ANALYSIS OF OWNERSHIP STRUCTURE AND INTELLECTUAL CAPITAL ON FINANCIAL DISTRESS: EMPIRICAL EVIDENCE FROM INDONESIA SERVICE COMPANY

(Undergraduate Thesis)

By:

Muhammad Nabil Risqika

Economic and Business Faculty

University of Lampung

Bandar Lampung

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ABSTRACT

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Tujuan dari penelitian ini adalah untuk mengetahui pengaruh corporate governance dan modal intelektual terhadap financial distress. Penelitian ini menggunakan Good Corporate Governance (GCG) dengan variabel terikat financial distress (Modified Altman Z-Score) dan variabel bebas seperti; kepemilikan institusional, kepemilikan manajerial, kepemilikan asing, dan modal intelektual dengan menggunakan koefisien nilai tambah yang dimodifikasi (MVAIC). Sampel yang digunakan adalah perusahaan jasa yang terdaftar di Bursa Efek Indonesia selama tahun 2016-2020. Total 105 observasi dari 21 perusahaan sampel selama lima tahun. Analisis yang digunakan adalah model regresi linier berganda dengan pendekatan data panel. Hasil penelitian menunjukkan bahwa: (1) Kepemilikan institusional berpengaruh negatif terhadap financial distress (2) Kepemilikan manajerial berpengaruh negatif terhadap financial distress (3) Kepemilikan asing berpengaruh negatif terhadap financial distress (4) MVAIC tidak berpengaruh terhadap financial distress.

Kata Kunci: Financial distress, Altman Z-Score, Altman III, Intellectual Capital, MVAIC, Ownership Structure, Institutional Ownership, Managerial Ownership, Foreign Ownership.

ABSTRACT

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The aim of this study is to determine the impact of corporate governance and intellectual capital on financial distress. This research uses Good Corporate Governance (GCG) with the dependent variable financial distress (Modified Altman Z-Score) and the independent variables such as; institutional ownership, managerial ownership, foreign ownership, and intellectual capital with modified value-added coefficient (MVAIC). The sample used is a service companies listed on the Indonesia Stock Exchange during 2016-2020. There is a total of 105 observation from 21 sample companies throughout five years. The analysis used is a multiple linear regression model with a panel data approach. The results of the study show that: (1) Institutional ownership has negatively affect financial distress (2) Managerial ownership has negatively affect financial distress (3) Foreign ownership has negatively affect financial distress (4) MVAIC does not affect financial distress.

Keywords: Financial distress, Altman Z-Score, Altman III, Intellectual Capital, MVAIC, Ownership Structure, Institutional Ownership, Managerial Ownership, Foreign Ownership.

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As One of the Requirements for Achieving a Degree
BACHELOR IN MANAGEMENT

Economic and Business Faculty

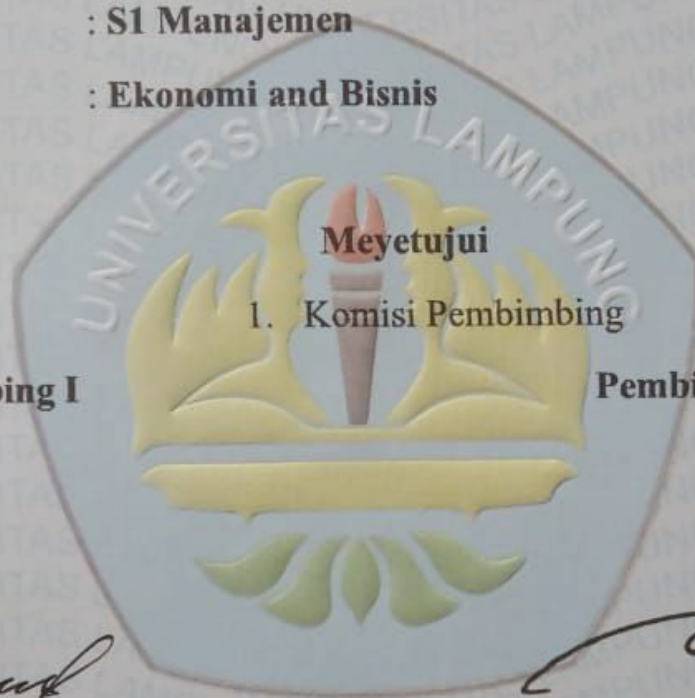**University of Lampung**

Bandar Lampung

2022

Judul Skripsi	: **ANALYSIS OF OWNERSHIP STRUCTURE AND INTELLECTUAL CAPITAL ON FINANCIAL DISTRESS: EMPIRICAL EVIDENCE FROM INDONESIA SERVICE COMPANY**

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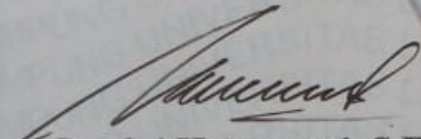
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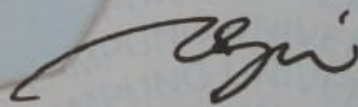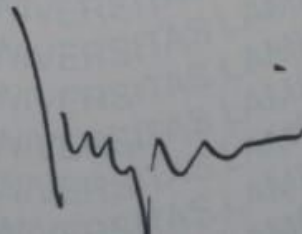Jurusan   : **S1 Manajemen**

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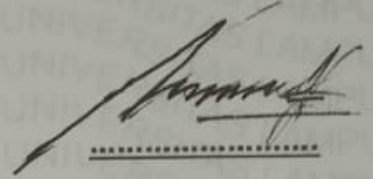NIP. 196308311989032002   NIP. 197902282005012001

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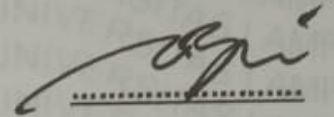
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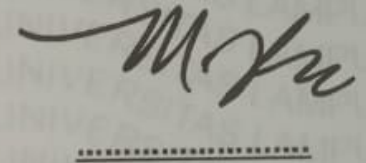
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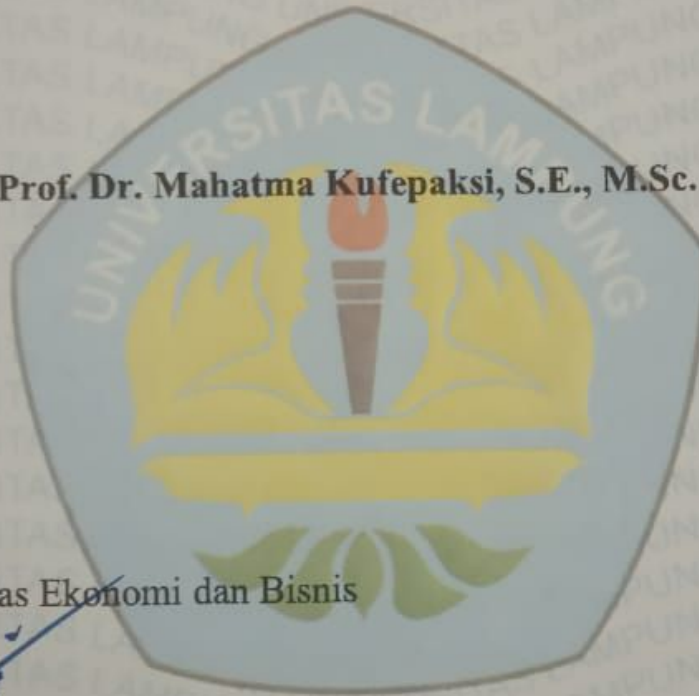
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Judul Skripsi : Analysis Of Ownership Structure And Intellectual Capital On Financial Distress: Empirical Evidence From Indonesia Service Company

Dengan ini menyatakan bahwa penelitian ini adalah hasil karya saya sendiri, dan dalam skripsi ini tidak terdapat keseluruhan atau sebagian tulisan dari orang lain yang saya ambil dengan cara menyalin atau meniru dalam bentuk rangkaian kalimat atau simbol yang menunjukan gagasan atau pendapat pemikiran dari peneliti lain tanpa pengakuan peneliti aslinya. Apabila di kemudian hari terbukti bahwa pernyataan ini tidak benar maka saya sanggup menerima hukuman atau sanksi sesuai dengan peraturan yang berlaku.

Bandar Lampung, 25 April 2022

Yang membuat pernyataan

Muhammad Nabil Risqika

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BIOGRAPHY

The researcher was born in the city of Jakarta on October 7th, 1997, into a beloved family of Muhammad Syamsi and Linda Sukmana. A researcher is the 1st son of three with two a younger sister named Nadja Hardini and Nikita Ariel Anjani. The researcher started formal school at TK Ikal Dolog and finished in 2004. The researcher started elementary school in 2004 at SDN 2 Pahoman then continued to junior high school at SMPN 16 Bandarlampung (2010-2013) and senior high school at SMAN 4 Bandarlampung (2013-2015).

In 2017, the researcher was accepted to enter the Faculty of Economic and Business, the University of Lampung, through SBMPTN. The researcher was majoring in Management and concentrating on finance and was a member of the International Class. The researcher was also listed as the Himpunan Mahasiswa Manajemen (HMJ) member and Economic English Club during the study.

The researcher was also actively open up a business in FEB Business Centre. The researcher takes a certification test in WPPE Waiver in 2019. The researcher was a part of the Short Course Program held in Aoyama Gakuin University-Japan as an exchange student in 2018. The researcher was part of student of ambassador of cicil.co.id from 2018-2021.

MOTTO

"Life Is Stock Chart It Need A Dip to Go to The Moon"

(Muhammad Nabil Risqika)

"Man Jadda Wa Jadda"

(Al-Quran)

"If You Never Fail You Never Try"

(Anon)

"Every Big Step Start from Small Step"

(Anon)

DEDICATION

Raise my gratitude to Allah for his blessing; thus, I can finish this thesis well. With a humble heart, I now present this thesis to:

MY FAMILY

My father, Muhammad Syamsi, and my mother, Linda Sukmana, have given me love all my life. To my sisters, who has always support me, for my support-system, Nabila always motivates me and for my cats' as emotional support, Fumi, Snowy, and Nero. Thank you for always believing and loving me and always be there for me through my ups and downs. I hope this thesis can be accepted as my gift to all of you.

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Praise to Allah SWT for his blessings and encouragement, hence the researcher can complete the thesis entitled **"ANALYSIS OF OWNERSHIP STRUCTURE AND INTELLECTUAL CAPITAL ON FINANCIAL DISTRESS: EMPIRICAL EVIDENCE FROM INDONESIA SERVICE COMPANY"** This undergraduate thesis is one requirement to achieve an undergraduate degree at the Faculty of Economics and Business, University of Lampung.

In writing this undergraduate thesis, the researcher noticed that this achievement was done alone and supported by various influential people who are willing to devote their time and resources to provide guidance and motivation. Therefore, the researcher would like to express her gratitude to:

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11. My full-time partner and 911 emergency call, Nabila. Thank you for everything. You are the one that always taught me to be healthier, smarter, and hard-worker. Your patience, knowledge, and sense of belonging are inspired me.

