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The role of multiple directorships in minimizing idiosyncratic risk due to the presence of large shareholders: Evidence from Indonesian companies

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ABSTRACT

This study aims to evaluate the role of multiple directorships in the relationship between large shareholders and idiosyncratic risk in Indonesian companies for 2017-2021. The study model included dynamic panel data for estimation and a two-step GMM system to address endogeneity issues. Multiple directorships and long-term shareholders have low-frequency data whereas idiosyncratic risk is associated with high-frequency data. The robustness test employed the Fama-Frenchhee factor model while the single factor model was used to evaluate idiosyncratic risk. Indonesia adheres to a two-tier system that separates the roles and functions of the board of directors and the board of commissioners. Furthermore, the concentrated ownership structure of Indonesian companies can cause agency problems between large and small shareholders. The study results show that large shareholders can strengthen the relationships of busy directors to reduce idiosyncratic risk. As a result, this research recommends increasing the role of multiple directorships in monitoring and predicting business conditions internally and externally to minimize interference from large shareholders which can cause expropriation due to agency problems.

Contribution/Originality: To the researcher's knowledge, there has been no research that examines the role of several directorships in the relationship between large shareholders and idiosyncratic risk. The role of multiple directorships can minimize export operations caused by large shareholders so as to minimize idiosyncratic risk.

1. INTRODUCTION

Idiosyncratic risk can be controlled and is exclusive to the company because it consists of the company's operating strategy, financial policy and investment strategy (Hatane, Supangat, Tarigan, & Jie, 2019). *Idiosyncratic risk arises because of asymmetric information.* Grossman and Stiglitz (1980) argue that agents obtain lower prices and higher expected returns because agents have more private signals about the company than those owned by the public. Li, Morck, Yang, and Yeung (2004) stated that high asymmetric information in emerging markets leads to high idiosyncratic risk.

The first study to be discussed in relation to idiosyncratic risk research was conducted by Campbell, Lettau, Malkiel, and Xu (2001). They showed that over the past forty years, the market average of idiosyncratic risk has been rising steadily. They also proposed that investors should constantly rebalance their portfolios to maintain the same level of diversification in response to rising market averages for a company's particular risk. On the other

hand, Goyal and Santa-Clara (2003) contend that there is a strong relationship between cross-sectional return and the market average of idiosyncratic risk. The notion that there is a significant relationship between idiosyncratic risk and return has been criticized by studies conducted by Fink, Grullon, Fink, and Weston (2005), Wei and Zhang (2005), and Bali, Cakici, Yan, and Zhang (2005). Merton (1987) initially introduced the limited information hypothesis which maintains that investors are not protected against idiosyncratic risk because they lack knowledge about additional securities.

The research results on idiosyncratic risk are conflicting. Numerous studies have examined the company-side elements that contribute to idiosyncratic risk, including corporate governance, company characteristics and reporting information. Xu and Malkiel (2003) found that changes in volume and speed of dissemination of information and an increase in the number of institutional owners or companies are the main reasons for each stock's increased volatility. Brown and Kapadia (2007) suggested that growth opportunities, profit margins, firm size and industry composition are related to an increase in idiosyncratic risk while Brandt, Brav, Graham, and Kumar (2010) showed that the pattern of idiosyncratic risk becomes stronger and higher in stocks with more significant retail investor holdings.

The purpose of this research is to assess the moderating effect of multiple directorships and the influence of significant owners on idiosyncratic risk in Indonesian companies listed on the Indonesia Stock Exchange (IDX) between 2017 and 2021. The existence of large shareholders in Indonesian companies with concentrated ownership structures in the family can prevent tunneling or expropriation by controlling shareholders for personal gain (Pagano & Röell, 1998).The presence of large shareholders as monitors and controls will make controlling shareholders act as they should. Miller and Chen (2003) suggest that large shareholders can contribute to the company especially in making decisions about the company's progress.

One of the characteristics of companies in the Asian region including Indonesia is the concentrated ownership of certain shareholders (Claessens, Djankov, & Lang, 2000). A conflict of interest arises between controlling and non-controlling shareholders in businesses with concentrated ownership structures when one party owns a greater percentage of the company than other shareholders (La Porta, Lopez-de-Silanes, & Shleifer, 1999). According to Utama and Utama (2014), agency difficulties occur in organisations with concentrated ownership because controlling shareholders take steps to get more accurate information than minority shareholders about the company's commercial operations.

Jensen and Meckling (1976) put forward the idea that the ownership structure influences how decisions are made and will affect the risk in the company. Large shareholders are shareholders who have the power to control the company. Suppose the large shareholders in company management are only concerned with personal interests. In that case, the function of the large shareholders is as follows: monitoring and controlling are not carried out which can increase the risk of the company.

