress: A Survival Analysis

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ABSTRACT

Objective – The objective of this study was to investigate the factors like corporate governance, financial ratios, and political risk and their impacts on company's survival.

Methodology/Technique – Collecting data of Indonesian Stock Exchange from 2000 to 2014 and employing purposive random sampling, this research collects samples of 58 companies undergoing financial distress and 275 others which do not.

Findings – The research eventually proves that agency theory and Asymmetric Information theory do occur in Indonesia. With Cox Proportional Hazard model, it then proves that all two models employed: independence commissioners, leverage, operating risk, size, return on asset and control of corruption, are variables which consistently affect financial distress of the company.

Novelty – The study uses original data and gives supported suggestion for the researched issues.

Type of Paper: Empirical

Keywords: Financial Distress; Financial Ratios; Corporate Governance; Political Risk.

JEL Classification: G01, G34, M48

1. Introduction

Theoretically, the company conducts its business activities to achieve its basic goal of earning a profit. Many ways are done to achieve that goal so that the company can operate continuously. But in its development, there are companies that succeed and there are companies that fail in maintaining its sustainability. Failure of a company that describes the process of adverse economic and financial conditions experienced by the company is defined differently. There are generally four characteristics of this unsuccessful company: failure, insolvency, default, and bankruptcy.

Bankruptcy does not always happen, but when it comes, it will affect a country either economically or socially. Altman (1984) avers that the total cost of such bankruptcy, both direct and indirect costs, is around 15% of the corporate value of the industry and 7% for retailers prior to distress. In fact, apart from economic turbulence, bankruptcy does evoke social problems as well, especially for those involved in the company and their families too (Argenti, 1976).

* Paper Info: Received: November 14, 2016

Accepted: April 12, 2017

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Previous literature has brought forth numerous studies related to bankruptcy. Beaver (1966) uses financial ratio to forecast bankruptcy, which is still being used by academicians and researchers as predictor variables, hitherto. The model of predicting bankruptcy with financial and non-financial ratios can be categorized as a micro-bankruptcy model (Rose, Andrew, and Giroux, 1982). Besides, the company should also notice the impact of the political environment on its business. The importance of identifying and analyzing socio-political as well as governmental situations is of the object to political risk analysis.

To date, multinational corporations put major concerns on analyzing political risks with an emphasis on the interrelations of domestic institutions and foreign direct investment inflow, political risks and credits, and democratic institutions and loan. As Haendel (1979) explicates, political risk is a situation which is likely to happen due to political incidents and would alter the company's profitability prospects to gain profits from its investment. The change may occur in regulation, response to corporate governance, reaction toward global competition, the law on manpower, taxation, and corruption which is ultimately unexpected. Corruption on a national scale acts as a political risk affecting the operational cost of a company which, in turn, influences the price of the products. It then hinders the company to compete with foreign competitors' which are more efficient; the chance of getting bankrupt is higher.

Data from www.worldbank.org/governance/wgi/pdf/PRS.xlsx shows that the control of corruption in Indonesia is one of the weakest of all six political risk variables. In 2002-2013. Indonesia has a very high risk of CC with an average of 0.40 (whereby a level less than 0.49 indicates higher risk). Not only does such a high risk affect operational costs of multinational companies, but that also affects domestic businesses. Furthermore, as Khan (2006) mentions that control of corruption is a common problem causing financial distress in most developing countries, except for few developing countries that have low levels of corruption.

Studies that explore the influence of corporate governance and corporate performance have been widely practiced in various countries. Australia (Balabat, Taylor and Walter, 2004), China (Claessens & Djankov, 1999; Xu & Wang, 1999, Li & Naughton, 2007), US (Parker, Peter, & Turetsky, 2011). If corporate governance is implemented within the company it is expected that corporate governance attributes will affect the company's probability of survival (Goktan, Kieschnick & Moussawi, 2006).