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Muhammad Nabil Risqika

TABLE OF CONTENT

BIBLIOGRAPHY

APPENDIX

TABLE LIST

FIGURE LIST

No. Figure   **Page**

APPENDIX LIST

Appendix

I. Introduction

A. Research Background

Financial distress is a condition in which a company faces financial difficulties. According to Platt and Platt (2002), financial distress is defined as the stage of decline in financial conditions that occurred before bankruptcy or liquidation. According to Wurck (1990) financial distress is a situation where operating cash flow is insufficient to meet its current obligations such as trade payables or interest costs (Alyabel, 2002). Financial distress can be started from liquidity problems (short term) as the mildest indication of financial distress, to the fact that bankruptcy is the most severe financial distress (Triwahyuningtias, 2012).

In Indonesia, companies that are unable to cope with financial distress can be delisted from the Indonesia Stock Exchange (IDX) (Pranowo, 2010). According to data published by the Indonesia Stock Exchange (IDX), 12 firms were delisted between 2018 and 2020. Companies are delisted because these companies cannot show adequate recovery, both financially and legally to the sustainability of the company as a public company or listed company (Rachmawati, 2011). A company can be categorized as being in financial distress if the company has a performance that shows negative operating profit, negative net income, negative book value of equity, and companies that have merged (Brahmana, 2007). Another phenomenon of financial distress is the number of companies that tend to experience liquidity difficulties, which is indicated by the decreasing ability of companies to fulfill their obligations to creditors (Hanifah, 2013).

Financial distress occurred in 1997 in Asia, including Indonesia (Dwijayanti, 2000). The main cause of this crisis occurred due to weak corporate governance. One of the characteristics that determine the implementation of corporate governance is the ownership structure (Fadhilah, 2013). The ownership structure can provide an overview of the company's future state (Achyani et al., 2014).

Interest in the issue of corporate governance in Indonesia began to be a concern, especially when the economic crisis that occurred in the Asian region hit

Indonesia in mid-1997 to 1998. The economic crisis not only damaged Indonesia's financial condition but also weakened the economy as a whole (Ramadhani and Lukviarman, 2009). The 1998 economic crisis was the worst crisis that Indonesia had ever experienced, resulting in inflation in the Indonesian economy. (Helena and Saifi, 2018).

Corporate governance is one of the most important aspects of good management in businesses around the world. Corporate governance is a system that regulates the relationship between the board of commissioners, directors, and management in order to create a balance in the management of the company (Oktadella, 2011 in Sastriana and Fuad, 2013).

Corporate governance is a framework that governs and oversees a firm in order to maximize shareholder value. There are four main components needed in the concept of good corporate governance (Linan, 2000 in Theresia, 2005), namely fairness, transparency, accountability, and responsibility. These four components are important because the consistent application of the principles of good corporate governance is proven to improve the quality of company performance. Company performance is always associated with management's ability to bring the company to survive as long as possible and provide optimal benefits to stakeholders. Therefore, it is natural that if there are errors in the management of the company, even those that lead to bankruptcy, the party most held accountable is active management (Deviacita and Achmad, 2012).

The financial crisis in 2008 and high-profile financial scandals in Enron, World COM, Lehman Brothers, AIG and others have again drawn academic researchers, policy makers, regulatory institutions, and investors to examine the level of corporate governance practices and its impact on firm performance and financial distress. In general, the quality of corporate governance can be evaluated on the basis of the principles of disclosure and transparency, relationship with shareholders and stakeholders, characteristics of board of directors, policies and compliance, and ownership and control structure. According to Black et al. (2006) and Hodgson et al. (2011), good corporate governance practices strengthen firm performance. At the same time, these practices protect firms against the risk of

financial distress (Parker et al., 2002; Wang and Deng, 2006; Abdullah, 2006).

The empirical literature on corporate governance is widely available in both developed and developing countries. However, limited literature is available that deals with the association between corporate governance and the likelihood of firm's financial distress. The relation between ownership structure and the likelihood of financial distress have become the core issue in the corporate governance studies now days after the financial crisis of 2008 and financial scandals of reputed companies around the world.

Nowadays, the rapid technological advances and the wide changes in environment have provided the economy with increased momentum and the increasingly growing competition has limited profit and increased the risk of financial distress. Furthermore, the owners, managers, investors, business partners and creditors are relying on corporate financial statements for evaluating the financial success of a company and its tendency toward financial distress (Technical Committee of Audit Corporation, 2002). It is well established in literature that the success of modern company depends on implementation of a good corporate governance practices. Udin (2016) explained there is common agreement among the academician and policy makers that sound corporate governance systems assist companies to improve their financial performance and pull the attention of domestic investor as well as international investors. Financial statements play a major role in financial decisions of investors and creditors about a particular institute (Accounting and Auditing Research Centre). Modern company can fulfill their corporate objectives, ensure shareholders rights and meet legitimate compliances through good corporate governance structure. Good corporate governance mobilizes the capital through the advancement of productive use of resources within the company and the economy. Moreover, it helps in pulling in low cost capital investment by improving domestic and foreign investor's confidence. Efficient corporate governance ensures the accountability of the board of directors and management (Rehman and Mangla, 2010).

The relationship between corporate governance (i.e., ownership structure) and the likelihood of Corporate financial distress is a matter of interest to all

stakeholders participating in the capital market. Ownership structure is the most cited determinant of corporate governance (Morck et al., 1988; Himmelberg et al., 1999; La Porta et al., 1999; Thomsen and Pedersen, 2000; Ramaswamy et al., 2002; Dwivedi and Jain, 2005). These studies consider that firm's ownership structure play an active role in the success or failure of company. Corporate governance has been considered as a key factor in recent global financial crisis of 2008 and Asian financial crisis of 1997. Powse (1998) and Rajan and Zingle (1997) concluded that ownership structure, ownership concentration and poor-quality corporate governance practices were the most important factors that lead Asian financial crisis.

Several studies have examined the effect of corporate governance on financial distress in many countries such as India (Narayanaswamy *et al.* (2012)), United States (Fatima *et al.* (2012)), and China (Hong-xia Li, Zong-jun Wang and Xiao-lan Deng, 2007; Dan Hu & Haiyan Zheng, 2011). Mostly, they proved that the corporate ownership of banks affects or can reduce their financial condition. Furthermore, Wang and Deng, 2006; Swain, 2009; Al-Tamimi, 2012; Shahwan, 2015; Manzaneque et al., 2016 noted that good corporate governance improves firm's financial performance and reduce the likelihood of financial distress.

Shahwan (2020) found CG efficiency and a firm's financial distress have insignificant relationship which in line with (Manzaneque et al., 2016; Udin et al., 2017). However, the finding is opposite with the studies from Nasir and Ali (2018). Thus, this contrast findings can be a research opportunity to fill the gap and prove the results in Indonesia's company.

Previous study has shown that investors agreed to pay large premium for companies with good corporate governance practices. McKinsey (2000) found that institutional investors would prefer to invest in companies with good corporate governance structure and willing to bear about 30 percent costs to their investment in emerging markets. It is also observed that companies with good corporate governance had high earning per share, market-to-book ratios and market capitalization. But conversely, many scientists and management experts believe that intangible resources are factors other than financial and physical assets that

contribute to a company's value, but they are not reflected in the financial statements. They believe that the traditional thinking which based on measuring the substantial resource and assets is presently supplanted by the value creation from intangible resource. Intellectual capital are one of the foremost vital component of organizational resources which corporate success is generally established in their intellectual capabilities.

In the modern era that has rapid economic development, a company must pay attention to corporate governance. In addition, a company must also pay attention to the management of its resources. In order to keep up with the times so that they are not eliminated from the global market, they can avoid the possibility of financial distress. According to Sawarjuwono and Kadir (2003), in order to survive, companies must change their business from labor-based business to knowledge-based business. The application of knowledge-based business aims to increase competitive advantage. In addition, they also provide value added in the products and services offered by the company (Oktari el al., 2016).

Existing studies have focused on tangible assets-based accounting ratios for firm performance such as return on assets (ROA), return on equity (ROE) – hence ignoring the importance of intangibles, i.e. intellectual capital (IC) indicators. For example, CanÄibano et al. (2000) argued that a majority of the manufacturing economies have been replaced by "knowledge driven, fast changing and technologically intensive economies", where IC has become the major driver of value creation processes for the firms. The resource-based view (RBV) of the firm, introduced by Barney et al. (2001), argues that a firm's competitive advantage should lie in the use of inimitable values, skills, knowledge and processes which can be combined under one term "Intellectual Capital". There is a major shift from physical assets based to intangibles-based companies where the firm's value is associated with intangible assets rather than tangible assets, Sullivan and Sullivan (2000). In this regard, Bontis (2001) has argued that knowledge assets have become the major driver of competitive advantage; therefore, a variety of models to measure IC efficiency are being introduced in the literature. Nonetheless, the above discussion postulates that the focus on

tangibles as compared to intangibles has been shifting toward the latter and therefore needs more research to understand its value generation mechanisms.

Intellectual capital (IC) literature has revealed the significance of IC to companies' financial and market performance and it has been shown increasing attention from both academics and practitioners over the last two decades. The world-wide recognition of IC and its popularity has confirmed it as an academic discipline (Serenko and Bontis, 2013). IC has been discerned as a key value driver of firms operating in the new economy and has become a most powerful factor for those companies in enhancing their competitive competence and achieving corporate success (Wang, 2008). The need for and benefit from IC for companies in knowledge intensive sectors, including high-technology and service industries is considerable; hence, they tend to invest substantially in IC. This fact makes high-technology and service sectors appropriate and attractive industries for IC research (Bontis, 2001; Hermans and Kauranen, 2005).

In response to the need for IC valuation, several methods to measure IC and its performance have been developed by various researchers, for example, Skandia IC Report Method (Edvinsson and Malone, 1997), Value Added Intellectual Coefficient (VAIC™) Model (Pulic, 1998, 2000), and Intangible Asset Monitor Approach (Sveiby, 1997). Among these methods, Pulic's VAIC™ is widely adopted by academics and practitioners as a method to measure IC and reflect the market value of corporations. There has been some criticism of VAIC™ and this will be enumerated below, however, irrespective of the critique, it provides a standardized and integrated measure, which allows cross-organizational or cross- national comparison and analysis (Chen et al., 2014; Phusavat et al., 2011; Young et al., 2009; Zeghal and Maaloul, 2010).

In Indonesia, research on IC in banking sector for example has been done by Ulum (2009a), Widarjo (2011), and Santoso (2011). Two last reviewed studies examined the effect of IC to company performance, while the first only measures the performance of IC based on the original formula of VAIC™. Relatively, it is also done by Basuki and Kusumawardhani (2012) and Sugiarti (2012). In a somewhat different perspective, Razafindrambinina and Kariodimedjo (2011)

analyzed the relationship of IC and corporate social responsibility disclosure. Later, Ulum (2013) proposed the performance measurement model for Islamic banking in Indonesia, which is constructed based on the VAIC™ model and labeled as iB-VAIC.

