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CORPORATE GOVERNANCE, TAX PLANNINGS AND FIRM RISK: EMPIRICAL STUDY OF INDONESIAN MANUFACTURING COMPANIES

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A B S T R A C T

Many companies reduce the tax expenses to as low as possible, leading to tax planning behavior. Tax efficiency is carried out to optimize company profits through various policies. Meanwhile, implementing certain tax policies can increase the company's risk because it triggers uncertainty in cash flows and profits. This study examines the effect of tax avoidance, tax aggressiveness, and tax risk on firm risk. In addition, this study also examines the moderating role of corporate governance, testing the independent and dependent variables. The data used in this study are from manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2016-2019 observation period, sourced from Indonesia Stock Exchange's official website, the company websites, www.finance.yahoo.com and www.bloomberg.com. This study resulted in a sample of 260 firm-years based on purposive sampling. Hypothesis testing is employed by multiple linear regression linear analysis for panel data. The results suggest that tax avoidance and tax risk are positively associated with firm risk, while tax aggressiveness is not associated with firm risk. Furthermore, this study also finds that corporate governance does not have a moderating effect in testing the independent and dependent variables. This study contributes novelty to tax planning activities testing related to firm risk, which is still rarely conducted in previous studies.
Keywords: *firm risk, idiosyncratic risk, tax avoidance, tax aggressiveness, tax risk, corporate governance*

Banyak perusahaan mengurangi beban pajak serendah mungkin, yang memunculkan perilaku perencanaan pajak. Efisiensi pajak dilakukan untuk mengoptimalkan keuntungan perusahaan melalui berbagai kebijakan. Sementara itu, penerapan kebijakan perpajakan tertentu dapat meningkatkan risiko perusahaan karena memicu ketidakpastian arus kas dan laba. Penelitian ini bertujuan untuk menguji pengaruh penghindaran pajak, agresivitas pajak, dan risiko pajak terhadap risiko perusahaan. Selain itu, penelitian ini juga menguji peran moderasi dari corporate governance pengujian variabel independen dan variabel dependen. Data yang digunakan dalam penelitian ini adalah perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia (BEI) selama periode pengamatan 2016-2019 yang bersumber dari situs web resmi Bursa Efek Indonesia, situs web perusahaan, www.finance.yahoo.com dan www.bloomberg.com. Berdasarkan purposive sampling, penelitian ini menghasilkan total sampel sebanyak 260 firm-year. Pengujian hipotesis dilakukan dengan menggunakan analisis linier regresi linier berganda untuk data panel. Hasil penelitian menunjukkan bahwa penghindaran pajak dan risiko pajak berhubungan positif dengan risiko perusahaan, sedangkan agresivitas pajak tidak berhubungan dengan risiko perusahaan. Selanjutnya, penelitian ini juga menemukan bahwa tata kelola perusahaan tidak memiliki efek moderasi dalam pengujian variabel independen dan variabel dependen. Penelitian ini memberikan kebaruan terkait dengan aktivitas pengujian perencanaan pajak terkait dengan risiko perusahaan yang masih jarang dilakukan dalam penelitian sebelumnya.
Kata Kunci: risiko perusahaan, risiko idiosinkratik, penghindaran pajak, agresivitas pajak, risiko pajak, tata kelola perusahaan

INTRODUCTION

There is significant uncertainty in the business environment due to social, economic, political, and natural conditions (Kot & Dragon, 2015). One indicator employed to identify business risk in a country is the level of equity risk premium (Zhu, 2019). The equity risk premium in a country shows an additional return on investment (Kim & Villalobos, 2016). This premium level compensates for the risk obtained by investors (Harjito & Hapsari,

2016). External risk factors have a significant influence on increasing firm risk. Loviscek & Riley (2013) stated that the global financial crisis in 2008 had a tremendous impact on stock prices. During this period of deep recession, the US stock market capitalization fell by more than 50 percent. In addition, during that period, the level of volatility increased ninefold due to the global crisis (Loviscek & Riley, 2013). The high volatility proves that investors respond to information about the global crisis, which is part of the company's external risk. The global crisis also affected the volatility of stock returns in Indonesia. In mid-September 2008, the Jakarta Composite Index reached 1200 from 2000, the sharpest decline in the Indonesia Stock Exchange history (Widiarta, 2011). These external risks are beyond the company's control.