What is new in this research is the use of survival analysis, which is still rarely used as a model to predict bankruptcy in Indonesia and also the use of explanatory variables which include political risk indicated by control of corruption. The study focuses on assessing financial distress of companies listed on the Indonesian Stock Exchange, which uses survival analysis with time-varying variables. The Cox proportional hazard analysis, which is a sub-discipline of survival analysis can contribute to the literature of financial distress of companies. The research explores extensively various potential variables to predict financial distress which adopts both financial and nonfinancial data. Financial data covers financial ratios, while nonfinancial variables include corporate governance and political risk. Such potential variables are meticulously chosen based on previous empirical studies and their relevance with theoretical frameworks.

2. Literature Review

2.1. Financial Distress

Financial distress as lacking finance of the company, causing that company unable to pay dividends and obligation, and which in turn goes bankrupt (Beaver, 1966). Many research has been conducted which are related to bankruptcy. Beaver (1966) started his study employing the univariate analysis to predict bankruptcy. Altman (1968) copes with the weakness of univariate model by using multivariate discriminant analysis (MDA). After that, Altman, Haldeman, and Narayanan (1977) restore the previous model with a quadratic discriminant analysis. In the 1980s, Ohlson (1980), then, criticized discriminant analysis for having a limited assumption and introduced the alternative econometric technique rooted in logistic transformation (Logit Model). Zmijewski (1984) adapts analysis of Probit, Frydman, Altman, and Kao (1985) together with recursive

partitioning analysis (RPA). In the 1990s, Odom and Sharda (1990), then, introduced Artificial Neural Network (ANN).

Lane, Looney, and Wansley (1986) introduce the use of survival analysis (Cox proportional hazard model) to predict financial distress in a banking system. Shumway (2001) then applies such a hazard model and compares it with Altman's Z-score model (1968) and with that of Zmijewski (1984). This hazard model eventually becomes a model to predict bankruptcy in various countries such as in America, Lane, Looney & Wansley (1986), Wheelock and Wilson (2000), Shumway (2001), Turetsky and McEwen (2001), Le Clere (2005) Parker, Peters and Turetsky (2011). The interest also spreads out in other countries like UK, Bhattachjee, Higson and Holly (2004); Finland, Laitinen (2005); Australia, Chancarat (2008) and Gepp and Kumar (2008); and Italy, Donato and Nieddu (2014).

2.2. Corporate Governance

Agency theory becomes an important consideration when talking about corporate governance. explore distributions of ownership and a control over a company. Hill and Jones (1992), on the other way around, put their interest in an interrelation between managers and their stakeholders. The agency theory gives an understanding of what motivates and makes CEO takes certain actions which eventually influence company's performance. Like what Donaldson and Davis (1991) describe that decision for managers (agents) should be taken to fulfill the interest of shareholders (principal).

According to Asymmetric theory, when the stockholders are concentrated then asymmetric information decreases, so that they will have more power to change top management and the managers are more likely to obtain strategy akin to the interests of the business owners. However, if the stockholders are dispersed, asymmetric information comes up significantly and the managers are more likely to have strategy different from the owners' interests (Hill & Snell, 1989).

The National Committee of Governance Policy (KNKG) states that good corporate governance (GCG) is required to boost market's efficiency, transparency, and consistency in line with its regulation. Thus, the implementation of GCG should be patronized by three interrelated pillars: the state and her apparatus as regulators, business sectors as market agents, society as product and service users. In a company, boards hold a very prominent role. In Indonesia, with a two-tier system, the boards consist of the commissioner and director boards. Commissioner board, monitors management process, while director one is in charge of daily operations of a company.

Several literatures of corporate governance mechanism as a potential predictor of financial failure describes several attributes. Elloumi and Gueyee (2001) conducting their study in Canada use shareholder's percentage, stock holding by directors and block holders, the percentage of outside directors, and if a CEO is also a member of the board. Abdullah (2006) researching in Malaysia uses variable of board independence, executive director, non-executive director, and outside block holding. Fich and Slezak (2008), in their study in the US, use a variable of board size, outside board and years of CEO. While in Thailand, Polsiri and Sookhanapabhiran (2009) investigate the variability of stock holding above 25%, business rank from controlling stockholders, and board who is also controlling stockholders.