In spite of its importance, IC is not easily identified, captured, and reported in financial statements. This may be partly because of the influence from accounting standards. Based on International Accounting Standard IAS 38, intangible assets, the recognition of internally generated brands, mastheads, publishing titles, and customer lists in financial statements is prohibited (IASB, 2004). It implies that the identification and measurement of these IC items in organizations is not easily accommodated by traditional accounting practice. This results in an increasing gap between firms' financial value as shown in corporate reports and stock market value (Rahman, 2012). Intangible assets and the human resources with quality and knowledge are the most important competitive advantage for an organization and the rarest resource in today's knowledge-based economy which plays an important role in evaluating a company's financial success and its tendency toward financial distress.

Research on bankruptcy, failure and financial distress uses indicators of the company's financial performance as predictions in predicting the company's condition in the future (Iramani, 2007). This indicator is obtained from the analysis of financial ratios contained in the financial statement information published by the company. Financial statements issued by companies are one source of information about the company's financial position, performance, and changes in financial position, which is very useful to support the right decision making (Almilia, 2006). This is reinforced by the results of Altman's research (1968) showing that financial ratios can be useful to predict failure or bankruptcy of a company with a bankruptcy prediction rate of 94 percent and 95 percent correct in its research. The Altman model is known as the Z-Score, which is a score determined from the standard count of financial ratios that indicates the probability of bankruptcy of the company.

This study aims to examine the impact of corporate governance and

intellectual capital on financial distress in Indonesia's service companies in order to fill a research gap and add to the literature references. The reason for this is that management ownership mechanisms, particularly in Indonesia, are still limited. Managerial ownership can help resolve agency conflicts while also lowering company costs. The higher the degree of managerial ownership in a company, the more active the management will be in serving the interests of its shareholders. Service industries are the biggest industry in Indonesia seen from the number of companies engaged in the service sector. Majority of company in Indonesia Stock Exchange (IDX) are engage in service industry. Because of this large number the service industry is the perfect sample to study on intellect capital.

To make the analysis results explain the phenomenon more optimally and have higher statistical power, this research uses Return on Asset (ROA), Firm Size, and Leverage as control variables (Daily and Dalton 1994, Mollabashi and Sendani 2014, Shahwan 2015, and Shahwan 2020).

The research is carried out in the context of selected Indonesian company. In response to industry appropriateness, it focuses on the service company because of the high IC. In sum, the study aimed to examine empirically the relationship between Ownership Structure, firms' IC, and financial distress. Based on this phenomenon and findings of various research, this research wants to examine: **Analysis of Ownership Structure, Intellectual Capital on Financial Distress: Empirical Evidence from Indonesia Service Company.**

B. Problem Formulation

Research is conducted to obtain information that is useful in figuring and solving problems. For that reason, every research that will be carried out always came from the problem. Based on the description presented in the research background, the identification of the problems to be examined in this study are as follows:

1. Does the Ownership Structure affect the Financial Distress?
2. Does the IC affect the Financial Distress?

C. Research Purpose

Based on the subject matter above, the purpose of the research is to analyze:

1. To analyze effect of Ownership Structure on the Financial Distress.
2. To analyze effect of IC on the Financial Distress.

D. Research Benefit

The results of the research in this final work are expected to contribute to the benefits in particular including:

1. Academic Significance

   Academically, this research is expected to be useful to complement previous studies, regarding the relationship between CG Structure, IC, and Financial Distress. In addition, this research is expected to increase knowledge and be a reference or input material in similar studies in future research.

2. Practical Significance

   This research is expected to be useful and a reference for management to create more stability for the company internationally and can provide input to avoid company bankruptcy.

II. Literature Review, Conceptual Framework, and hypothesis

A.   Theoretical Basis

1.   Corporate Governance

The Forum for Corporate Governance in Indonesia (FCGI) states that corporate governance is a set of rules governing the relationship between shareholders, managers (managers) of the company, creditors, the government, and employees as well as other internal and external stakeholders related to rights and their obligations or in other words a system that controls the company. Understanding Corporate Governance in general is a system, process, and set of regulations governing relations between various interested parties, especially in the narrow sense, the relationship between shareholders, the board of commissioners, and the board of directors for the achievement of organizational goals (Triwahyuningtias, 2012). Corporate Governance is intended to regulate these relationships and prevent significant errors in corporate strategy and to ensure that errors that occur can be corrected immediately (Triwahyuningtias, 2012).

Corporate governance is the values that lead a corporate body in the conduct of its day-to-day business and how to serve concern of stakeholders. The aim of governance is responsible, honest, and transparent operation of corporate entities in the powerful concern of all stakeholders. Inyang (2017) stated that CG have a specific purpose to promote corporate transparency and accountability in the management of corporate body.
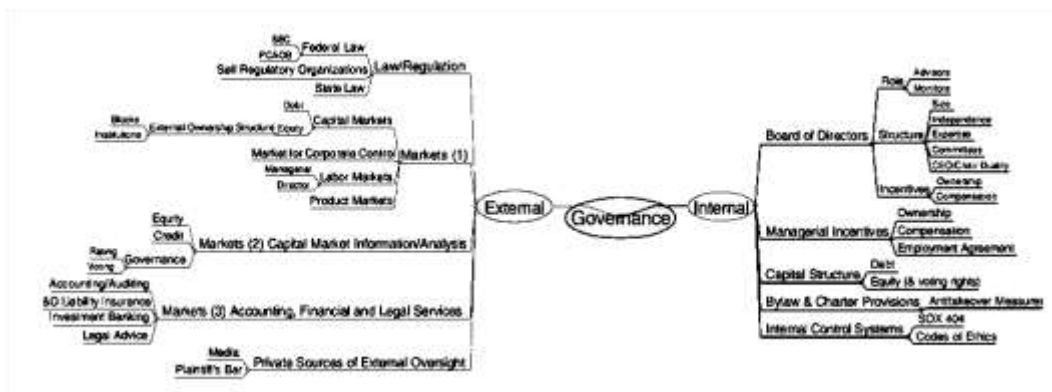

Figure 2.1 Corporate Governance Framework (Source: Gillan, 2006)

Based on the figure above, Gillan (2006) explained that there are two roles of corporate governance, such as the role of company-specific internal and external mechanisms. The role of internal mechanisms is divided into the ownership structure and control structure of the company. Meanwhile, the role of external mechanisms is divided into outside shareholder rights and market control (Hendrawaty, 2015; Lins & Warnock, 2004). The effectiveness of CG relies massively on the regulatory framework that is operational in a country. This framework depends on the corporate governance mechanism which are the processes and systems by which country company's laws and corporate governance regulations to boost shareholder value.

Based on the foregoing, it can be concluded that Corporate Governance is a system, process, and set of regulations that govern the relationship between various interested parties in order to achieve organizational goals, particularly in a narrow sense, the relationship between shareholders, the board of commissioners, and the board of directors. The Indonesian Institute for Corporate Governance (IIFCG) can achieve an independent appraisal system for implementing Good Corporate Governance (GCG) to prioritize several aspects such as commitment to corporate governance, transparency, accountability, independence, fairness, competence, leadership, and staff collaboration to ensure the implementation of GCG runs optimally. The evaluation is undertaken to offer reliable information to investors on the level of firm health. Furthermore, the CEO and the Board of Commissioners must attend more than 75% of regular directors' meetings and examine monthly reports on a regular basis. The Board of Commissioners creates an audit committee to assist it in carrying out its duties and activities. It shows that good corporate governance is a critical tool for assessing performance by ensuring accountability, transparency, and company independence.

The main concepts of GCG, which include information transparency, accountability, responsibility, independence, and justice, were implemented by the National Governance Policy Committee in 2006. These indicators are necessary for a company's long-term viability, as well as an interest in stakeholders; the principles for implementing corporate governance are as follows:

a. **Transparency**

Transparency may be defined as the disclosure of important and relevant information about a company that is advantageous to its performance, ownership, and shareholders, as well as in the decision-making process.

b. **Accountability**

Accountability is described as the clarity of functions, structure, systems, and accountability of company organs; as a result, the company's management is implementing effectively based on the distribution of power among commissioners, directors, and shareholders, which includes management monitoring, evaluation, and control to ensure that management acts in the best interests of shareholders and other interested group.

c. **Responsibility**

The corporation's managerial duty in management, management oversight, and accountability to the firm and shareholders is referred to as responsibility. The role of shareholders must be acknowledged by legislation, and firms and stakeholders must work together to create wealth, jobs, and a financially successful firm.

d. **Independence**

When a firm is managed professionally or autonomously without any conflicts of interest, each section of the firm does not control the other and outside parties cannot meddle.

According to Inyang (2017), good governance entails:

i. A system that controlled how the Board of Commissioners, Directors, the General Meeting of Shareholders, and other stakeholders interacted.

ii. A check and balance system includes a balance of authority over company control.

iii. The importance of shareholders' rights to receive accurate and timely information, as well as the corporation's responsibility to disclose all information about corporate performance, ownership, and stakeholders in an accurate, timely, and transparent manner.

The corporate governance mechanism used in this study refers to previous

research conducted by Shahab Udin et al. (2016), there are several variables such as:

a)   Institutional Ownership

Shares held by the government, insurance firms, and foreign investors are referred to as institutional ownership. It means that institutional ownership might take the form of a proportion of the institution's total outstanding shares owned by the institution. Institutional ownership's enhanced monitoring activity is due to the fact that institutional ownership's capacity to interact has expanded as a result of their considerable share ownership. The circumstance will promote more effective control if the company's institutional ownership is broad, and the greater the institution's ownership to supervise management, the better the company's performance will be.

b)   Managerial Ownership

Share ownership is controlled by management, in this case by the board of directors and commissioners. Managerial ownership is thought to be able to lessen the amount of agency issues that develop in the organization (Emrinaldi, 2007). Since of the existence of managerial ownership, corporate decisions will be made with full accountability because they will be made in the best interests of shareholders, which in this instance includes the interests of management as one of the business's components. Management's ownership will provide them more control over the company's management.

c)   Board of Commissioners' Size

The Board of Commissioners is the body in charge of reviewing the company's performance and advising or advising the director. If the director is unable to attend, the Board of Commissioners may be required to carry out the director's specified responsibilities. The board of commissioners, according to Hendrawaty (2015), is the highest internal control mechanism responsible for overseeing and offering feedback to directors, as well as ensuring that the corporation follows good corporate governance. The role of the board of commissioners is supposed to reduce conflict between the board of directors and shareholders. Therefore, the board of commissioners should oversee the board of

directors' performance so that the resulting performance is in shareholders' interests.

d)   Board of Directors' Size

A board of directors is a group of persons who are in charge of guiding a company's activities. Each board of directors can carry out its responsibilities and make decisions in accordance with the task division as well as its authority. According to Syafitri et al. (2018), a company's board of directors' functions as an agent or manager who is totally accountable for the company's operational activities. The board of directors must also submit information to the board of commissioners on a regular basis and respond to questions presented by the board of commissioners.

e)   Independent Commissioners

An independent commissioner is a member of the Board of Commissioners who has no financial, management, share ownership, or family relationships with other members of the Board of Commissioners, Board of Directors, or controlling shareholders, or any other relationships that may affect their ability to act independently (Hendrawaty, 2015). A party outside the Company having no financial, management, share ownership, or familial connections with the Board of Commissioners, Board of Directors, or controlling shareholder, or any other relationship that might impact their capacity to act independently is referred to as an independent party.