Apart from external risk factors, internal risk factors can also contribute to firm risk. In 2007, the tax office discovered that PT. Bumi Resources had underpaid taxes of Rp. 2.1 trillion in tax evasion. It has resulted in a decrease in its share price from IDR 6,000/share in 2007, IDR 910/ share in 2008, IDR 2,425/share in 2009, and this price getting lower in 2012 at the level of Rp 590/share (Gandhi, 2012). This occurrence showed an increase in firm risk, as indicated by the high volatility of PT. Bumi Resources' share. The act of tax evasion by PT. Bumi Resources increased the company's risk from internal factors.

The company's internal and external risk factors concern both investors and companies. The risk of a company is reflected in the volatility of the return rate (Bumi, 2013). Sujana (2017) explained that in the efficient capital market theory - semi -strong form, the company's share price in the capital market reflects past prices and public information received by investors. In decision-making theory, investment management adheres to the concept that investors rationally use utility maximization and reject risk (Weber et al., 1998). This concept causes investors to utilize all available information, including information about firm risk from market conditions and internal company conditions, including management policies and actions. Information regarding firm risks is reflected in unsystematic risk information. Naomi (2011) explained that unsystematic risk could not be avoided through diversification by investors. Unsystematic risks are company-specific risks such as uncertainty in management and annual profits (Firmansyah & Muliana, 2018). Companies can cut costs, implement a policy or carry out a specific strategy to reduce such risk (Mathew et al., 2018). However, the company's actions can also increase its risk, as occurred to PT Bumi Resources. The number of conditions that can increase the company's risk encourages investigating the factors that trigger firm risk.

The testing on the company's risks has been conducted quite a lot in previous studies. At the international level, studies that have examined the effect of variables that are associated with firm risk include corporate governance (Haider & Fang, 2016; Lenard et al., 2014; Mathew et al., 2018), corporate social responsibility (Albuquerque et al., 2019; Nguyen & Nguyen, 2015), firm size (Rajverma et al., 2019), leverage (Rajverma et al., 2019), market-to-book (Rajverma et al., 2019) and profitability (Rajverma et al., 2019), tax aggressiveness (Guenther et al., 2013), tax risk (Guenther et al., 2013; Hutchens & Rego, 2015), and tax avoidance (Guenther et al., 2013; Hutchens et al., 2020). In Indonesia, firm risk testing has been conducted, including gender board (Hatane et al., 2019), independence of the board of directors (Hatane et al., 2019), ownership of the board of directors (Hatane et al., 2019), board size (Hatane et al., 2019), financial leverage (Geno et al., 2022; Sidauruk & Pangestuti, 2015), derivatives (Candradewi & Rahyuda, 2019; Firmansyah et al., 2020a), firm size (Sidauruk & Pangestuti, 2015), profitability (Sidauruk & Pangestuti, 2015), financial performance (Candradewi & Rahyuda, 2019), corporate governance disclosure (Candradewi & Rahyuda, 2019), liquidity (Sidauruk & Pangestuti, 2015), avoidance (Firmansyah & Muliana, 2018) and tax risk (Firmansyah & Muliana, 2018).

Tax policy is still a problem facing companies and shareholders (Chen, 2017), so investigating firm risk related to tax activities is still very important. Corporate policies related to taxes can increase firm risk because these directly correlate with the company, creating uncertainty in the company's cash flow and earnings (Hutchens et al., 2020). Guenther et al. (2013) stated that the more excellent ex-ante dispersion in the form of firm risk is reflected in disseminating the ex-post impact of the company's tax policy because it is directly related to the company's performance.

Determinants of firm risk related to taxes are still a problem faced by companies and shareholders (Chen, 2017). Companies carry out tax efficiency to optimize company profits by implementing policies that can reduce tax expenses as much as possible. When a company has a significant profit, the tax debt incurred will be even more significant, making the company do the tax efficiency owed (Jessica & Toly, 2014). Tax payable efficiency can be conducted by avoiding taxes through various actions and policies (Hanlon & Heitzman, 2010). Hutchens et al. (2020) revealed that tax avoidance and firm risk have a strong relationship because the tax expenses that reduce corporate earnings affect its cash flow and overall profit. Guenther et al. (2013) explained that in contrast to tax avoidance, tax aggressiveness is an act of tax efficiency with weak legal support. Tax efficiency can increase a company's net cash flow and be utilized to make investments, pay off debts, or distribute dividends or share buybacks to shareholders. However, on the other hand, this tax avoidance strategy can lead to a greater possibility of cash outflows (Ciconte et al., 2016). Future cash outflows can arise from the use of tax consulting services, more complex audits of financial statements, or audits of tax authorities that require companies to pay taxes accompanied by sanctions and fines (Ciconte et al., 2016). This condition makes corporate tax strategies such as tax avoidance and tax aggressiveness a vital issue and parameter in making decisions because they can create uncertainty. It is difficult for investors to distinguish between tax strategies that benefit the company or create uncertainty in future cash flows, so the relationship between corporate tax strategies and firm risk is a problem faced by both companies and investors (Hutchens et al., 2020).