2.3. Financial Ratios

Agency theory states that the relationship between principal and agent could evoke agency problems which cause agency cost. Agency cost exists because the company takes a loan involving the relationship between the owner and creditor. As the debt increases, financial distress is also more likely to happen. Asymmetric information theory states that there is a condition in which one party (managers) has more information than the others (investors). The existence of asymmetric information makes the company take more loans without issuing new stocks when the value decreases due to bad signaling. The increase in debts will also increase the risks of the company which in turn lead it to financial distress. Previous studies have identified a number of

accountancy dimensions related to the prediction of bankruptcy. The study adopts financial ratios which are also used by Parker, et.al. (2011), i.e.: financial risk, operating risk, liquidity risk, profitability, size and market perception.

2.4. Political Risk

Political risk is defined as the probability of political incidence which would change company's prospect to gain profits from certain investment (Haendel, 1979). Political risk results from a connection between political authorities and market agents referring to uncertainty. Political risk causes harm to the company and threatens its future operations. Glasser (2012) also notes that the loss of prosperity may come from the private initiative source (corruption) and purely public demoralization (political favoritism or cronyism). If political leaders have potentials to corrupt, then public ownership will take a consequence of their actions. Corruption will cause the laws to cease which, eventually, triggers the increased operational costs. Such condition reduces the ability to make the profit and leads the company to go bankrupt.

This study employs control of corruption using the data of International Country Risk Guide Methodology (ICRG) from the Political Risk Service Group (PRS) covering 140 and which has operated since 1984. Political risk can be measured using corruption index of a nation (Glaeser, 2012). The high rate of corruption indicates that the country has a problem of market efficiency, which is certainly unable to prosper the society. Cashman, Harrison, and Sheng (2014) find that the increased political risk (using a corruption price index) will cause the increased cost of equity in a company. This high cost also increases the price of the products which eventually finds it difficult to compete with cheaper products from other countries. If such a condition keeps going on, the company will face financial distress and even bankruptcy. If the control of corruption increases, then the possibility of financial distress and bankruptcy decrease.

3. Research Methodology

The period of research is from 2002 to 2014. Distressed companies are those with negative equity, refers to the definition of distressed companies which are unable to pay their liabilities as proposed by Beaver (1966) and Andrade and Kaplan (1998). If the company has negative equity, it will be coded by (1), while having no negative equity is coded by (0). To collect the samples, the research employs purposive random sampling with criteria of non-financial companies having complete data throughout the period of investigation. Moreover, having a different structure of financial statement, any financial companies are excluded from the samples. There are 58 firms with financial distress and 275 firms without financial distress are chosen as samples. The period of research which spends up to ten years and sampling method which covers all sectors listed on the Indonesian Stock Exchange are expected to improve an effectiveness of a model predicting financial distress.

Survival analysis is employed to determine the capability of attributes such as corporate governance, company's financial risk, and political risk, to distinguish the failed companies from those which survive. This survival analysis includes failure of time as the dependent variable in the model. Therefore, the dependent variable is the length of distress. Survival analysis is one type of statistical models to study a case and a time of an event. An event exposed in the study is defined as firms with financial distress which have negative equity. 'Time to event' is the total length (in the year) from the initial period of the investigation until the year of financial distress. Survival analysis has two advantages, i.e. its ability to handle time-varying variables and censored observations. Time-varying variables are explanatory variables which are changed as time goes by. Financial ratios, corporate governance and political risks which are used in the study are time-varying variables. Thus, it is expected that the symptoms of financial distress be observed from those aforesaid ratios (Louma & Laitenen, 1991). Censored observations, additionally, is an observation which does not occur in the whole period of observation. Censoring occurs when the duration of the study is limited. In this study, those suitable for censored observations are active firms in which they do not face financial distress during the period of research.

The model can be translated as:

$$\log h_i(t) = a(t) + b_1BI_i(t) + b_2GENDIV_i(t) + b_3CEODIV_i(t) + b_4COW_i(t) + b_5LEV_i(t) + b_6OR_i(t) + b_7Szi(t) + b_8Liq_i(t) + b_9ROA_i(t) + b_{10}PBV_i(t) + b_{11}PRI_i(t) \quad (1)$$

in which,

$h_i(t)$ = hazard of i company is in the financial distress in t time.

$a(t) = \log h_0(t)$, in which, $h_0(t)$ = hazard function for individuals having 0 value in all variables.