Information that was previously controlled by significant shareholders is now advantageous when buying or selling stocks. Li, Wang, Zhou, and Zhang (2021) state that large shareholders have two conflicting effects affecting stock crash risk: monitoring and tunneling. Large shareholders will create trust-based interest alliances in order to observe management behaviour due to the monitoring effect. A consistent ownership structure provides residual ownership large enough for large shareholders. Large shareholders under supervision can replace management through the monitoring effect which is detrimental for the business since it reduces the agency problem brought on by the spread of equity and raises the possibility of declining stock prices. The largest shareholder's power will be used to expropriate in contrast to the tunneling effect by important business management shareholders. Consequently, the decline in stock values is the effect.

Li et al. (2021) examine the influence of existing information on large shareholders with stock crash risk in companies listed in China. A Chinese company is a company with a concentrated structure. The study found that

the monitoring effect would be more dominant than the tunneling effect. The impact of monitoring causes large shareholders to incur more incentive costs to monitor management.

The powers of the executive and non-executive boards are also kept apart in Indonesian corporations that use a two-tier system. The board of commissioners is a supervisory board that evaluates the effectiveness of the board of directors and all business operations. The goal of monitoring is to enable the board of directors to make correct decisions, reduce agency conflicts and efficiently manage the daily operations of the business. Section 108 Ayat (5) of Law No. 40 of 2007 on Limited Liability Companies dictates that public corporations have a minimum of two members on their board of commissioners.

Haunschild and Beckman (1998) argue that multiple directorships are expected to be a means for companies to reduce uncertainty and facilitate access to resources to create cooperation such as the exchange of information and knowledge so that it is hoped that companies can increase their competitive advantage, be able to face competition in the market and minimize risks that may occur within the company. In addition, multiple positions can improve corporate governance because of the board of commissioners' experience and knowledge. Multiple directorships are controversial because of the increased workload and whether the question of various positions in one company with other related companies will be influential.

The study findings indicate that the existence of large shareholders can increase the idiosyncratic risk that occurs in the company. Makhija and Patton (2004) stated that the greater the quantity of large shareholders, indirectly, the weaker the disclosure due to conflicts of interest, thus potentially increasing the company's risk because large shareholders get higher benefits (shared benefits and direct benefits). Henceforth, there is a relationship between idiosyncratic risk and large shareholders and the role of busy directors indicating that the reputational theory is acceptable.

The remaining sections of the paper are arranged as follows: Section 1 is about the introduction. Section 2 is about a literature review and hypotheses development. Section 3 is about research methods. Section 4 is about results. Section 5 is about discussion. Section 6 is about robustness tests. Section 7 discusses the conclusion. Limitations and directions for future research are given in section 8.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Idiosyncratic Risk

Risks that can be diversified are special risks or idiosyncratic risks from within the company. The possibility of an idiosyncratic risk materializing can be decreased through diversification. Diversification to minimize or reduce risk depends on the relationship between stocks. Fu (2009) defines idiosyncratic risk as a unique and specific risk so it is often referred to as firm-specific risk because the risks can be offset by the good things that happen in other companies.

The fundamental idea of idiosyncratic risk is a modern portfolio developed into the Capital Asset Pricing Model (CAPM) (Lintner, 1965; Mossin, 1966; Sharpe, 1964). An investor can look for an equilibrium point or an optimal portfolio when investing in a risky asset portfolio that follows the assets from the market portfolio stated in the CAPM theory. Idiosyncratic risk is not taken into account when estimating expected return and asset valuation at an optimal equilibrium point because diversification can effectively and cost-free minimize idiosyncratic risk. Markowitz (1991) suggests that idiosyncratic risk can be reduced in a well-diversified portfolio.

Alternative asset pricing models that can explain predicted returns on stocks are necessary because the capital asset pricing model is unable to account for company-specific characteristics. Alternative models of asset pricing have been proposed to clarify predicted stock returns because some related literature indicates that the CAPM is unable to account for the significance of company-specific factors. Idiosyncratic risk in pricing models is susceptible to factor loadings. Previous research has shown that using imperfect capital markets and under-diversification approaches can determine expected stock returns between countries by conducting idiosyncratic risk analysis on

stock returns. Research has focused on idiosyncratic risk explicitly in order to explain idiosyncratic risk's behavior and some of its possible drivers. In their study, Rubin and Smith (2011) noted that every organisation has unique circumstances. It is impossible to make firm judgements about the factors influencing idiosyncratic risk due to variations in the company's circumstances.

2.2. Large Shareholders

In a company, there are two groups of shareholders, namely large shareholders and small shareholders. The company's ownership structure can have various forms and combinations (Anantharaman & Fang, 2012). Jensen and Meckling (1976) argue that ownership structure influences how business decisions are made and how management is monitored and compensated which can significantly impact the company's risk. A concentrated ownership structure means that a controlling shareholder has a conflict of interest because ownership of the company may be concentrated around one party referred to as large shareholders who own a greater percentage of the company than other shareholders (La Porta et al., 1999).

Large shareholders are shareholders with a share composition larger than that of other shareholders. Therefore, large shareholders have rights in the company's management. Large shareholders can monitor and control shareholders so that they will not act in a way that may harm minority shareholders. Lehmann and Weigand (2000) suggest that the existence of large shareholders can contribute to sound decision-making for the company and increase experience and professionalism in managing the company.