2.   Agency Theory

Agency theory expresses the relationship between the company owner (principal) and management (agent). According to Jensen and Meckling (1976), an agency relationship is a contract between the company's managers (agents) and the company's owner (principal). As a result, they defined an agency relationship as a contract in which one party (the principal) hires another party (the agent) to provide a service on their behalf. The principal will assign some decision-making authority to the agents as part of this.

Corporate managers (agents) are hired to act on behalf of shareholders (principals) and agency problems occur when managers are unable to act in the best

interests of the shareholders. The agent's and principal's tasks are regulated in the employment contract based on mutual agreement. The fact that principals and agents have different preferences or purposes is one of the most important aspects of agency theory. Conflicts arise as a result of a misalignment of interests between shareholders and profit management. The fundamental goal of shareholders is to receive profit from the company in the form of dividends. Unlike the shareholders, the company's management chooses to allocate profits rather than share them with them. This unshared profit can use as capital for the company's expansion. It is referred to as agency problems.

One of the causes of agency problems is the existence of Asymmetric Information. Asymmetric Information is information that is not balanced due to the unequal distribution of information between the principal and the agent which can result in two problems due to the principal's difficulty in monitoring and controlling the actions of the agent. (Emirzon, 2007). Agency problems occur from conflicts of interest between two parties to a contract, are almost limitless in scope. According to Jensen and Meckling (1976) these conflicts are:

a. **Moral Hazard**

Jensen and Meckling (1976) designed a moral-hazard description of agency conflicts. When it is difficult or costly for owners to witness or infer the amount of work put in by managers, moral hazard occurs. Because owners are unable to examine the 'real picture,' there is an inevitability for managers to avoid working to the terms of the established employment contract. Managers may have both the incentive and the ability to hide the "real picture" by misrepresenting the actual results given to the owners. Accounting allows for misrepresentation by allowing for the representation of results from every course of action in multiple ways.

b. **Adverse Selection**

A situation where the principal cannot know whether a decision made by the agent is really based on the information he has obtained, or occurs as negligence in their duties. Because the owner does not have access to all of the information accessible to the manager at the time of a decision, the owner cannot be certain that

the manager made the best option possible under the circumstances. Furthermore, the manager has no motive to disclose what he knows because doing so would make it easier for the principal to correctly evaluate his future activities. This is referred to as 'information expectedness.'

Thus, agency theory analyzes and seeks solutions to two problems that arise in the relationship between principals (owners/shareholders) and agents (top management). Agency theory is the root for theoretical models that influence the concept of good corporate governance in various companies. Corporate governance is required to reduce agency problems between owners and managers and to ensure that the interests of company owners and managers are aligned.

3. Intellectual Capital

Intellectual capital (IC) is one of the resources owned by the company. Intellectual capital (IC) is generally known as the gap between the market value of the company and the book value of the company's assets or its financial capital. Intellectual capital (IC) is frequently the most important factor in determining a company's profitability. The Value-Added Intellectual Capital (VAIC) measuring approach, which looks at the firm's intellectual capabilities and value, may help a firm determine its market valuation.

Intellectual capital is an intangible asset and is difficult to research or measure directly. In the study of intellectual capital, many definitions have been proposed by researchers. Klein and Prusak in Sawarjuwono (2003) we can define intellectual capital operationally as intellectual material that has been formalized, captured, and leveraged to produce a higher value asset.

Brooking (1996) stated that the IC is the term given to a combination of intangible assets of markets, intellectual property, employees, and infrastructure that enables enterprises to be able to function. This definition clearly implied that IC is not just about human resources/human capital. Human capital is only one component of IC. Table 2.1 summarizes some of the constructs and definitions of IC offered by scholars:

Table 2.1 Construct and Definition of IC

Scholar	Construct	Definition of IC
Bontis (1996)	Human capital Structural capital Relational capital	IC may provide a new resource-base for an organization to compete and win
Roos and Roos (1997)	Human capital Structural capital	IC is the sum of the "hidden" assets of the company, such as brands, trademarks and patents and also includes all assets that are not shown in the financial statements. IC is a company's the most important source of sustainable competitive advantages
Stewart (1997)	Human capital Structural capital Customer capital	IC is knowledge, information, intellectual property and experience; it is a collective brainpower or useful knowledge
Edvinsson and Malone (1997)	Human capital Structural capital Customer capital	IC refers to the difference between a company's market value and book value
Sveiby (1998)	Personnel competence internal structure External structure	IC is knowledge that can be converted into value
Bontis (1999)	Human capital Structural capital Relational capital	IC is the effective use of knowledge as opposed to information
Andriessen and Stem (2004)	Human resources Organizational resources Relational resources	IC is all intangible resources that are available to an organization, that give a relative advantage, and which in combination are able to produce future benefits
Youndt et al. (2004)	Human capital Organizational capital Social capital	IC is the sum of all knowledge that an organization is able to leverage in the process of conducting business to gain competitive advantage

Source: Ulum *et al.* (2014)

Another opinion regarding the definition of intellectual capital is stated by Stewart, (1997) IC is intellectual material – knowledge, information, intellectual property, experience – that can be put to use to create wealth. Edvinson and Sullivan (1997) in Cheng et al., (2010) assume a broader definition of intellectual capital as

knowledge that can be transformed into value.

In general, Bontis et al., (2000) identified three main constructs of IC' these are:

a.   Human Capital

HC, according to Bontis et al. (2000), reflects an organization's individual knowledge stock as represented by its workers. HC is a result of a mixture of genetics, education, experience, and a positive attitude toward life and business. This human capital will later support structural capital and capital employed. In an organization or corporation, human capital is a valuable source of information, skills, and competences. Human Capital refers to a company's collective ability to provide the optimal solution based on its human resources' mastery of knowledge and technology. If the firm is able to put its employees' expertise to good use, it will enhance its human capital.

b.   Structural Capital / Organizational Capital

Structural Capital, according to Bontis et al., (2000), encompasses all non-human knowledge storehouses in the organization. Databases, organizational charts, process manuals, strategies, procedures, and everything else that makes the company's worth larger than it's tangible worth fall into this category. Structural Capital refers to a company's ability to fulfill routine processes and structures related to employees' efforts to produce optimal intellectual performance of the company and overall business performance, such as company operational systems, manufacturing processes, organizational culture, management philosophy, and all types of intellectual property.

c.   Relational Capital / Costumer Capital

A harmonious relationship held by the firm with parties outside the firm is referred to as relational capital. Both are pleased with the company's services, its connection with the government, and the collaboration of business partners, and they come from excellent suppliers and loyal consumers. In order to increase commercial cooperation, relational capital might come from a variety of sources outside the company's surroundings. Relational capital may come from a variety of sources outside the company's environment, and it may be used to improve

commercial collaboration that benefits both parties, therefore improving the company's performance and value.

It may be stated that intellectual capital (IC) is an essential term that may offer knowledge-based resources and define intangible assets that, when employed effectively and efficiently, enable organizations to execute their goals successfully and efficiently. As a result, intellectual capital is information about a company's intangible worth that can impact the company's durability and contribute to its competitive advantage.

There were several studies to investigate the valuation and measurement method of IC. Andriessen (2004) reviewed 25 methods for the valuation and measurement of intangibles. Table 2.2 summarizes the name of IC valuation and measurement method based on Andriessen's study and additional research.

Table 2.2 IC Valuation and Measurement Methods

No.	Name of Method	Inventor/Pioneer	Year
1.	Balanced Scorecard	Robert S. Kaplan and David P. Norton	1992
2.	Calculated Intangible Value	Thomas A. Stewart David H. Luthy	1997
3.	Citation-Weighted Patent	Bronwyn H. Hall, Adam B. Jaffe, and Manuel Trajtenberg	1998
4.	Holistic Value Approach	Göran Roos, J. Roos, Nicola C. Dragonetti, and Leif Edvinsson	2001
5.	Intellectual Capital Audit	Annie Brooking	1997
6.	Intellectual Capital–Index	Göran Roos	1996
7.	Inclusive Value Methodology	Philip K. M'Pherson and Stephan Pike	1997
8.	Intangible Asset Monitor	Karl Erick Sveiby	2001

Table 2.2 Continued

9.	Intangibles Scoreboard	Baruch Lev	1997
10.	Intellectual Capital Benchmarking System	José Maria Viedma	1999
11.	Intellectual Capital Dynamic Value	Ahmed Bounfour	1999, 2001
12.	Intellectual Capital Statements	Jan Mouritsen	2001
13.	iValuing Factor	Ken Standfield	2001
14.	Market-To-Book Ratio	Thomas A. Stewart	1997
15.	Skandia Navigator	Leif Edvinsson and Michael S. Malone	1997
16.	Sullivan's Work	Patrick H. Sullivan	1998, 2000
17.	Value-Added Intellectual Coefficient (VAIC)	Ante Pulic	1997
18..	Value Chain Scoreboard/ Value Chain Blueprint	Baruch Lev	2001, 2003
19.	Extended VAIC	Jamal A. Nazari and Irene M. Herremans	2007
20.	iB-VAIC	Ihyaul Ulum	2013
21.	Modified Value-Added Intellectual Coefficient (MVAIC)	Ihyaul Ulum	2014

Source: modified from Ulum *et.al* (2014)

Among various measurement models of IC, Pulic's VAIC™ model has attracted much attention over the past two decades. Various researchers and practitioners have adopted Pulic's VAIC™ model as a measure of IC. Much of the IC research has been performed in developed countries, while latterly IC research in developing countries has received increasing interest. The research, its results and implications are elaborated below. Regarding the study of IC and its relationship with market value and firm's performance in developed economies, generally consistent empirical findings tend to be revealed. Research by Bassi and van Buren (1999) was one of the early works investigating the relationship between IC investment and financial performance. They identified a positive relationship

between IC investment and financial performance based on 500 US companies.

The VAIC™ was developed and proposed by Pulic (1998, 2000) as a measurement model of a firms' IC. It offers information on value creation efficiency of both tangible and intangible assets of a firm. He argued that this method provides two important aspects of valuation and value creation not offered by other models. First, it can be applied to unlisted firms where the market-based IC value is not available. Second, it provides a monitoring system of the efficiency of business activities carried out by employees, whether their capability is pointed toward value creation or value demolition.

VAIC has been used in studies in several countries in a variety of research designs. For example, VAIC used to measure the IC performance of a company (Kamath, 2007; Mavridis, 2004; Ulum, 2009a); the influence of VAIC on firm's performance is also widely studied (Kamal, Mat, Rahim, Husin, & Ismail, 2011; Khanqah, Khosroshahi, & Ghanavati, 2012; Shiri, Mousavi, Pourreza, & Ahmadi, 2012; Sydler, Haefliger, & Pruksa, 2013); antecedent factors of VAIC also been widely studied (Al-Musalli & Ismail, 2012; El-Bannany, 2008; Saleh, Rahman, & Hassan, 2009).