Research examining the effect of tax avoidance and tax aggressiveness has been conducted previously (Firmansyah & Muliana, 2018; Guenther et al., 2013; Hutchens et al., 2020). However, there are still some differences in the tests and the results. Firmansyah & Muliana (2018) and Guenther et al. (2013) concluded that tax avoidance carried out using a consistent strategy does not increase firm risk. However, Hutchens et al. (2020) suggested a positive relationship between tax avoidance and firm risk. Also, Guenther et al. (2013) found that tax aggressiveness has no relationship with firm risk.

Another factor that can affect firm risk related to taxes is tax risk. Brown et al. (2017) stated that firm risk increases when a company policy creates tax risk even when the company has controlled other factors. Hutchens & Rego (2015) explained that tax risk includes all tax-related uncertainties that cause companies to bear costs. Furthermore, Hutchens & Rego (2015) explained that tax uncertainty makes it more difficult for companies to profit from budget planning after tax. The company's tax risk is addressed by the volatility of tax payments made (Guenther et al., 2013). The volatility of tax payments can be caused by changes in the company's taxation system, tax rates, tax relaxation, and various policies from the company and the tax authority. Tax risk provides uncertainty about changes in the company's future cash flows. Guenther et al. (2013) found that tax risk in the form of the volatility of tax payments made by companies is positively associated with firm risk, which indicates that the volatility of tax payments is an essential indicator of high risk. This finding aligns with research by Hutchens & Rego (2015), which concluded that tax risk consistently positively influences firm risk. In contrast

to the two studies, Firmansyah & Muliana (2018) found that tax risk is not associated with firm risk. Based on these studies, there are still inconsistencies in the results examining the effect of tax avoidance, tax aggressiveness, and tax risk on firm risk.

This study investigates the effect of tax avoidance, tax aggressiveness, and tax risk on firm risk. The test in this study is an extension of the previous tests because the three independent variables in this study are related ((Firmansyah & Muliana, 2018; Guenther et al., 2013; Hutchens et al., 2020; Hutchens & Rego, 2015). Unlike previous studies that used total risk in measuring firm risk (Firmansyah & Muliana, 2018; Guenther et al., 2013; Hutchens et al., 2020; Hutchens & Rego, 2015), this study utilizes idiosyncratic risk to investigate firm risk. It is an unsystematic risk, so it is expected to provide empirical evidence and a more comprehensive examination of the more precise relationship between firm risk and tax-related risk determinants. Idiosyncratic risk, which reflects the specific company's inherent risks, will better capture its internal risk from the internal policies chosen because it does not involve market risk (Firmansyah et al., 2020; Naomi, 2011). Tax avoidance and tax aggressiveness are internal factors to the company, so the tax-related determinants are only attached to certain companies. Besides, management policies that increase tax risk are also part of the internal company. The idiosyncratic risk that shows the risk to the internal company is the correct measurement for firm risk because the idiosyncratic risk is the risk inherent in the company as an unsystematic risk (Kurniawati et al., 2019).

In contrast to most studies that do not differentiate tax avoidance and tax aggressiveness (Firmansyah & Muliana, 2018; Hutchens et al., 2020; Hutchens & Rego, 2015), this study distinguishes tax avoidance and tax aggressiveness as Guenther et al. (2013) and Lietz (2013) explicitly. Lietz (2013) described tax avoidance as an activity that explicitly reduces corporate taxes, while tax aggressiveness is a tax planning activity with great potential to generate tax audits. Lietz (2013) explained that tax avoidance could be avoided by choosing accounting methods and adopting tax rules to reduce expenses. Furthermore, Lietz (2013) revealed that tax aggressiveness indicates non-compliance with tax regulations which causes the possibility of a tax audit of more than 50%. Tax aggressiveness has a higher level of non-compliance than tax avoidance. Thus, tax avoidance and tax aggressiveness cannot be used interchangeably, even though both are tax reduction strategies (Lietz, 2013). This classification is supported by Guenther et al. (2013), who stated that tax avoidance differs from tax aggressiveness. Guenther et al. (2013) explained that tax aggressiveness is a strategy to reduce tax payments without sufficient legal force support, leading to the potential inspection of tax authorities. Meanwhile, tax avoidance is a strategy of reducing tax payments that tend to be supported by applicable tax regulations such as double-declining depreciation, using tax facilities, or other actions. However, in contrast to Guenther et al. (2013), this study employs a permanent book-tax-difference to capture tax aggressiveness. According to Lietz (2013), tax sheltering through tax aggressiveness often creates a permanent book-tax-difference. A permanent book-tax difference is closely related to companies' tax planning and assists in measuring tax aggressiveness.