Attig, El Ghoul, and Guedhami (2009) argue that the standard of corporate governance will increase with the involvement of large shareholders in the company's oversight. According to Demsetz and Lehn (1985), enhanced control and supervision are primarily responsible for the presence of larger shareholders. Shleifer and Vishny (1997) suggest that large shareholders can help address agency conflicts between owners and managers by monitoring management and having enough voting power to exert pressure on it.

Hope (2013) states that large shareholders are an important part of corporate governance because monitoring that actively involves large shareholders can hinder business decisions that may be considered less than optimal. According to Zhang, Jin, and Chen's (2023) assertion, the presence of large shareholders can help reduce the risks associated with businesses where a rise in the percentage of large shareholders' shares is linked to insider trading.

Indonesian enterprises often have a concentrated ownership structure with a small number of stockholders. Most of the shares are owned by corporate groups, majority shareholders or large shareholders (Claessens et al., 2000). Concentrated ownership can cause agency conflicts that shift into agency problems between large and small shareholders, opening agency conflicts between management and shareholders. The cause of agency problems is that large shareholders can take private benefits from the company by appointing people as management. This condition can motivate large shareholders to order management to take action in the interests of large shareholders. The same thing was also stated by Fan and Wong (2002) who made a similar observation indicating that the presence of large shareholders as controlling shareholders can result in expropriation by allowing them to profit privately from deals that transfer profits to other businesses that are still under their control or by influencing corporate policy for their own purposes.

H_1: Large shareholders have a positive effect on idiosyncratic risk.

2.3. Multiple Directorships

Indonesia uses a two-tier system: Indonesia Financial Services Authority (OJK) Regulation Number 33/POJK.04/2014 (2014) which restricts concurrent positions, including the board of commissioners, contains limitations for multiple directorships. This is due to the fact that commissioners' non-executive roles and contributions in the two-tier system structure are crucial for supervising business operations. Increasing the ability, knowledge and expertise of the board of commissioners who act as multiple directors provides benefits for the

companies they manage. In addition, multiple directorships are able to obtain information regarding more profitable investment options (Chou & Feng, 2019).

In the company, the board of commissioners plays a vital function as the oversight body. Agency theory states that a direction board also known as a commissioner in Indonesia is an essential part of the control system that ensures problems resulting from the principal-agent relationship can be managed. (Fama & Jensen, 1983; Pucheta-Martínez & Gallego-Álvarez, 2020). Meanwhile, resource dependency theory states that the board of commissioners plays a vital intermediary role between the business and the outside resources it needs to operate at its best (Pucheta-Martínez & Gallego-Álvarez, 2020).

People who serve as non-executive directors or board commissioners on more than one board of another corporation are said to have multiple directorships (Chakravarty & Hegde, 2022). The condition of multiple directorships is common in Indonesia and is legal due to official government regulations. Fama and Jensen (1983) stated that building a reputation as a reliable supervisor is crucially motivated by the market for outside directors. According to resource dependency theory, the board of commissioners acts as a crucial middleman between the company and the outside resources it needs to run efficiently (Field, Lowry, & Mkrtchyan, 2013). In addition, their reputational incentives in the labor market also inspire them to become conscientious supervisors (Fama & Jensen, 1983; Masulis & Mobbs, 2011). According to Mbanyele (2020), directors with concurrent responsibilities have a critical role in enhancing complicated firms' performance, particularly in underdeveloped institutional contexts. Therefore, organisations select their directors based on their stature, qualifications and work history in the industry in order to benefit from the reputational advantages of having numerous designated direct principals Falato, Kadyrzhanova, and Lel (2014). Thus, directors who are busy can become good monitors through experience and reputational incentives.

H_2: Multiple directorships have a negative effect on idiosyncratic risk.

2.4. Large Shareholders, Multiple Directorships and Idiosyncratic Risk

Claessens et al. (2000) stated that there is a separation between company owners and managers in several Asian countries. It was found that Indonesia is characterized by highly concentrated ownership. The agency problem concept explains the relationship between idiosyncratic risk and large shareholders. According to an agency problem type II, conflicts occur between majority shareholders and minority shareholders (Jensen & Meckling, 1976). The majority of shareholders are categorized as large shareholders.

The existence of large shareholders who function as monitors is expected to minimize the occurrence of idiosyncratic risk in the company. Jensen and Meckling (1976) state that supervision will be more intense with the largest shareholder as the controlling shareholder. Attig et al. (2009) support the idea that large shareholders in a company can minimize risks because they carry out monitoring which can improve corporate governance. Therefore, it is anticipated that the relationship between multiple directorships and major shareholders will lessen idiosyncratic risk. Multiple directorships are based on the reputational hypothesis where a good reputation can minimize the risks due to the directors' experience and reputation (Fama & Jensen, 1983). Similar claims were also made by Elyasiani and Zhang (2015) who stated that organisations with a large number of director positions have a lower overall risk because of the experience, expertise, and reputation that come with holding numerous positions. These factors can help a large number of director positions advise and monitor management more effectively thereby reducing idiosyncratic risk. Raithatha and Ladkani (2023) also stated that there is a tendency to benefit from having directors with various board positions because they will provide much needed expertise. Researching directors with a range of board roles tends to be advantageous since they will offer much-needed resources, networks, and knowledge. These benefits can reduce the likelihood of idiosyncratic risks and networks and these advantages can minimize the occurrence of idiosyncratic risk.