BI (board Independence) is measured by a ratio of Independence Commissioner. GENDIV (gender diversity of the board) that represent the percentage of women on the board. CEODIV (CEO diversity) represent the woman as a top executive, use dummy variable, coded (1) if the CEO is the woman and coded (0) otherwise. COW (concentration ownership) is measured by the proportion of common stock held by the top 20% shareholder (Chancharat, 2008). LEV (leverage) represent a percentage of total debt to total assets. OR (operational risk) is measured by total assets by total sales. Sz (Size) is measured by the log of total assets. ROA is the proportion of earnings after tax to total assets. PBV is measured by price book value to market value of equity. PL (political risk) that used control of corruption as a proxy.

Hazard ratios identify an effect of the change of one independent variable unit in its hazard function or its probability to distress. The hazard ratio of less (more) than 1 suggests a lower (higher) likelihood of financial distress. Each coefficient of independent variable estimates a change of hazard rate from certain independent variables.

4. Results

Table 1 illustrates the result of the cox proportional hazard model tested with various models adopted in this current study. Model 1 is an initial model which is employed in this research, whose covariates are corporate governance, financial ratios, and control of corruption as the indicators of political risk. Model 2 employs corporate governance and financial ratio variables as its covariates.

Table 1. Statistical Test Results

| Variable | Model 1 | | Model 2 | |
|--------------------|--------------|-------|--------------|-------|
| | Hazard Ratio | Sig. | Hazard Ratio | Sig. |
| Indpt.Commissioner | 0.064** | 0.023 | 0.012*** | 0.000 |
| Board Diversity | 2.882 | 0.246 | 0.631 | 0.608 |
| CEO diversity | 0.972 | 0.956 | 0.501 | 0.509 |
| Conct.Ownership | 1.958 | 0.257 | 0.357 | 0.612 |
| Leverage | 1.588** | 0.004 | 2.273*** | 0.000 |
| Operational Risk | 1.063* | 0.010 | 1.074** | 0.001 |
| Size | 0.651* | 0.050 | 0.491*** | 0.000 |
| Liquidity | 1.073 | 0.227 | 1.016 | 0.723 |
| Return on Assets | 1.108* | 0.098 | 1.125** | 0.044 |
| PBV | 0.970 | 0.281 | 0.917 | 0.155 |
| Political Risk | 0.000*** | .000 | | |

Source: Estimation results

***) significant at alpha 1 %, **) significant at alpha 5 %, *) significant at alpha 10 %.

For those two (2) models it is pretty obvious that variables of independent commissioner and leverage are variables which consistently affect financial distress, significant with an alpha 5% and 1%.

5. Discussion

Agency theory which explicates a separate function of ownership and control is proven in the study. Independent commissioner has a significantly negative impact on the likelihood of financial distress of firms. With the more roles of independent commissioner, there would be more outsiders involved in the controlling process of operational business which leads them to outperform and prevent the companies from financial distress. This study is support of study Kristanti, Rahayu, and Huda (2015) on Indonesia family firm. But this opposes the study conducted by Abdullah (2006) in Malaysia suggesting a positive effect. This also opposes the study of Siahaan (2013) in Indonesia, which finds an evidence that independent commissioner has a negative impact on the value of the firm, whereas with the decrease of the value itself, the more possibility of financial distress it will face.

Leverage has a significantly positive impact on the possibility of financial distress. As the leverage of a company increases, and so does the possibility of financial distress. The average of a company's leverage is 0,635 which identifies that the company does not adopt a conservative capital structure. This causes the possibility of financial distress to rise as noted by Gitman (2009) that the higher fixed obligation is, the more leverage and risk of the company will be. The risk results from the possible incapability of the company to afford its liability. This is in line with previous studies conducted in the US like Ohlson (1980), Shumway (2001), Turetsky and McEwen (2001), LeClere (2005), and in Australia such as Chancarat (2008). This, nonetheless, is not consistently supporting studies of Pranowo, Achسانی, Manurung and Nuryantoro (2010) in Indonesia, and Tinoco and Wilson (2013) in the UK which identify negative effects of leverage towards financial distress. This study also supports an agency theory and asymmetric information theory. Agency problem will cause the agency cost which arises due to company's debts. The asymmetric information causes the company to take loans. Because of the bad signaling in the stock market, the management does not offer the stock. The increased debt is likely to increase the risk of financial distress.