Pulic (IBEC, 2003) states that there are two key resources to create added value in the enterprise: capital employed and IC. IC consists of human capital and structural capital. Value added is the output minus the input of a firm. Output is sales revenue; input is everything that comes from outside the company. Figure 2.2 illustrates the distribution of two key resources in question by Pulic (Ulum *et.al.* 2014).
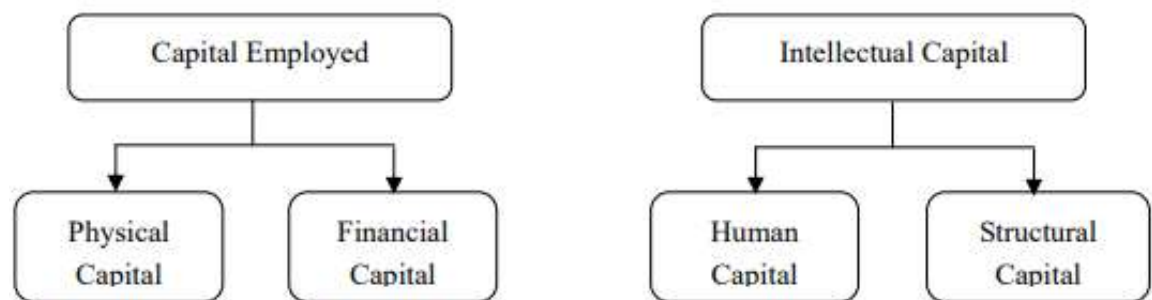

Figure 2.2 Two key resources to create added value in the enterprise

(Source: Ulum *et.al* 2014)

This model begins with the company's ability to create value added (VA). Value added is the most objective indicator to assess the success of the business and demonstrate the ability of the company in the creation of value (value creation). VA is calculated as the difference between output and input. Output (OUT) represents the revenue and includes all products and services sold in the market, while the input (IN) covers the entire load used in obtaining revenue. It is important in this model is that the burden of employees (labor expenses) are not included in IN. Because of its active role in the process of value creation, intellectual potential (which is represented by labor expenses) is not counted as an expense (cost) and are not included in the IN component. Therefore, a key aspect of the model is to treat labor Pulic as entity creation of value (value creating entity).

VA is influenced by the efficiency of the Human Capital (HC) and Structural Capital (SC). Other relationships of VA is capital employed (CE), which in this case is labeled with CEE. CEE is an indicator for the VA created by one unit of physical capital. Pulic (1998) assumed that if 1 unit of CE produced greater returns than any other company, it means the company better utilize its CE. Thus, a better utilization of CE is part of the company's IC. The next relationship is VA and HC. 'Human Capital Efficiency' (HCE) shows how much the VA can be produced with funds expended for labor. Relationship between VA and HC indicate the ability of HC to create value in the company. Consistent with the views of other writers IC, Pulic argued that the total salary and wage costs are an indicator of the company HC.

The third relationship is 'structural capital efficiency' (SCE), which shows the contribution of structural capital (SC) in value creation. SCE measured the amount of SC required to produce 1 rupiah from VA and is an indication of how successful the SC in value creation (Tan, Plowman, & Hancock, 2007). SC is not an independent measure as HC, it is dependent on value creation (Pulic, 2000c). That is, the greater the contribution of HC in value creation, the smaller the contribution of the SC in the case. Pulic further stated that SC is VA minus HC, this model has been verified through empirical research on traditional industrial sectors (Pulic, 2000b).

The advantage of VAIC™ method is because the required data is relatively easily obtained from various sources and types of companies. The data required to calculate the various ratios are financial figures that are generally available standard of corporate financial statements (Tan et al., 2007). The other alternative of IC measurements only limited on financial indicators and unique non-financial perspective that only to supplement a company's individual profile. These indicators, especially indicators of non-financial, are not available or not recorded by other companies. Consequently, the ability to implement the measurements consistently with a large and diversified sample is limited (Firer & Williams, 2003).

Ulum *et.al* (2014) suggested a method known as Modified Value-Added Intellectual Coefficient or known as M-VAIC^{TM}. M-VAIC is a comprehensive measure of IC based on VAIC™ model. It is started with calculating VA by using the formula proposed by Pulic (2000a):

$$VA = OP + EC + D + A \text{ (Ulum } et.al,, \text{ 2014)}$$

Where OP is operating profit, EC is employee costs, D is depreciation, and A is amortisation. According to Pulic (2004), VAIC™ is the sum of intellectual capital efficiency (ICE) and capital employed efficiency (CEE), while ICE is HCE (human capital efficiency) plus SCE (structural capital efficiency). The formula to calculate HCE is as follows:

$$HCE = VA/HC \text{ (Pulic, 2000a)}$$
$$SCE = SC/VA \text{ (Pulic, 2000a)}$$

Where:

HCE = Human Capital Efficiency: ratio of VA to HC.

VA = value added

HC = Human Capital: total salaries and wages.

SCE = Structural Capital Efficiency: ratio of SC to VA

SC = Structural Capital: VA-HC

While in this M-VAIC, Ulum *et.al* (2014) add the third component of IC, i.e. RCE (relational capital efficiency). RCE illustrate the efficiency of investment in

relational aspect. In this context, relational capital is proxied by marketing costs.

$$RCE = RC/VA \text{ (Ulum } et.al \text{ 2014)}$$

Where:

RCE = Relational Capital Efficiency: ratio of RC to VA

RC = Relational Capital: marketing costs (Nazari & Herremans, 2007)

Pulic (2004) argued that to have a broad overview of the efficiency of all resources, it is important to take the financial capital and physical capital (capital employed) as one of the considerations. The efficiency of capital employed calculated by:

$$CEE = VA/CE \text{ (Pulic, 2000a)}$$

Where:

CEE = Capital Employed Efficiency: ratio of VA to CE

CE = Capital Employed: book value of total assets.

Thus, the complete formula of M-VAIC is:

$$ICE = HCE + SCE + RCE$$

$$M\text{-}VAIC = ICE + CEE \text{ or}$$

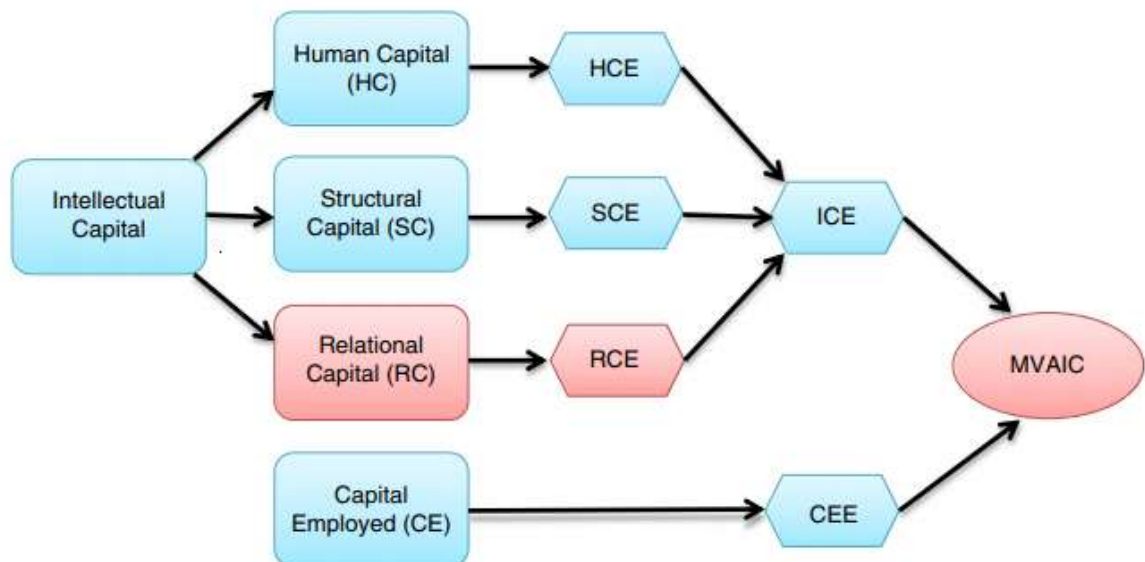$$M\text{-}VAIC = HCE + SCE + RCE + CEE$$

Figure 2.3 The Formulation of M-VAIC (Ulum *et al*., 2014)

4.   Financial Distress

According to Yessie (2011) financial difficulties can be interpreted as a failure to cover the company's operating costs, the level of profit is smaller than expenses, projections are not met, failed to meet obligations, negative net worth, and others that can cause companies to go bankrupt. Emery and Finnerty (1997) stated that a company is said to experience financial distress, that is, when the company does not have the ability to meet the schedule of repayment of debt to creditors when due. With the inability of the company to be able to meet its financial obligations on an ongoing basis can make the company go bankrupt.

According to Platt and Platt (2002) Financial distress is defined as the stage of decline in financial conditions that occurred before bankruptcy or liquidation. Financial distress is reflected in the inability or unavailability of funds to pay obligations that are due. There are differences in interpreting financial difficulties in previous research studies and this difference depends on how to measure it (Wardhani, 2006).

Bankruptcy prediction models are typically built by using accounting ratios from the financial statements (Altman 1968; Ohlson 1980; Altman and Sabato 2007). The classic study by Altman (1968) uses discriminant analysis and financial ratios to predict the insolvency. Specifically, he uses ratios like working capital on total assets, retained earnings on total assets, EBIT on total assets, market value of equity on total debt, sales on total assets. Ohlson (1980) introduces the use of logistic regression and finds that high debt, low liquidity and low profitability increase the probability of default.

Altman et al. (2010) explore bankruptcy prediction in a sample of small and medium size firms and examine the role of several qualitative and non-financial factors, including the firm age, the firm size and the auditor's opinion. They find that older and larger firms have lower probability of default. Older firms have gone through learning process for longer periods of time, increasing the probabilities of survival and growth. This might suggest that intellectual capital resources are

higher in mature firms and can contribute to reduce the likelihood of default (Pena, 2002).

a. Z-Score Model Bankruptcy Analysis

"Bankruptcy is a state in which a corporation is no longer able to meet its commitments," Syahyunan (2015). This is a condition that does not always manifest itself in the workplace. If the financial statements are carefully analyzed in a certain way, there are early indications of the company that can usually be recognized earlier. Financial ratios can be used to determine a company's financial health.

b. Z-score

Edward I Altman, Ph.D., a professor and financial economist at New York University's Stern School of Business, created the Z-Score in 1968. For a sample of firms who file for bankruptcy during the next 12 months, the Altman model predicts with 95% accuracy. The sample of firms utilized in future research is larger, and they are examined under varied economic situations, with the Z-Score accuracy level maintaining in the range of 82 percent to 85 percent.

The modified Altman Z" Score model established by Altman et al. (1995) – one of the most well-known distress prediction models – was used in this study to estimate the risk of company financial hardship. The proposed model is appropriate for both nonmanufacturing and manufacturing businesses, as well as businesses in emerging markets.