H_3: Large shareholders strengthen the influence of multiple directorships in reducing idiosyncratic risk.

3. RESEARCH METHODS

3.1. Research Sample

Indonesian companies listed on the Indonesian stock exchange between 2017 and 2021 comprise the study's sample with 1,510 observations from 302 companies. Companies that fall into the category of the financial sector are excluded.

3.2. Variable Measurement

Idiosyncratic risk and risk uncertainty are associated with volatility. In general, volatility is synonymous with risk as a symptom of market disturbances where prices are unreasonable and the capital market does not function properly. Traditionally, volatility is seen as synonymous with variance risk. According to Schwert (1991), there is an increase in stock market volatility in the capital market as shown by the percentage change in price or the rate of return. This will lead to more opportunities for share price fluctuations.

Therefore, the overall risk is annualized as a standard deviation of stock returns. Regression analysis was performed for each company's stock returns using the following model which was based on the study's measurement model (Nadeem, Suleman, & Ahmed, 2019). Idiosyncratic risk is calculated using the residual standard deviation and is then annualized based on the quantity of trading days that are active during the research period (Nadeem et al., 2019; Sila, Gonzalez, & Hagendorff, 2017). Equation 1 presents the idiosyncratic risk calculation using a single factor model.

$$R_{i,t} - R_{f,t} = \alpha_{i,t} + \beta_{i,t}\,(R_{m,t} - R_{f,t}) + \varepsilon_{i,t} \quad (1)$$

$R_{i,t}$ is company daily returns, $R_{m,t}$ is the daily market return, $R_{f,t}$ is the risk-free rate and $\varepsilon_{i,t}$ It calculates the idiosyncratic risk of each company using the standard deviation. The measurement of idiosyncratic risk is also carried out by a robustness test using the Fama-French three factors which are shown in Table 3.

Shareholders are declared large shareholders by classifying dispersed or concentrated ownership based on the percentage of direct share ownership or immediate ownership (La Porta et al., 1999). Shareholders categorized as large shareholders are the number of shareholders who own at least 10% of the company's outstanding shares (Duygun, Guney, & Moin, 2018; La Porta et al., 1999). Thomsen, Pedersen, and Kvist (2006) state that high block holders were defined as major shareholders in this analysis if they held more than 10% of the shares. The calculation of large shareholders is the percentage of the largest share ownership owned by the owner's largest stock (Zhou & Huang, 2016).

This study uses moderating variables that can strengthen or weaken the relationship between one variable and another. Several directorships in this study are the moderating variables because of Indonesia's two-tier system. Dual locations merely suggested their existence in earlier research. However, according to Fich and Shivdasani (2006) when calculating multiple directorship, the board of commissioners who hold more than two positions is divided by the total number of board of commissioners in the company. Equation 2 presents the calculation of multiple directorships.

$$MD_{i,t} = \frac{The\ number\ of\ members\ of\ the\ board\ of\ commissioners\ concurrently\ hold \geq 2\ positions}{Board\ of\ commissioners\ size} \quad (2)$$

The study's control variables include firm size (SIZE), firm age (AGE), leverage (LEV), Return on Assets (ROA), Volume Turnover (VT), and Industry (INDT). The log of all assets is used to compute SIZE. Logging company age is the difference between the age of the research period and the age of the company established. The leverage calculation is shown in Equation 3 and we use Mitton's (2002) method.

$$LEV_{i,t-1} = \frac{Total\ Debt_{i,t}}{Book\ Value\ of\ Total\ Capital_{i,t}} \quad (3)$$

Income before extraordinary items divided by the book value of equity at the end of the fiscal year is known as Return on Assests (ROA) (Kim, Song, & Zhang, 2015) present in Equation 4.

$$ROA_{i,t-1} = \frac{EBIT_{i,t-1}}{Total\ Assets_{i,t-1}} \quad (4)$$

Volume Turnover (VT) is the mean deviation of the monthly share turnover in year t from the monthly share turnover on average in year t-1 presented in Equation 5.

$$VT_{i,t-1} = \frac{Trade\ Shares_{i,t}}{Outstanding\ Shares_{i,t}} - \sum_{t-1}^{t-1} \frac{Traded\ Shares_{i,t^n}}{Outstanding\ Shares_{i,t^n}} \quad (5)$$

Industry (INDT) is a dummy variable for manufacturing companies. Businesses classified as manufacturing companies are assigned a value of 1 while businesses classified as non-manufacturing companies are assigned a value of 0. A manufacturing company is one of the companies that has the characteristics of uncertain expected returns (Mazzucato & Tancioni, 2008).