Operational risks which are measured by comparing the total asset with sales show its significant positive impact on financial distress. The increase in operational risks means fewer sales that can be made, which also affects the chance of getting distressed rises. Parker, et.al. (2011) suspects that there is a positive correlation between the two. Yet, his study shows their positive correlation though insignificant. Likewise, Kristanti, et.al. (2015) suggest their negative correlation in spite of its insignificance faced by the Indonesian family firm.

Size has a negative correlation with financial distress. A bigger size of the company could give more access to obtain external capital. This, however, also means that the risk is getting higher. Only if this high debt is backed up by adequately better management, the company will gain more profit to finance all of its liabilities and to prevent itself from financial distress. Studies conducted by Chancarat (2008), Battacharjee, et.al. (2004), and Parker et.al. (2011) prove that the size has a positive impact on financial distress, yet inconsistent with studies conducted by LeClere (2005), Fich and Slezak (2008), and Tinoco and Wilson (2013) proving that it has a negative impact on financial distress.

The more liquidities could afford its higher liabilities which are already in due date. As noted by Chen and Lee (1993), liquidity is a direct determinant of company's capability to survive. This study supports studies conducted by Kristanti, et.al., (2015) in Indonesian family firms which also finds the positive impact of liquidity on financial distress. This current study is in line with Pranowo, et.al. (2010) in Indonesia. However, it opposes the results suggested by, Turetsky and Mc Ewen (2001) in the US, Elloumi and Gueyie (2001) in Canada, Polsiri and Sookhanaphibran (2009) in Thailand and Parker, et.al. (2011) in the US.

The increased ROA contributes to the increased possibility of financial distress. The average of ROA is -0.18 which means the most of the investigated companies have a negative profit. Because most companies experiencing negative earnings, then this causes the possibility of financial distress companies are also getting bigger. This study is in line with by Wheelock & Wilson (2000) in the US. However, it opposes the results

suggested by Ahmad (2013) suggests in his study in Indonesia showing the negative impact of ROA on financial distress.

Control of corruption has a significantly negative effect towards financial distress of the companies in Indonesia at alpha 1%. The more corruption is, the higher chance of a company facing financial distress so that the economic growth is stunted. This research also supports other literature stating that corruption is an obstacle to economic growth. The increasing of the corruption will increase cost of capital of the company which, in turn, causes the companies to get distressed. Cashman, Harrison & Sheng (2014), in their study on property sector of Indonesia, identifies that corruption is going to increase the cost of equity of a company which eventually increases the weighted cost of capital. The increased average cost of capital causes the companies to get distressed by the absence of their high rate of profitability. The high rate of corruption is going to drag the economic growth down. This occurs as the company finds it difficult to run its business due to the increased cost of capital led to financial distress. On the other hand, the World Bank (2003) suggests, though insignificant, that there is a negative effect of corruption and the sales of the company. However, Rand & Trap (2010), Ayaydin & Hayaloglu (2014) finds evidence that the rate of corruption has a positive correlation with the company's growth, explaining that if the corruption increases, and so does the company's growth. With the growth of the company, the possibility of financial distress decreases.

6. Conclusion

Agency theory which separates control from ownership is proven in Indonesia. This is characterized with the result stating that there is a significant effect of an independent commissioner towards financial distress. It also pinpoints that asymmetric information is happening in Indonesian company which is obviously seen from the high rate of leverage. The high leverage results in the risks of the companies which also increases the chance of getting distressed. With the existence of asymmetric information between the agents and the authorities, it causes the rate of corruption to rise even though the control of corruption during the research period is getting better. This certainly decreases the possibility of financial distress. Furthermore, the government has also an obligation to improve control of corruption in the coming years, for the high level of control of corruption is evidently reducing the chance of the companies to get distressed.

For the future research, it is recommended to keep employing variable of corporate governance, as the good corporate governance in Indonesia is on the high demand in the following periods so that the research result might change. Besides, variables reflecting macro conditions (GDP, inflation, and the like) could also be important variables for the emerging markets such as Indonesia.

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