Apart from these differences, this study also includes corporate governance as a moderating variable in examining the effect of tax avoidance, tax aggressiveness, and tax risk on firm risk, which has never been conducted in previous studies. In Agency theory, Watts & Zimmerman (1990) argued that the agent (managers) would implement policies that maximize their wealth without paying attention to the interests of the principal (shareholders), thus triggering agency problems. To reduce agency problems, shareholders supervise company management through a corporate governance mechanism (Mathew et al., 2018) so that corporate governance can reduce firm risk. Hutchens & Rego (2015) explained that most tax directors consider

tax risk management an essential factor in companies. Hatane et al. (2019) concluded that several components of corporate governance negatively influence firm risk, indicating that the company board has a role in overseeing and controlling firm risk to protect investors' and other stakeholders' interests. This result aligns with Mathew et al. (2018), who found that risk management in corporate governance allows companies to control their risks. Chan et al. (2013) stated that good corporate governance negatively relates to tax aggressiveness. Chan et al. (2013) explained that companies with effective governance have lower tax aggressiveness. Armstrong et al. (2015) also supported this finding that governance with independent board attributes negatively relates to tax aggressiveness. In addition, Annisa & Kurniasih (2012) found that corporate governance with the attributes of audit quality and audit committee has a significant effect on tax avoidance.

Corporate governance is vital in controlling and aligning interests between managers and shareholders to avoid managers' opportunistic actions (Chan et al., 2013). Mathew et al. (2018) explained that the components of corporate governance allow managers to implement policies that can accommodate all parties' interests. Tax avoidance, tax aggressiveness, and tax risk are manifestations of management policies that can be taken. Thus, in this study, corporate governance is expected to weaken the positive effect of tax avoidance, tax aggressiveness, and risk on firm risk.

This study contributes to complementing capital market-based accounting research by examining idiosyncratic risk as firm risk and its relationship with tax avoidance, tax aggressiveness, and tax risk and the role of governance in that relationship. This research can also be considered in policymaking by the Indonesian Tax Authority and Indonesian Financial Services Authority. In addition, the results of this study can be used as consideration in making investment decisions by investors and determining corporate taxation policies.

Furthermore, this study employs control variables, including leverage, firm size, and profit before tax. Guenther et al. (2017) explained that leverage and firm are used as control variables to capture the economic environment's volatility. Meanwhile, profit before tax is utilized to capture potential accounting adjustments made by companies for income smoothing or earnings adjustments to meet other reporting objectives. Harjito & Hapsari (2016) and Rajverma et al. (2019) concluded that leverage, firm size, and profit before tax are proven to have a negative effect on firm risk. Appropriate control variables are crucial to producing functional equations; however, incorrect control variables will produce wrong results (Becker et al., 2016).

This study consists of six segments. The first segment is an introduction consisting of research phenomena, problems, objectives, the differences between this study and previous research, and the selection of variables used in this study's examination. The second segment consists of a literature review and hypothesis development. The third segment consists of the research methodology, sampling and proxy methods used to measure each variable in this study and the research model. The fourth segment describes the test results, including descriptive statistics and hypothesis testing. Also, in the fourth segment is a discussion that explains the research findings. The fifth segment contains conclusions, namely a summary of the discussion based on the research objectives, the limitations and implications of managerial implications, and future research.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Efficient Capital Market Theory – Semi Strong

An efficient capital market is a capital market whose securities prices reflect all relevant information (Fama, 1970). The capital market could be efficient if prices fully reflect all relevant information (Fama,

1970). All available information refers to past and current information received by the public, such as financial statements, management decisions and policies, and government policies. Fama (1970) distinguished all available information into three types: past price changes and public and private information. Also, Fama (1970) explained that prices only reflect past price changes and reflect all relevant information to the public in a semi-strong form of the capital market. In the semi-strong form of efficient capital markets, the information available includes the first and second types of information, namely past price information and publicly available information.

Investors can decide according to their risk preferences in a semi-strong form of an efficient model market. Investors can diversify their investments to create portfolios by the level of risk and the expected level of return. Thus, a positive relationship between risks and returns is expected to occur (Sujana, 2017). In a semi-strong form of the efficient capital market, investors will collect information about firm risk available to the public, such as financial statements, annual reports, and other sources. Information provided by the company to the public can be an assessment for users of financial statements, especially investors, to assess the company's internal risk. Company management policies and actions that may reflect risk will directly affect the price of its shares in the capital market.