3.3. Analysis Method

The data were analyzed using the fixed effect and dynamic panel-data estimation, two-step Generalized Method of Moment (GMM) system. The fixed effects model is appropriate when we focus on a specific firm characteristic ($c_{i,t}$) and therefore $e_{i,t} = v_{i,t} + c_{i,t}$ with $v_{i,t}$ being a time-varying error component.

The selection of estimates using the dynamic panel-data estimation two-step Generalized Method of Moment (GMM) system is due to data limitations with a small sample size. Blundell and Bond (2023) stated that when the sample size is small, asymptotic standard errors can cause bias. One of the appropriate methods to overcome this bias is dynamic panel-data estimation, a two-step system Generalized Method of Moment (GMM) (Windmeijer, 2005).

The Arrelano-Bond test, Sargan test and unbiased test are included in the two-step Generalized Method of Moment (GMM) approach for dynamic panel data estimation. The Arrelano-Bond test is carried out to test consistency while the purpose of the Sargan test is to determine the validity of using instrument variables that exceed the number of estimated parameters (over identifying restrictions). The unbiased test is used to determine whether the Generalized Method of Moment (GMM) model produces unbiased estimates.

According to panel research data by Okoyeuzu, Ujunwa, Ujunwa, and Onah (2021) that is estimated using Generalized Less Square (GLS), a statistical panel, the GLS estimator uses quasi-demeaned data and produces a correlation between the dependent variable and quasi-demeaned residuals which makes the GLS estimator biased and inconsistent and leads to poor selection. The right way is with a system called the Generalized Method of Moment (GMM).

A forecast study using the dependent lagged value on the regressors was used to assess endogeneity issues resulting from idiosyncratic risk over a five-year period. The Generalized Method of Moment (GMM) technique was selected due to the extended research period and its ability to eliminate endogeneity difficulties. Wintoki, Linck, and Netter (2012) declare that if a simultaneous link is established where X influences Y and Y impacts X then the endogeneity problem cannot be solved in panel data estimation using the pooled least squares, fixed effects, and random effect regression methods. Therefore, it is necessary to test the instrumental variables in solving this simultaneous problem. However, this approach has the disadvantage that it can produce bias in limited sample sizes (Blundell & Bond, 2023) so it needs to be estimated using the Generalized Method of Moment (GMM).

Equations 6 and 7 examine the direct relationship between large shareholders, multiple directorships and idiosyncratic risk. Meanwhile, Equation 8 examines the relationship between moderating variables. Equation 9 examines all variables in the research.

$$IR_{i,t} = \alpha + \beta_1 IR_{i,t-1} + \beta_2 LS_{i,t-1} + \beta_3 SIZE_{i,t-1} + \beta_4 AGE_{i,t-1} + \beta_5 LEV_{i,t-1} + \beta_6 ROA_{i,t-1} + \beta_7 VT_{i,t-1} + \beta_7 INDT_{i,t-1} + \varepsilon_{i,t} \quad (6)$$

$$IR_{i,t} = \alpha + \beta_1 IR_{i,t-1} + \beta_2 MD_{i,t-1} + \beta_3 SIZE_{i,t-1} + \beta_4 AGE_{i,t-1} + \beta_5 LEV_{i,t-1} + \beta_6 ROA_{i,t-1} + \beta_7 VT_{i,t-1} + \beta_7 INDT_{i,t-1} + \varepsilon_{i,t} \quad (7)$$

$$IR_{i,t} = \alpha + \beta_1 IR_{i,t-1} + \beta_2 LS_{i,t-1} + \beta_3 LS_{i,t-1} * MD + \beta_4 SIZE_{i,t-1} + \beta_5 AGE_{i,t-1} + \beta_6 LEV_{i,t-1} + \beta_7 ROA_{i,t-1} + \beta_8 VT_{i,t-1} + \beta_9 INDT_{i,t-1} + \varepsilon_{i,t} \quad (8)$$

$$IR_{i,t} = \alpha + \beta_1 IR_{i,t-1} + \beta_2 LS_{i,t-1} + \beta_3 MD_{i,t-1} + \beta_4 LS_{i,t-1} * MD + \beta_5 SIZE_{i,t-1} + \beta_6 AGE_{i,t-1} + \beta_7 LEV_{i,t-1} + \beta_8 ROA_{i,t-1} + \beta_9 VT_{i,t-1} + \beta_{10} INDT_{i,t-1} + \varepsilon_{i,t} \quad (9)$$

$IR_{i,t}$: Idiosyncratic risk is the risk of a company *i* at the end of period *t*.
$IR_{i,t-1}$: Idiosyncratic risk is the risk of a company *i* at the end of period *t-1*.
$LS_{i,t-1}$: Large shareholders of a company *i* at the end of period *t-1*.
$MD_{i,t-1}$: Multiple directorships of a company *i* at the end of the *t-1* period.
$SIZE_{i,t-1}$: The company size in company *i* up to the end of the *t-1* period.
$AGE_{i,t-1}$: The company's age in company *i* up to the end of the *t-1* period.
$LEV_{i,t-1}$: Leverage on the company *i* until the end of period *t-1*.
$ROA_{i,t-1}$: Return on assets for the company *i* until the end of period *t-1*.
$VT_{i,t-1}$: Volume turnover *of* the company *i* until the end of period *t-1*.
$INDT_{i,t-1}$: Dummy variable, manufacturing company: 1 and non-manufacturing: 0.
α : Constant.
β : The coefficients of the explanatory variables.
$\varepsilon_{i,t}$: Residual as idiosyncratic risk.