5. Previous Research

References from past researchers should be taken into account when doing research. The following table summarizes previous studies in a quick-recap format:

Table 2.3 Previous Research

Reesearcher	Research Variable	Object	Research Method	Result
Shahwan *et al.* (2020)	Independent Variable: Corporate Governance • Aggregate Corporate Governance Index	51 firms traded in the Egyptian Exchange from 2014 to 2016	• Malmquist index • logistic regression with panel data	The efficiency score of CG practices had no impact on the likelihood of financial distress. However, the efficiency score of IC negatively affected the probability of financial

Table2.3 Continued

	(ACGINX) Intellectual Capital • Value Added Intellectual Capital (VAIC) Dependant Variable: Financial Distress • Modified Altman Z-Score			distress.
Widhiadnyana *et al*. (2018)	Independent Variable Ownership Structure • Managerial Ownership • Institutional Ownership • Board of Commissioner Size Intellectual Capital • Value Added Intellectual Capital Dependent Variable Financial Distress • Altman Z-Score	Manufacturing companies listed on Indonesian Stock Exchange (IDX) on 2014-2016	• Multinomial Logistic Regression	1) Managerial ownership, institutional ownership, and intellectual capital has a negative effect on financial distress. 2) Proportion of independent commissioner has a positive effect on financial distress.
Chin-Chung Wei *et al.* (2017)	Independent Variable Ownership Structure • Managerial Ownership • Institutional Ownership • Board of Director Size Dependent Variable Financial Distress • Altman Z-Score	Non-financial industries company listed in Taiwan stock exchange from 2006 to 2014.	• Descriptive Statistic • Coefficient Analysis • Logistic Regression	1) Managerial share ownership has positive relationship with the probability of a financial distress warning happening 2) Shareholding ratio of institutional investors and the size of the board of directors have a negative relationship with the probability of the same warning happening.
Udin et al. (2017)	Independent Variable: Corporate Governance • Institutional Ownership	146 Pakistani public limited companies listed at the Karachi Stock Exchange over	• dynamic Generalized Method of Moments (GMM) • Panel Logistic	1) Insignificant impact of ownership structure on firm's likelihood of financial distress based on the

Table 2.3 Continued

		the period of 2003-2012.	Regression (PLR)	dynamic GMM method.
	• Insider Ownership • Foreign Ownership • Government Ownership Dependent Variable: Financial Distress • AltmanZ-Score			2) PLR results indicate that foreign shareholdings have significant negative association with firm's likelihood of financial distress in the case of Pakistan

B. The Conceptual Framework

A few studies have tried to link CG structure in general and IC in particular with Financial Distress, the novelty of this study lies in its contribution to the literature by focusing on IC as a financial distress measure. Previous research has tried to examine the effect of corporate governance on financial distress. Corporate governance uses several proxies such as; board size, board structure, institutional ownership, managerial ownership, audit committee, and many others. Whereas, financial distress use Altman Z-Score as a dominant proxy (Ud-din et al., 2020; Widhiadnyana*et al.* 2018; Chin-Chung Wei *et al,* Udin *et al.* 2017).

Shahwan et al (2020) explained that increase in IC by using VAIC as proxy negatively affecting financial distress. Widhiadnyana *et al.* (2018) revealed that corporate governance does matter significantly for the financial distress. Specifically, managerial ownership and institutional ownership has a negative effect on the financial distress, while proportion of independent commissioner affect positively.

Ud-din (2020) stated that board independent has an impact on credit risk where the higher the proportion on board independent hence the lower financial distress, the board size has an impact credit risk where the higher board size and hence the lower financial distress. Generally, board size, number of independent directors has a negative impact on financial distress.

Besides, there are some different findings related to Managerial Ownership as a mechanism. Chin-Chung Wei *et al.* (2017) found that managerial ownership has positive effect on financial distress. Whereas, Widhiadnyana *et al.* (2018) found that managerial ownership has negative effect on financial distress. Thus, this

contrast findings can be a research opportunity to fill the gap and prove the results in Indonesia's company. Further, in the instance of Chinese multinational enterprises, He et al. (2016) stated that state ownership and foreign ownership play a critical role in improving financial performance (MNCs). It is supported by Udin (2017) found that the foreign ownership has lower financial distress level in the case of Pakistan.

Ownership structure can be an essential role to reduce the risk of financial distress especially Board size and Board independent. Several studies found that ownership structure can affect financial distress. Higher number of boards possess lower bankruptcy possibility, particularly in terms of a financial distress. It indicates that allocating more board director and intellectual capital in company can reduce a company financial distress.

The current research was carried out in the context of selected Indonesian company. In response to industry appropriateness for Intellectual Capital, it focuses on the service company. In sum, the study aimed to explore and compare Ownership Structure and IC performance of listed companies operating in the service industries in Indonesia as well as examine empirically the relationship between firms' Ownership Structure, IC, and Financial Distress. The data were drawn from financial statements and annual reports of these firms.
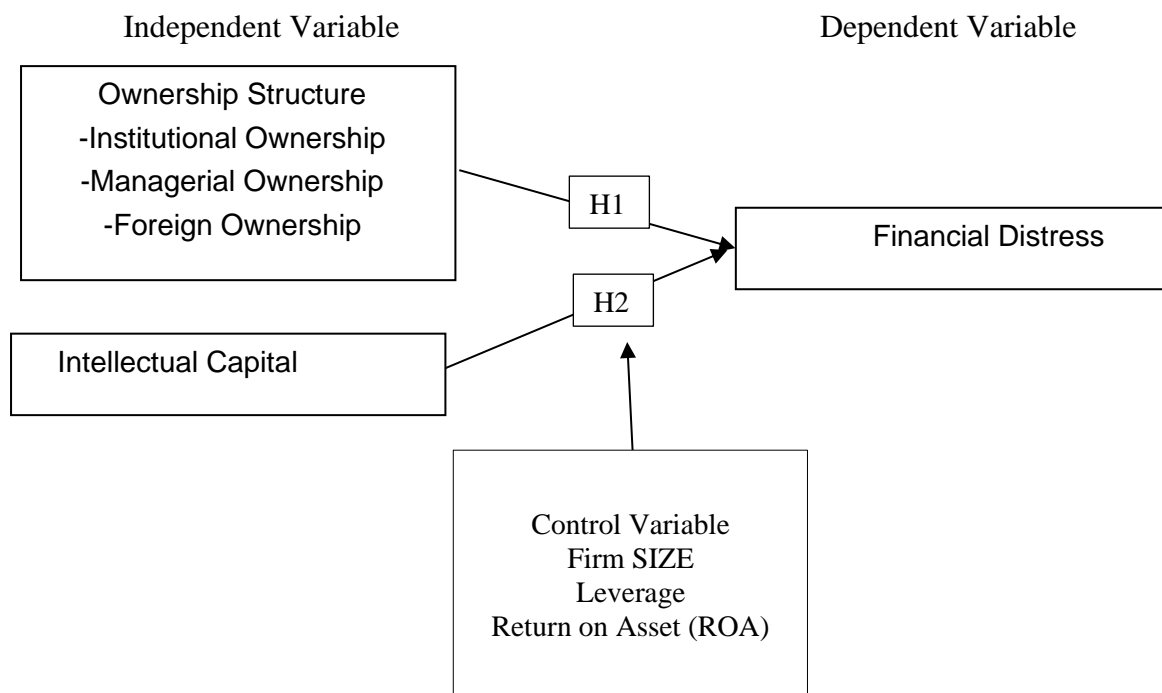

Figure 2.4 The Conceptual Framework

C. Hypothesis Development

The hypothesis is a provisional conjecture or a temporary answer to the research problem which requires data to test the alleged truth. It can be said that the hypothesis is a statement that may occur between two variables where the possibility occurs based on theory.

1. The Effect of Ownership Structure on Financial Distress

Heard and Sherman, 1987; McConnell and Servaes, 1990; Pound, 1998; Clay,2001; Yuan et al., 2008; Donker et al., 2009; Uwuigbe and Olusanmi, 2012; Alfaraih et al., 2012 analyzed the effect of institutional ownership on firm financial performance and reported mixed evidence. For example, Pound (1998) argued that institutional investors have better knowledge and can monitor management activities at lower cost than individual small shareholders. Donker et al. (2009) argued that institutional investors focused long-term performance rather than short-term as management. Therefore, the institutional investors play active role to monitor management activities, which improves firm financial performance and reduces the likelihood of default. On the other hand, Daily and Dalton (1994), Chung and Kim (2006) and Magena and Chamisa (2008) found negative relationship between institutional ownership and likelihood of financial distress.

H1a: Institutional Ownership negatively affects financial distress (H1a)

Francis and Smith, 1995; Holthausen et al., 1995; Palia and Lichtenberg, 1999) examined the impact of insiders' ownership on the firm financial performance and likelihood of financial distress. These studies concluded that insider ownership has significant influence on firm financial performance and likelihood of financial distress. A large number of studies, inter alia, Wang and Dang (2006), Li et al. (2007), Fich and Slezak (2008), Elloumi and Gueyire (2001), Donker et al. (2009), Zeitum (2009) and Al-Tamimi (2012) showed negative relationship between insider's ownership (directors/managers) and likelihood of financial distress.

H1b: Managerial Ownership negatively affects financial distress (H1b)

Foreign shareholders are more profit oriented and having more incentives to

monitor the company's management. For example, Rohani et al. (2013) found negative relationship between foreign ownership and likelihood of financial distress. Yoo and Koh (2014) find that foreign ownership decreases tax avoidance in Korean context as compared to family owned business. Foreign investors will carefully monitor firm behavior due to prospect opportunism by management lead to decease financial distress. They concluded that the monitoring function of foreign investors enhances firm performance and complements the relatively weak monitoring by domestic institutions.

H1c: Foreign Ownership negatively affects financial distress (H1c)

2. The effect of Intellectual Capital on financial distress

Firms can combine intellectual capital with tangible resources to obtain long-term sustainable competitive advantage (Zambon, 2003). I.e. firms with innovative knowledge can register patents creating entry barriers; firms with relational capital can deliver customized quality services (as intangible component of the product), ensuring differentiation advantage (Grant, 1991). The barrier to imitation of resources, especially those intangibles, creates the premise for long-term superior performance and resilience to environmental changes. Prior research finds empirical evidence that intellectual capital is associated to superior financial performance (Riahi-Belkaoui (2003; Massaro, 2015; Dženopoljac et al., 2016). Studies suggest that intellectual capital is an indicator of future financial performance and has the potential to ensure greater long-term financial health. If such firms are awarded with long-term financial stability, they would be in a better position to create long-term value and should display lower probabilities of bankruptcy.

H2: MVAIC negatively affects financial distress (H2)

III Research Methodology

A. Type and Data Source

Panel data is a combination of time series data and cross-section. Time series data is data arranged in chronological order such as; daily, monthly, quarterly or annual data. In contrast, cross-section data is data collected at the same time from several regions, companies or individuals. Merging the two types of data can be seen that the variable consists of several company units (cross-section) but in various periods (time series). The data source in this study is secondary data. Secondary data is data that has been previously processed by other parties and published to the public through official institutions that have been determined. In this research, the data comes from the annual financial statements of each services industries company in Indonesia at the end of each year during the research period from 2016 to 2020.