Agency Theory

Agency theory explains the working relationship between principals (shareholders) and agents (managers). Jensen & Meckling (1976) described an agency relationship as a contract that occurs when one party acting as a shareholder assigns another party as management to carry out activities or actions on behalf of the owner by involving the granting of authority in decision-making. According to Godfrey et al. (2010), agency theory was built to explain and predict the actions of agents (management) and principals (shareholders), in which both principals and agents are considered to have the same goal. The goal is to maximize utility and achieve the highest satisfaction with their economic decisions, although their interests differ.

The relationship between the principal and agent creates an agency problem caused by the difference in interests between shareholders as the principal and management as the agent. An agency conflict arises when the manager has their motives and does not act in the interests of shareholders as owners of the company. In agency conflicts, managers take opportunistic actions to maximize their wealth.

Tax Avoidance and Firm Risk

Based on the semi-strong efficient market theory, stock prices in the capital market reflect past prices and publicly available information. Bumi (2013) explained that firm risk is reflected in the stock returns volatility. This condition indicates that the market will react to the firm risk. Rego & Wilson (2012) stated that tax avoidance is risky for companies. Tax avoidance raises high costs for companies and managers, including completing more comprehensive audits and tax consulting fees (Rusydi & Martani, 2014). According to Blouin et al. (2012), tax avoidance can create uncertainty about future corporate tax payments. Tax avoidance indicates that the manager reduces the transparency of financial statements to shareholders and the tax authority (Desai & Dharmapala, 2009).

Hutchens et al. (2020) concluded that there is a positive relationship between tax avoidance and firm risk. Companies would seek new strategies with uncertain impacts to reduce tax payments (Hutchens et al., 2020). When companies take tax avoidance, the firm risk can increase due to the potential for cash outflows to pay for tax shortages and tax consulting services. Companies will find it challenging to determine post-tax profit because there is uncertainty about future cash flows.

H1: Tax avoidance is positively associated with firm risk

Tax Aggressiveness and Firm Risk

Based on the semi-strong form of efficient market theory, prices on the capital market reflect past price changes and public information. This information allows investors to select companies based on risk according to their risk preferences. Fama (1970) stated that the rate of return on stocks is an equilibrium of its risk function. In a semi-strong form of efficient capital market conditions, investors will collect information about firm risk available to the public, such as financial reports or annual reports. Firm risk arises from various factors. Chen (2017) argued that shareholders face various risks, including tax-related risks from the invested company.

In agency theory, the relationship between shareholders as principals and managers as agents raises agency problems. Managers tend to take actions that maximize efforts to increase profits to obtain a high bonus as agents. Efforts to increase profit can be made in various ways, including reducing expenses that must be paid. One of the efforts that can be made is tax efficiency by reducing tax expenses as much as possible. When the company has a significant profit, the tax debt that arises will be even more significant, encouraging the company to carry out efficiency in taxes (Jessica & Toly, 2014). Tax efficiency can be conducted through tax aggressiveness. Lietz (2013) explained that tax aggressiveness refers to actions that violate tax laws. This action results in a high probability of an audit by the tax authorities on the company. This audit can lead to cash outflow uncertainty arising from the amount of tax paid and the fine. This uncertainty potentially increases firm risk.

Firm risk arising from tax aggressiveness will be better captured by idiosyncratic risk because tax aggressiveness is part of internal activity. idiosyncratic risk is the risk that arises due to manager actions that cause uncertainty. Tax aggressiveness creates cash flow uncertainty in companies that derives from the potential for fines and sanctions due to tax authorities' audits, leading to increased firm risk. This condition causes tax aggressiveness to increase the potential risk that harms the company.

H2: Tax aggressiveness is positively associated with firm risk

Tax Risk and Firm Risk

Investors will consider all available information to the public in making investment decisions. This condition allows investors to adjust their investment portfolios based on their risk profile. Investors will consider the various internal risks in the company to reach optimal decisions. This mechanism will create a balance point between the share price and the internal risks in the company. The risk factors in the company include systematic and unsystematic risks. Unsystematic risk is an internal firm risk that investors can avoid through diversification, so internal factors will be the investors' primary concern in compiling a portfolio.

Tax risk is all taxes-related uncertainties, including corporate transactions, operating activities, financial reporting policies, and company reputation (Hutchens & Rego, 2015). Based on the semi-strong efficient market theory, all risks to the company will directly affect its share price in the capital market. Guenther et al. (2013) described tax risk as uncertain future tax payments. If there is any uncertainty about taxing the company, the company will experience uncertainty in cash flows in the future. This uncertainty makes it difficult for companies to budget for profit after tax, thus complicating corporate planning activities. These conditions can trigger more risk for the company. Guenther et al. (2013) and Hutchens & Rego (2015) suggested that tax risk is proven to affect overall firm risk positively. High tax risk causes the level of corporate uncertainty to increase. Investors will catch this uncertainty as an indication of increased firm risk.