4. RESULTS

4.1. Descriptive Statistics

Table 1 provides descriptive information. Idiosyncratic risk is the dependent variable in this research. The residual standard deviation of the annualized daily stock price data serves as a proxy for idiosyncratic risk (Nadeem et al., 2019). The spread of the data is seen from the standard deviation. For idiosyncratic risk it has a standard deviation of 0.038. The average value (mean) shows 0.043 which is on a percentage scale and the risks the average company faces are 4.3%. French and Roll (1986) stated that the stock average daily variance due to mispricing of the stock return variance affects asset price volatility between trading and non-trading hours. However, there will still be differences in variance between trading and non-trading because there is different information between the two times. The analysis's findings indicate that information appears to be the primary cause of inconsistencies in information with the majority of that information being private.

The average value of the large shareholders of the 302 companies over the five years of research from 2017 to 2021 is 63.1%. Ownership is dominant with a total share of 63.1% on average for both individual and company owners. The high number of shares owned by controlling shareholders indicates that the corporate ownership structure in Indonesia is very concentrated. This is as stated by Claessens et al. (2000). The controlling shareholders will have more authority to organise and participate in the company's policy-making processes due to their substantial ownership position.

Table 1. Statistic descriptive.

Variables	N	Mean	Median	Maximum	Minimum	Std. deviation
$IR_{i,t}$	1.510	0.043	0.030	0.091	0.007	0.038
$LS_{i,t-1}$	1.510	0.631	0.648	0.997	0.174	0.201
$MD_{i,t-1}$	1.510	0.253	0.236	1	0	0.262
$SIZE_{i,t-1}$ (Rp million)	1.510	4.298.399	536.303	156.724.465	206.196	13.533
$SIZE_{i,t-1}$ (The total asset)	1.510	29.089	24.705	32.686	26.052	23.328
$AGE_{i,t-1}$ (Year)	1.510	34.818	33	114	3	17.189
$LEV_{i,t-1}$	1.510	0.454	0.464	0.973	0.007	0.237
$ROA_{i,t-1}$	1.510	0.029	0.025	0.704	-0.679	0.094
$VT_{i,t-1}$	1.510	0.282	0.827	7.073	0.004	3.596
$INDT_{i,t-1}$	1.510	0.331	0	1	0	0.476

In Indonesia, a two-tier structure provides distinct duties and functions to the supervisor and executor. Oversight of the company is held in full by the board of commissioners, one of the company organs that has a vital role as supervisor. The average (mean) is that 25.3% of the companies in the sample have a board of commissioners with multiple positions. Number 33/POJK.04/2014 (2014) which regulates concurrent positions on the board of commissioners in Indonesian companies states the maximum limit is three. Still, it can reach five if not using a quota to concurrently serve as a member of the board of directors (quota substitution).

Table 2. Results.

Variables	Fixed effect			Dynamic panel-data estimation, two-step system GMM		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
$IR_{i,t-1}$				1.934** (0.034)	2.684*** (0.000)	2.958** (0.049)
$LS_{i,t-1}$	1.352** (0.051)		1.158* (0.087)	1.782** (0.045)		1.967** (0.035)
$MD_{i,t-1}$		-2.060** (0.039)			-2.457** (0.014)	
$MDLS_{i,t-1}$			-1.805** (0.005)			-1.876** (0.003)
$SIZE_{i,t-1}$	1.346*8 (0.032)	3.972*** (0.000)	2.110** (0.037)	1.367** (0.045)	2.789*** (0.005)	2.595** (0.033)
$AGE_{i,t-1}$	-0.656 (0.511)	4.851*** (0.000)	-0.281 (0.457)	-0.210 (0.833)	2.241*** (0.002)	-0.876 (0.381)
$LEV_{i,t-1}$	1.819* (0.069)	1.358 (0.174)	1.897** (0.058)	1.998* (0.062)	1.111 (0.191)	1.724** (0.046)
$ROA_{i,t-1}$	-1.419 (0.156)	-1.078 (0.281)	-1.493 (0.135)	-1.256 (0.185)	-2.139 (0.330)	-1.158 (0.247)
$VT_{i.t-1}$	1,866* (0.092)	1.913 (0.221)	0.318 (0.220)	1.568* (0.087)	1.249 (0.217)	0.496 (0.268)
$INDT_{i.t-1}$	1.117* (0.062)	1.739* (0.078)	2.931** (0.003)	1.519* (0.071)	1.142* (0.063)	2.488** (0.005)
R^2	0.256	0.278	0.309			
AR (1)				0.316	0.222	0.381
AR(2)				0.574	0.478	0.445
Conclusion				No misspecification	No misspecification	No misspecification
Sargan/Hansen (*Chi-square*)				0.354 Valid	0.511 Valid	0.224 Valid
Observation	1.510	1.510	1.510	1.510	1.510	1.510
p value: *** 1%. ** 5%, * 10%						