B. Data Collection Method

The data collection method is indirect, by using the archive data contained on the Indonesia Stock Exchange (IDX) website. The technique of collecting the data used in the present study is through documentation study, which is conducted by searching, collecting, recording, and review data on things variables in the form of notes, documents, transcripts, books, newspapers, magazine, journals, websites and etc. It is intended to collect the overall data needed to answer the arch problem and enrich the literature to support the quantitative data obtained.

C. Population and Sample

The population of this research are companies in the services industries which were listed on the Indonesia Stock Exchange in 2016-2020. The selection of research samples is referring on non-probability sampling method, precisely the purposive sampling method. The criteria used to select samples in this study are as follows:

1. Sample companies listed on the Indonesia Stock Exchange in 2016-2020 in the services industries that publishes annual reports in a row.

2. Companies that go public before 2018 or not get suspend by IDX

3. The sample company has financial statements ending December 31.

4. Company have negative income for 3 years or more.

Table 3.1 Sample Characteristic

No	Sample Characteristic	Total Company
1	Service industries company in IDX	566
2	Total Company go public after 2018 or got suspended by IDX	(199)
3	Company have negative income less than 3 years.	(344)
2	Observation Total (2016-2020)	21 x 5
	Total Observation	105

Table 3.2 Sample List

No	Issuer	Company Name
1	AIMS	Akbar Indomakmur Stimec Tbk.
2	AKKU	PT Anugrah Kagum Karya Utama Tbk
3	ARII	Atlas Resource Tbk
4	BBRM	Pelayaran Nasional Bina Buana Raya Tbk
5	BIKA	PT Binakarya Jaya Abadi Tbk
6	BKDP	Bukit Darmo Property Tbk
7	CMPP	PT Airasia Indonesia Tbk
8	ESTI	Ever Shine Textile Industry Tbk

Table 3.2 Continued		Eterindo Wahanatama Tbk
10	FORU	Fortune Indonesia Tbk
11	FREN	PT Smartfren Telecom Tbk
12	GDYR	Goodyear Indonesia Tbk
13	GIAA	Garuda Indonesia (persero) Tbk
14	HOTL	Saraswati Griya Lestari Tbk
15	IATA	PT Indonesia Transport & Infrastructure Tbk
16	IMAS	Indomobil Sukses International Tbk
17	LEAD	PT Logindon Samudramakmur Tbk
18	MTSM	Metro Realty Tbk
19	SDMU	Sidomulyo Selaras Tbk
20	SRAJ	Sejahteraraya Anugrahjaya Tbk
21	TAXI	Express Trasindo Utama Tbk

D. Research Variable

1. Independent Variable

This research using Corporate Governance and Intellectual Capital as an Independent variable with Institutional Ownership, Managerial Ownership, Foreign Ownership, Government Ownership and Modified Value-Added Intellectual Coefficient as variables.

a. Ownership Structure

Henry (2010) pointed out that ownership structure is considered as an external mitigating attribute in the overall corporate governance of a firm. The relationship between ownership structure and firm performance can be influenced by the separation of ownership from control and by agency costs (Berle and Mean, 1932; Jensen and Meckling, 1976). Due to inappropriate incentives and insufficient monitoring, managers exercise their discretions to pursue strategies that benefit

themselves at the expense of shareholders. Consequently, agency conflicts arise. Therefore, there exists a negative relationship between conflicts and firm performance which, in turn, increases the probability of financial distress. The present study uses four proxies to measure the ownership structure: institutional ownership (INSO), managerial ownership (MO), and foreign ownership (FO). The calculation summarize as follows:

Source: Sadjiarto *et.al* (2019)

$$Institutional\ Ownership = \frac{number\ of\ institutional\ shares}{number\ of\ shares}\ x\ 100\%$$

$$Managerial\ Ownership = \frac{number\ of\ managerial\ shares}{number\ of\ shares}\ x\ 100\%$$

$$Foreign\ Ownership = \frac{number\ of\ foreign\ shares}{number\ of\ shares}\ x\ 100\%$$

b. Intellectual Capital

The data for measuring Intellectual Capital can be found on company financial report. Following Nimtrakoon (2015), the study used modified Pulic's VAIC™ by adding an extra component based on the work of Ulum et al. (2014). The calculation of MVAIC is summarized as follows:

Source: Nimtrakoon *et.al* (2015)

$$VA = OUT–IN$$

$$CEE = VA/CE$$

$$HCE = VA/HC$$

$$SCE = SC/VA$$

$$RCE = RC/VA$$

$$ICE = HCE+SCE+RCE$$

$$MVAIC = ICE+CEE$$

Where VA is the value added of a particular firm; OUT the total revenues; IN the total expenses excluding employee expenditures (i.e. recruiting cost, salary, payroll taxes, incentives, benefit, training and development, etc.) ; CEE the capital employed efficiency; CE the capital employed both physical and financial capital, measured by total assets – intangible assets; HCE the human capital efficiency; HC the human capital, measured by total employee expenditures; SCE the structural capital efficiency; SC the structural capital, measured by VA–HC; RC the relational capital, measured by marketing expenses; RCE the relational capital efficiency; ICE the intellectual capital efficiency; and MVAIC the modified value added intellectual coefficient.

2. Dependent Variable

This research using Financial Distress as Dependent variable with altman Z-score as a proxy

Z-score (Altman II)

To assess the likelihood of corporate financial distress, the modified Altman Z Score model proposed by Altman et al. (1995) – as one of the best-known distress prediction models – was employed in the present study. The proposed model is suitable for both nonmanufacturing and industrial companies and also for companies operating in emerging countries (Shahwan, 2020). In Indonesia a number of studies have been carried out using Altman III. Ramadhani (2020) used Altman III in telecommunication sub sector company that listed on IDX and found that Altman III have 100% accuracy in Indonesia. On the other side Alfiyanti (2020) using Food & Beverage sub sector highest accuracy are 86.16%. In this paper, the proxy to assess the firm financial distress condition are Altman II in response to the several companies that have just go public or listing in Indonesia Stock Exchange during the research period. Following Altman and Hotchkiss (2006), the Altman Z-Score can be used for assessing a firm's financial distress, in that increasing the value of Z reduces the risk of financial distress. The value of the Z-Score can be mathematically estimated as follows (Altman and Hotchkiss, 2006):

$$Z - score = 0.717X_1 + 0.847X_2 + 3.107X_3 + 0.420X_4 + 0.998X_5$$

x1 = working capital/total assets. This variable reflects the ability and scale characteristics of a company's property and assets. If the working capital of a company continuously decreases, then it usually indicates the company has cash flow problems or has a crisis of repaying debt in the near term.

x2 = retained earnings/total assets. This reflects the accumulation of company profits. When there is more income, there is a greater surplus ability for the company to pay interest on its shares.

x3 = earnings before interest and taxes/total assets

x4 = market value equity/book value of total debt

x5= sales/total asset.

Following Altman (2005), Altman and Hotchkiss (2006), and Shahwan (2020) a company with a Z-Score of over 2.9 has a low risk of bankruptcy (a healthy firm), whereas a Z-Score below 1.23 represents a firm already within the area of insolvency (an unhealthy firm). A Z-Score between 1.23 and 2.9 indicates potential bankruptcy or a gray area.

3. Control Variable

Following Shahwan (2020), the control variables used in the present study, a certain firm-specific variable, namely, firm size, leverage, and return on assets (ROA). Previous studies indicate that firm size is one of the main determinants influencing the firm's financial distress According to Dong et al. (2014) and Chakraborty et al. (2018), large firms tend to be less risky due to their ability to diversify risks. Moreover, Chung et al. (2010) argued that firm size also affects governance quality because of investor interests and scrutiny. As a result, the corporate size is expected to be negatively associated with corporate financial distress risk. The leverage was defined as the ratio of total debt to total assets. Following Shahwan (2015), in an emerging market like Indonesia where the capital structure of Indonesian firms heavily depends on debt financing, it is expected in the current study that leverage is positively associated with the corporate financial distress risk. The ROA was calculated as the ratio of net income to total assets. Based on the pecking order theory, Myers and Majluf (1984) argued that highly profitable firms heavily depend on their internally

generated cash flows rather than on debt as a source of funds. Thus, it is expected that ROA is negatively associated with the firm's risks.

Source: Shahwan and Habib (2020)

1. Size

$$SIZE = Ln\ (Total\ Assets)$$

2. Leverage

$$Lev = \frac{Total\ Debt}{Total\ Assets}$$

3. Return on Assets

$$ROA = \frac{Percentage\ of\ net\ profit\ after\ tax}{Total\ Assets}$$

E. Data Analysis Method

1. Descriptive Statistic

Descriptive statistics describe a variable as seen from the values, standard deviations, maximum, and minimum values (Agus, 2013). Descriptive technique intended in this study is to interpret the average value, maximum, and minimum value of each research variable.

2. Model Estimation of Panel Data Regression

In estimating the regression model with panel data, three approaches are often used, such as; Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM) (Prasanti et al., 2015; Wibowo, 2019).

a. Standard Effect Model (CEM)

CEM is the most straightforward technique for estimating the panel data regression model. This approach ignores the heterogeneity between cross units' section or over time. It is assumed that the data behavior is between cross-section units the same over time. The Ordinary Least Square (OLS) method can be carried

out in estimating the standard effect model. Common effect models can be stated as follows;

$$y_{it} = \alpha + x_{it}\,\beta + \mu_{it} \;; i = 1, 2, \ldots, N \;; t = 1, 2, \ldots, T$$

b. **Fixed Effect Model (FEM)**

According to Gujarati (2003), one way to pay attention to the heterogeneity of unit cross-sections in the panel data regression model is to allow different intercept values for each cross-section unit but still assumes a constant slope. The fixed-effect model can be stated as follows:

$$y_{it} = \alpha_i + x_{it}\,\beta + \mu_{it} \;; i = 1, 2, \ldots, N \;; t = 1, 2, \ldots, T$$

There are two approaches to fixed-effect models, namely fixed-effect models within groups by eliminating the unit cross-section effect and the least square fixed-effect model dummy variable (LSDV) with the use of dummy variables (Gujarati, 2012).

c. **Random Effect Model (REM)**

The Random Effect Model (REM) approach assumes that each unit is a cross-section with different intercepts.

$$y_{it} = \alpha_0 + x_{it}\,\beta + w_{it} \;; i = 1, 2, \ldots, N \;; t = 1, 2, \ldots, T$$

Estimate The random effect model was performed using the Generalized Least Square (GLS) method.