H3: Tax risk is positively associated with firm risk

Corporate Governance, Tax Avoidance and Firm Risk

Agency theory explains and predicts the

actions of agents (managers) and principals (shareholders). These two parties aim to maximize their respective utilities raising differences in interests between managers and principals. Managers will take actions that can reduce the company's expenses to obtain high profits. This profit level affects the bonus management gets, thus encouraging management to continue tax avoidance. Although tax avoidance can be conducted while complying with tax laws, this action still provides risk exposure to the company, such as an increase in the cost of tax consulting services, extending the time for preparing financial statements, and auditing financial statements. In addition, tax avoidance still has the possibility of being examined by the tax authorities.

Several previous studies have investigated the effect of corporate governance on corporate tax avoidance actions. Zulma (2016) concluded that corporate governance, represented by attributes related to commissioners and ownership, is negatively associated with tax avoidance. In line with this finding, Waluyo (2017) suggested that corporate governance, represented by independent commissioners' attributes, is negatively associated with tax avoidance.

According to Annisa & Kurniasih (2012), a manager's tendency to avoid taxes can be controlled by shareholders through a corporate governance mechanism. Desai & Dharmapala (2009) revealed that tax avoidance indicates that management reduces the transparency of financial reports to shareholders and tax authority. Mathew et al. (2018) found that corporate governance oversight allows companies to reduce risk. It is a tool shareholder can use to reduce tax avoidance behavior that increases firm risk.

H4: Corporate governance weakens the positive association between tax avoidance and firm risk

Corporate governance, Tax Aggressiveness and Firm Risk

In agency theory, the manager will maximize their wealth without paying attention to shareholders' interests, thus causing agency problems due to differences in interests. Managers will attempt to maximize the company's profit by acting not in line with shareholders' interests. To reduce agency problems, shareholders supervise company management through corporate governance mechanisms.

Tax aggressiveness is a form of corporate activity to reduce the amount of tax paid by taking actions that tend to be inconsistent with taxation provisions. This action creates a high possibility for the tax authority to conduct tax audits on the company. This condition is not following investors' interests because of the uncertainty of the manager's actions taking tax aggressiveness without the investors knowing. Managers will hide tax aggressiveness, resulting in asymmetric information between managers and shareholders.

The relationship between corporate governance and tax aggressiveness was tested by Chan et al. (2013). That study proved that effective corporate governance could reduce tax aggressiveness. Armstrong et al. (2015) confirmed this study's result, showing that good corporate governance is negatively associated with tax aggressiveness. From the agency theory perspective, previous studies' results mean that effective corporate governance can reduce aggressive tax behavior.

Hatane et al. (2019) concluded that corporate governance could reduce its overall risk with supervision and risk management in corporate governance. Tax aggressiveness can be controlled through the oversight of corporate governance. Shareholders can oversee the company's tax management activities that create potential cash outflows due to actions that tend to disobey tax laws. Non-compliance with the tax laws is of concern to shareholders because it creates the possibility of paying underpayments of taxes and penalties. Corporate governance tends to weaken tax aggressiveness, which can result in scrutiny by tax authorities.

H5: Corporate governance weakens the positive association between tax aggressiveness and firm risk

Corporate Governance, Tax Risk and Firm Risk

Hutchens & Rego (2015) stated that tax risk includes all tax-related uncertainties that cause companies to bear costs. This uncertainty makes it difficult for companies to plan an after-tax profit budget. Tax uncertainty derives from several factors, such as tax policy, corporate tax position, operational uncertainty, and different tax law enforcement (Jacoby et al., 2017). Tax risk can arise from changes in regulations that are an external source, and changes in internal management policies can arise. Tax risk is the volatility of income tax payments by companies, resulting in uncertainty over tax payments.

Cheung et al. (2011) stated that good corporate governance could reduce the emergence of management policies resulting in losses to the company through risk management. Companies can manage tax risk to avoid adverse impacts on the company (Firmansyah & Muliana, 2018; Guenther et al., 2013). Hatane et al. (2019) found that corporate governance can reduce firm risk because it can reduce the exposure to the uncertainty of corporate tax policies. The company's tax position also includes changes in tax regulations from tax authorities. Corporate governance is expected to reduce the effect of tax risk on firm risk.

H6: Corporate governance weakens the positive association between tax risk and firm risk.