Note: IR = Idiosyncratic risk, namely a proxy for measuring company risk where IR is the standard deviation of the residual regression of daily stock price data (single factor model). LS: large shareholders. MD: Multiple directorships. MDLS: Moderating large shareholders and multiple directorships SIZE= Company size of total assets. AGE = company age calculated from the year the company was founded up to the research period. LEV = Leverage, namely total debt divided by the book value of total capital, BS = The number of commissioners in one company. VT = Turnover volume. INDT: dummy variable, manufacturing firm: 1 and non-manufacturing: 0.

The average value of assets owned by the company is Rp. 4 trillion. The minimum asset value is Rp. Two hundred six billion and the maximum asset value is Rp. 156 trillion. There is a high distribution between one company and another in this study's sample, so there is a large imbalance in the total assets of one company and other companies. The average company has a lifespan of 34-35 years. The average leverage for the corporation is 0.454 which indicates that 45.4 percent of its total assets are financed by debt on average. A stand-in for profitability is return on assets (ROA). On average, ROA is 0.029. This shows that the sample mean's profitability is typically quite low. For industry categories, INDT is a dummy variable. Manufacturers are represented by companies with a value of 1 and non-manufacturing companies are represented by companies with a value of 0. Overall, the average value is 0.331 with a 0.476 standard deviation.

5. DISCUSSION

The results of the research hypothesis test are shown in Table 2. The results showed that large shareholders positively affect idiosyncratic risk which means that they support Hypothesis 1. The higher the number of large shareholders, the higher the idiosyncratic risk that occurs. Makhija and Patton (2004) stated that the higher the large shareholders indirectly weaken disclosure due to conflict interests that potentially increase the company's risk. The results of this study are also supported by Utama and Utama (2014) who found that with the existence of large shareholders, there is a higher possibility of expropriation in the transfer of cash flows, assets or shares.

The results of this study are in contrast to those of Lehmann and Weigand (2000) who state that large shareholders will contribute to good decision-making for the company. According to Shleifer and Vishny (1997), there is a beneficial relationship between share ownership and the propensity to hedge to lower risk because the owner wants to keep his level of wealth. Attig et al. (2009) support the idea that the existence of large shareholders in the company can minimize the risk because large shareholders do monitor which can increase corporate governance.

The controlling shareholder controls share ownership in developing country enterprises including Indonesia due to the structure of ownership pyramids and cross-ownership (Claessens et al., 2000; Faccio, Morck, & Yavuz, 2021; La Porta et al., 1999). Ownership held by large shareholders enables the use of power to determine financial policy and company operations. Jensen and Meckling (1976) state that the largest shareholder as the controlling shareholder will be more intense in supervising. The same was also found by Auvray and Brossard (2012) that ownership with a high concentration of supervision will be better.

Leech and Leahy (1991) stated that company performance is assessed by the concentration of ownership because of the shared ownership structure. Distributed and concentrated ownership have different functions. Shared ownership implies that no one or organisation has the power to impose control on or compel another party in order to maximise profits. In contrast, controlling shareholders will effectively control the company (Claessens et al., 2000). La Porta et al. (1999) argue that large shareholders will make controlling shareholders.

According to Claessens et al. (2000), agencies that have divisions in ownership and control over their companies are more likely to experience agency conflict. This is especially true for enterprises operating in Asia. The features of concentrated ownership are present in Indonesia. Companies with concentrated ownership experience agency conflict due to several factors including large shareholders who take on dominant roles with fewer shareholders. Agency problems arise because large shareholders have greater control over the excessive use of company policies for personal gain.

Direct relationships with multiple directorships can reduce idiosyncratic risk. Indonesia has a two-tier system in which the Dean of Commissioners and the Board of Directors have different tasks and responsibilities. Lu, Wang, and Dong (2013) stated that multiple directorships in several companies could diversify the experience of a board and be more helpful in increasing the efficiency of decision-making. The findings of this research contradict those of Pandey, Baker, Kumar, Gupta, and Ali (2023) who suggest that boards of directors of companies with

stronger growth prospects have to be composed of individuals who do not hold numerous roles in other organisations concurrently. Highly busy boards find it challenging to dedicate sufficient time and attention to managing the company which leads to a high frequency of missed board meetings (Jiraporn, Singh, & Lee, 2009). The board may miss out on a lot of good business prospects if they are not committed (Ahn, Jiraporn, & Kim, 2010). Therefore, multiple directorships can affect the idiosyncratic risk that occurs in a company.