3. **Model Selection**

The best model selection in panel data regression is mostly made by statistical tests, including **Chow Test, Lagrange Test,** and **Hausman Test**.

a. **Chow Test**

The Chow test is used to compare the fixed effects model with the typical effects model. The statistical formula for the Hausman test according is:

$$F = (RSS1 - RSS2)/n - 1 \; RSS2/(nT - n - k) \sim F(\alpha;n-1;nT-n-k)$$

where n = number of individuals; T = observation period; k = number of parameters in the fixed model effects; $RSS1$ is the residual sum of squares common effects model, while RSS2 is the residual sum of squares model fixed effects. If the calculated F statistical value is greater than the F table, then the null hypothesis will be rejected so that it can be concluded that the fixed effects model is better used than the common effects model.

b. Lagrange Multiplier Test

Lagrange Multiplier (LM) test is used for testing based random effects at the residual value of the standard effect model. The amount of the LM test statistic can be calculated using the following formula:

$$LM = \frac{KT}{2(T-1)} \left[\frac{\sum_{i=1}^{K}[\sum_{t=1}^{T} e_{it}]^2}{\sum_{i=1}^{K} \sum_{t=1}^{T} e_{it}^2} - 1 \right]^{\iota} \sim \chi_{\alpha,1}^2$$

K is the sum of sectors, T is the sum of periods, and it is the residual model common effects. When the value of LM>, then the selected model is the model Random Effect Model (REM).

c. Hausman Test

Hausman-test aims to choose the best model among the fixed effects model with a random-effects model with formula;

$$W = (\beta FEM - \beta REM)'[var(\beta FEM - \beta REM)] - 1(\beta FEM - \beta REM) \sim \chi^2 (k)$$

Where is βFEM is the vector of slope estimation in the fixed effects model and βREM is a vector estimated slope in the random-effects model. The Hausman test's null hypothesis is a model of Random Effects is better than Fixed Effects models. If the output is obtained with a p-value smaller than the five percent significance level, the null hypothesis will be rejected, and it is concluded that the fixed effects

model is better than the random model effects. Conversely, if the output obtained is with a p-value more significant than with a significance level of five percent, it can be said that the random-effects model is better from fixed effects.

4. Classical Assumption Test

a. Normality test

This test aims to determine whether the distribution in the data has followed or approached the normal distribution. In testing a hypothesis, the data must be normally distributed. There are two ways to test normality in Eviews10 software, namely with a histogram and the Jarque-Bera test. There are two ways to see whether data is normally distributed. First, if the Jarque-Bera value <2, then the data is normally distributed. Second, if the probability> value is 5%, then the information is normally distributed.

b. Multi-collinearity Test

Multi-collinearity test aims to test whether the regression model found a correlation between independent variables. A good regression model should not occur in the relationship between independent variables. If the independent variables are correlated with each other, then these variables are not orthogonal. Orthogonal variables are independent variables whose correlation values among equal variables are equal to zero. The use of bivariate correlation can be done to detect multi-collinearity between independent variables with a tolerance standard of 0.8. If the correlation shows a value smaller than 0.8, then it is assumed that these variables do not have a significant collinearity problem (Agus, 2013).

c. Heteroscedasticity Test

Heteroscedasticity test aims to test whether the regression model occurs when the variance inequality from the residuals of one observation to another is fixed, then it is called homoscedasticity and if it is different it is called heteroscedasticity (Ghozali, 2016:138). A good regression model is one with homoscedasticity or no heteroscedasticity. To detect the presence or absence of heteroscedasticity in this

study is to use the glejser test. The basis for making decisions to determine whether there is a heteroscedasticity problem is as follows:

1. If the Probability Chi-square value is less than 0.05, then Ho is accepted and Ha is rejected, meaning that there is a heteroscedasticity problem.

2. If the Probability Chi-square value is greater than 0.05, then Ho is rejected and Ha is accepted, meaning that there is no heteroscedasticity problem.

d. Autocorrelation Test

The autocorrelation test aims to test whether, in the linear regression model, there is a correlation between the fault of the intruder in the t period and the disturbance error in the t-1 period. If there is a correlation, then there is a problem called autocorrelation. Autocorrelation arises because consecutive observations all the time are related to each other. This problem occurs because residuals are not free from one view to another. This is often found in time series data because disturbances in an individual/group tend to affect disturbances in the same individual/group in the next period. In cross section data, the problem of autocorrelation is relatively rare because disturbances indifferent observations originate from different individuals/groups. A good regression model is a regression that is free from autocorrelation. The Durbin Watson test is a way to detect autocorrelations, where the multiple linear regression model is independent of autocorrelation if the calculated Durbin Watson value is located in an area without positive and negative autocorrelation. The autocorrelation testing of this study used the DurbinWatson test (DW test) (Agus, 2013).

Table 3.3 Durbin-Watson Test

Zero Hypothesis	**Decision**	**If**
There is no positive autocorrelation	Rejected	$0 < d < dl$
There is no positive autocorrelation	No Decision	$Dl < d < du$

Table 3.3 Continued

There is no negative autocorrelation	Rejected	4-dl < d < 4
There is no negative autocorrelation	No Decision	4-du ≤ d ≤ 4-dl
There is no positive or negative autocorrelation	Not Rejected	Du < d < 4-du

5. Multiple Linear Regression

Multiple regression analysis is a study of the dependent variable's dependence with one or more independent variables, intending to estimate and predict the population mean or average value of the dependent variable based on the known value of the independent variable. In regression analysis, measuring the strength of the relationship between two or more variables shows the direction of the relationship between the dependent variable and the independent variable. The regression analysis results are in the form of regression coefficients for each independent variable. This coefficient is obtained by predicting the value of the dependent variable with an equation. The regression equation in this study is;

Model one is a model used to test the effect of Institutional Ownership, Managerial Ownership, Foreign Ownership, and Modified Value-Added Intellectual Coefficient on financial distress with control variables.

$$Z = \alpha + \beta_1 IO + \beta_2 MO + \beta_3 FO + \beta_4 MVAIC + \beta_5 SIZE + \beta_6 Lev + \beta_7 ROA + \alpha_i + \alpha_t + \varepsilon_{i,t}$$

Explanation

Z	= Financial Distress (Z-Score)
α	= Constanta
β_{1-7}	= Regression Coefficient
IO	= Institutional Ownership

MO	= Managerial Ownership
FO	= Foreign Ownership
MVAIC	= Modified Value-Added Intellectual Coefficient
SIZE	= Firm Size
Lev	= Leverage (Debt to Assets Ratio)
ROA	= Return on Assets
α_i	= Firm effect
α_t	= Time effect
$\varepsilon_{i,t}$	= Error

6. Hypothesis Testing

a. t-test

If the hypothesis test is done using the t-test. This t-test was implied to see the effect of each independent variable on the dependent variable (Agus, 2013). This test was implied by comparing the significance of t- arithmetic with the following conditions:

i. If the p-value > α, H0 is accepted and Ha is rejected. It indicates that independent variable has no effect on dependent variable.

ii. If the p-value < α, H0 is rejected and Ha is accepted. It indicates that independent variable has an effect on dependent variable.

b. Determination Coefficient Test (R^2)

This test is used to test the goodness-fit of the regression model in which to measure how far the model's ability to explain the variation of the dependent variable can be seen from the adjusted R2 value (Agus, 2013).

c. Test F (Model Feasibility)

The F test is can be used to test whether the model used is significant or not, so it can be ascertained whether the model can be used to predict the effect of the

independent variables together on the dependent variable. The test criteria are that if the F statistic meets the requirements, then the model can be used.

i. If the significance > α then H0 is accepted and Ha is rejected. It indicates that independent variable has no effect on dependent variable.

ii. If the significance > α then H0 is rejected and Ha is accepted. It indicates that independent variable has an effect on dependent variable.

V. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusion

Based on the results of regression tests and data analysis regarding the effect of ownership structure, and intellectual capital on financial distress in Indonesia's service company, the following conclusions can be drawn:

1. The ownership structure will increase the number of z-score in Indonesia's service company 2016-2020 period. The company with high z-score value will be reduce the probability of financial distress and vice versa. Thus, the increase in IO, MO, and FO will led to decreasing the probability of financial distress. The hypothesis states that institutional managerial, and foreign ownership negatively affect financial distress is supported by these research findings.

2. Intellectual capital has no significant effect on financial distress. If the company's intellectual capital has increased or changed, it will not be followed by financial distress. This is because the company cannot utilize its resources optimally from the use of physical assets or working capital of the company which still dominates so that it can contribute to improving company performance. The second hypothesis stated that the intellectual capital negatively impacts financial distress in Indonesia's service company 2016-2020 period, is not supported by these research findings.

In this research, ownership has positively affected z-score in the 2016-2020 period which will led to negatively affect the probability of financial distress. The negative relationship between institutional ownership and the possibility of financial distress conditions can be explained because if the company is majorly owned by institutional investors, then the company's management is considered to be highly monitored and unable to hide the losses or failures that are being experienced, thus triggering the management to be more professional and optimal in setting policies and increasing profitability. The findings of this study is

corroborate the agency theory, which states that ownership structure reduces agency conflicts because shareholders can assist oversee the organization, ensuring that company managers do not act in a way that is harmful to the shareholders. The monitoring process is more successfully controlled by the dominant ownership since the manager's performance is more closely monitored.

Majority company in this research are categorized as concentrated ownership structure through cross-shareholdings (Thillainathan, 1999) and pyramid ownership structure (Claessens et al., 2000), family business and large business groups. These controlled businesses preferred debt financing (loan from banks) rather than equity financing. The main reason of this could be the underdeveloped equity market, inactive capital market and weak corporate governance infrastructure. Therefore, there is need of regulations that discourage ownership concentration and self-interests of insider shareholders. This study is able to support agency theory, explaining that ownership structure is one of the concepts of good corporate governance that can be used to avoid information asymmetry between management and shareholders.

Intellectual capital in this study shown positives and insignificant effect on the financial distress, which means the increasing of intellectual capital – which is marked by the increasing of staff salary, does not followed by the improvement of productions' efficiency. This lack of improvement is indicated by the escalation of production costs and indirectly can increase the debt of a company in order to cover the production costs. This debt however, can also increasing the interest to be paid by a company. For the conclusion, the increasing of intellectual capital followed by the increasing of production costs and debts of a company cannot show how it affect the financial distress of that company.

B. Recommendation

Based on the conclusions obtained, the authors want to provide suggestions for interested parties, such as;

1. For Investor

Investors or potential investors who want to invest in companies listed on the IDX service industries should look at the ownership structure first especially the managerial ownership. The greater the level of the major ownership, the higher the stability of the company in Indonesia's service industries. Furthermore, intellectual capital cannot reduce the probability of bankruptcy if not utilized optimally. Thus, the investor can consider investing in companies with a more optimal intellectual capital utilized in the company.

2. For the Academician

For future research, the present study focused only on one aspect of corporate governance (i.e. ownership structure) and used only one measure of financial distress (Altman Z-score). In future researchers may use different proxies of financial distress such as Grover, Springate and Zmijewski models to capture the impact of corporate governance on the probability of financial distress. Furthermore, internal governance measures can also be used to analyze the effect of corporate governance on the likelihood of financial distress.

3. For the Companies

For the companies, they can focus their structural ownership in one of the category at their organizations to prevent unexpected condition that going to happen to the firm. They can improve the use of their intellectual capital more efficiently which will increase the Value Added of their company.

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