RESEARCH METHODS

This quantitative research employs the data of manufacturing companies listed on the Indonesia Stock Exchange (IDX) from 2012 to 2019. Manufacturing companies have a financial structure that reflects the general capital structure and does not use a particular tax tariff. This study employs an observation period from 2016 because it corresponds to the effective implementation period of the corporate governance guidelines based on the Indonesian Financial Services Authority (OJK) circulation letter 32 of 2015. The use of the research year up to 2019 is because, in 2020, Indonesia experienced the covid19 pandemic, so the company's external factors have a very significant role in the company's economic conditions. This study does not include 2020 company data to avoid data testing bias.

The research data was collected using the documentation method through the Indonesia Stock Exchange's official website, the company websites, www.finance.yahoo.com and www.bloomberg.com. Purposive sampling is carried out with the following criteria:.

The dependent variable in this study is firm risk. This study employs idiosyncratic risk to measure firm risk, following Firmansyah et al. (2020b) and Hatane et al. (2019), who employed a market model. Annual idiosyncratic risk is measured by multiplying the standard deviation of the monthly regression equation residuals multiplied by $\sqrt{12}$

Table 1.
Research Sample

Criteria	Number
Companies listed on the IDX as of June 2021	739
Companies listed on the IDX after January 1, 2012	-297
Non-manufacturing sector companies	-303
Companies with negative pre-tax profit	-70
Companies that have incomplete data	-4
Number of samples	65
Year	4
Total observation	260

(Wachter, 2013). The following equation calculates the idiosyncratic risk measurement model.

$R_t — R_{ft} = β_0 + β_1 (R_{mt} — R_{ft}) + ε_{it}$ …………(1)

Where: R_t= rate of stock return periode t; R_{ft}= government bond yield;R_{mt} = market rate of return periode t;$ε_{it}$ = idiosyncratic risk

The independent variables in this study consist of tax avoidance, tax aggressiveness, and tax risk. Tax avoidance is measured using the cash effective tax rate (CETR). Rego (2003) explained that CETR could capture tax avoidance activities carried out by companies. Also, Lietz (2013) explained that the advantage of using CETR compared to other ETR variations is that all taxes are taken into account regardless of the company's accounting treatment, such as the tax consequences of employee stock options. Besides, CETR remains unaffected by changes in valuation allowances or tax reserves (Dyreng et al., 2008). Ferdiawan & Firmansyah (2017) explained that CETR reflects worldwide tax expense and is not affected by changes in accrual basis, so CETR is a good measurement for tax avoidance. Value CETR is opposed to tax avoidance. If CETR is low, the tendency of tax avoidance is high, and vice versa, so the value of CETR is multiplied by -1 to determine the tax avoidance value (Permatasari et al., 2021; Suteja et al., 2022).

CETR = Cash tax paid : (pre-tax income)……………………………………...(2)

This study employs permanent discretionary difference (DTAX) following Lietz (2013) to measure tax aggressiveness. Lietz (2013) explained that aggressive tax sheltering often creates a permanent book-tax difference, making permanent book-tax difference strongly associated with corporate tax planning and handy as a measure of tax aggressiveness. Tax aggressiveness taxes showed by permanent discretionary differences (DTAX) indicated the residual value is shown by ε, where the residual value is obtained from the regression cross-section each year. The permanent discretionary difference (DTAX) used in the study has been adjusted to Indonesia's conditions according to Rachmawati & Martani (2017) with model (3):

$PERMDIFF_i = α_0 + α_1 INTANG_i + α_2 ΔNOL_i + α_3 LAGPERM_i + ε_i$ ……………..(3)

Where: $PERMDIFF_j$= total book-tax difference minus temporary book-tax difference = [book earnings before tax-(tax expense/tax rate)] - (deferred tax expense/tax rate)]; $INTANG_i$ = Goodwill and other intangible asstes of the company i in year t.; $ΔNOL_i$ = Change in the company's net operating loss carries forward in year t to the previous year; $LAGPERM_i$ = The total difference in commercial and fiscal profit minus temporary company difference i in year t-1 or PERMDIFF of the previous year.; $ε_i$ =the permanent discretionary difference of company i in t.

Tax risk in this study is measured using cash ETR volatility following Firmansyah & Muliana (2018) and Guenther et al. (2013). Firmansyah & Muliana (2018) explained that cash ETR volatility accommodates forecasting future after-tax income to reflect corporate tax risks best. Guenther et al. (2013) stated that cash ETR volatility is the most appropriate measurement to measure risk and uncertainty in firm risk policies. This statement is supported by (Hutchens & Rego, 2015), who explained that cash ETR volatility could better capture the various tax dimensions associated with firm risk.