The role of multiple directorships can minimize the occurrence of idiosyncratic risk. Core, Holthausen, and Larcker (1999) state that the board of commissioners can provide adequate supervision over each company if they hold or have three or more company positions because of their reputation and experience. This demonstrates that the role of the board of commissioners can minimize expropriation by large shareholders due to a conflict of interest. Multiple directorships will have an adverse effect on the commitment they have given and reduce the quality of work provided to each company. Mendez, Arrondo Garcia, and Pathan (2017) stated that if multiple directorships held positions concurrently in other companies, it could result in lower achievement based on the information released by the company.

6. ROBUSTNESS TEST

Our method for idiosyncratic risk assessment is based on the direct method of the Fama-French three factor model as described in Ang, Hodrick, Xing, and Zhang (2009) and Fu (2009). The three factor model is developed by incorporating the size and value aspects as additional systemic factors into the Fama-French to estimate idiosyncratic risk.

Table 3. Robustness test Fama_French three factor model.

Variables	Fixed effect			Dynamic panel-data estimation, two-step system GMM		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
$IR_{i,t-1}$				1.415** (0.047)	2.007*** (0.000)	2.680** (0.056)
$LS_{i,t-1}$	1.212** (0.032)		1.114* (0.089)	1.330** (0.034)		1.966** (0.050)
$MD_{i,t-1}$		-1.972** (0.049)			-2.231** (0.021)	
$MDLS_{i,t-1}$			-1.875** (0.004)			-1.381** (0.002)
$SIZE_{i,t-1}$	1.663** (0.010)	2.371*** (0.000)	2.375** (0.049)	1.425** (0.057)	2.727*** (0.005)	2.957** (0.039)
$AGE_{i,t-1}$	-0.717 (0.473)	4.404*** (0.000)	-0.292 (0.368)	-0.206 (0.836)	2.236*** (0.002)	-0.873 (0.383)
$LEV_{i,t-1}$	2.015** (0.044)	2.077 (0.382)	2.127** (0.034)	1.967* (0.070)	1.106 (0.195)	1.725** (0.048)
$ROA_{i,t-1}$	-1.217 (0.151)	-2.562 (0.396)	-2.592 (0.198)	-1.252 (0.189)	-2.135 (0.345)	-1.157 (0.279)
$VT_{i,t-1}$	1.853* (0.077)	1.057 (0.278)	0.449 (0.215)	1.505* (0.071)	1.006 (0.219)	0.453 (0.237)
$INDT_{i,t-1}$	1.587* (0.052)	1.078* (0.083)	2.959** (0.002)	1.625* (0.061)	1.454* (0.091)	2.121** (0.005)
R^2	0.362	0.383	0.396			
AR (1)				0.317	0.220	0.283
AR(2)				0.577	0.492	0.380
Conclusion				No misspecification	No misspecification	No misspecification
Sargan/Hansen (*Chi-square*)				0.352 *Valid*	0.506 *Valid*	0.245 *Valid*
Observation	1.510	1.510	1.510	1.510	1.510	1.510

p value : *** 1%, ** 5%, * 10%

Note: IR = Idiosyncratic risk, a proxy for measuring company risk, where IR is the standard deviation of the residual regression of daily stock price data (single factor model). LS: Large shareholders. MD: Multiple directorships. MDLS: Moderating large shareholders and multiple directorships SIZE= Company size of total assets. AGE = Company age calculated from the year the company was founded up to the research period. LEV = Leverage, namely total debt divided by the book value of total capital, BS = The number of commissioners in one company. VT = Turnover volume. INDT: Dummy variable, manufacturing firm: 1 and non-manufacturing: 0.

According to the study's consistent findings, numerous directorships have a negative influence on idiosyncratic risk, but substantial shareholders have a favourable effect. The role of multiple directorships as a moderating variable can minimize the occurrence of idiosyncratic risk which means it supports the reputational hypothesis.

7. CONCLUSION

Indonesian companies with concentrated ownership cause agency problems for large and small shareholders. Personal interests prevent large shareholders from being effectively implemented when they serve as supervisors which can lead to an increase in idiosyncratic risk. Thus, in corporate management, the role of multiple directorships as the supervisory board can minimize idiosyncratic risk. This study evaluates the direct relationship between large shareholders and idiosyncratic risk and multiple directorships as a moderating variable in companies listed on the Indonesian Stock Exchange for 2017-2021.The study results show that large shareholders can strengthen multiple directorships to reduce idiosyncratic risk which means the role of multiple directorships supports the reputational hypothesis. Multiple directorships that occur in Indonesia are legal considering that there are official government regulations, namely POJK regulation no. 33/POJK.04/2014 so that the existence of multiple directorships provides more benefits in terms of monitoring and advice to management regarding risks occurring in the company.

8. LIMITATION AND DIRECTION FOR FUTURE RESEARCH

The lack of a difference between cash flow and control rights is one of the research's limitations. The author suggests that future research on the topic of multiple directorships should compare the implementation of one-tier and two-tier systems in different countries. In addition, the study should take into account the gender and age distribution of the positions.

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Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
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