$TRISK = STDEV (CETR_{it-4} + CETR_{it-3} + CETR_{it-2} + CETR_{it-1} + CETR_{it}$……………...(4)

The moderating variable in this study is corporate governance. This study measures corporate governance by developing an index comprising 25 criteria under the principles of corporate governance issued by the OJK, OJK circular letter number 32 of 2015. In this study, the measurement of corporate governance refers to Fasita et al. (2022) and Firmansyah et al. (2021). The index derives the five principal dimensions from forming an index with a score of 1 if the criteria are satisfied and 0 if it is not. The checklist is then calculated and averaged

to form a value from 0 to 1. Thus, the formula for the governance index (5).

$CGOVi = \Sigma Xi / n$ ……………………….(5)

Where: CGoV = Corporate governance index of the company i in year t; X = The score of fulfilled CG criteria of the company i in year t; n = Total criteria on the CG checklist

The control variables in this study consist of leverage, firm size, and pretax book income. Guenther et al. (2017) explained that leverage and firm size are employed as control variables to capture the economic environment's volatility. Meanwhile, pretax book income is used to capture potential accounting adjustments made by companies for income smoothing or earnings adjustments to meet other reporting objectives. Harjito & Hapsari (2016) and Rajverma et al. (2019) concluded that leverage, firm size, and profit before tax are proven to have a negative effect on firm risk. Leverage is a ratio that measures long-term and short-term debt capacity to finance company assets (Geno et al., 2022). The proxy of leverage in this study is based on Firmansyah & Muliana (2018), Guenther et al. (2013), and Sidauruk & Pangestuti (2015). Firm size in the study employs a proxy based on Firmansyah & Muliana (2018), Guenther et al. (2013), Hatane et al. (2019) and Hutchens & Rego (2015) as on the formula (7)

Pretax book income is operating profit plus other income less other expenses before the applicable tax rate under tax regulations (Firmansyah & Muliana, 2018; Guenther et al., 2013). Profit before tax in this study employs a proxy by Firmansyah & Muliana (2018) and Guenther et al. (2013) as on formula (8)

LEV= Total Liability/ Total Equity…….(6)
SIZE = Ln(total assets)……………………..(7)
PTBI: Pretax book income/total assets (8)

This study uses two models. The first model (9) is used to test H1, H2, and H3. The second model (10) explains corporate governance's role in moderating the dependent variable's influence on the independent variable. The model is used to test H4, H5, and H6.

$$IDIOVOL_{it} = \beta 0 + \beta_1 TAXAVOID_{it} + \beta_2 TAGR_{it} + \beta_3 TRISK_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 PTBI_{it} + \varepsilon_{it} \quad (9)$$

$$IDIOVOL_{it} = \beta 0 + \beta_1 TAXAVOID_{it} + \beta_2 TAGR_{it} + \beta_3 TRISK_{it} + \beta_4 CG_{it} + \beta_5 (TAXAVOID*CG)_{it} + \beta_6 (TAGR*CG)_{it} + \beta_7 (TRISK*CG)_{it} + \beta_8 SIZE_{it} + \beta_9 LEV_{it} + \beta_{10} PTBI_{it} + \varepsilon_{it} \quad (10)$$

Where: $IDIOVOL_{it}$= idiosyncratic risk of the company i, year t ; $TAXAVOID_{it}$= tax avoidance of company i, year t; $TAGR_{it}$ = tax aggressiveness of company i, year t ; $TRISK_{it}$ = tax risk on company i, year t ; $CGov_{it}$ = corporate governance of company i, year t; $SIZE_{it}$ = firm size of firm i, year t; LEV_{it} = leverage of company i, year t;$PTBI_{it}$ = pretax book income of company i, year t

ANALYSIS AND DISCUSSION

The descriptive statistical analysis in this study is described by using the mean, median, standard deviation, maximum, and minimum. The summary of the results of descriptive statistics on the variables data in this study is presented in the following table. Furthermore, the regression model selection tests (Chow test, Lagrange multiplier test, Hausman test) suggest that the most appropriate regression model for two research models is the fixed-effect model (FEM). The result of equation model regression is as follows Table 3.

The association between tax avoidance and firm risk

Based on the result of hypothesis testing, tax avoidance is positively associated with firm risk. The result is in line with Hutchens et al. (2020) but is not in line with Firmansyah & Muliana (2018). Differences in the sample of companies and the proxies used can cause differences in this study's results. Guenther et al. (2013) utilized total risk to measure firm risk with a sample of all public companies in the United States. Firmansyah & Muliana (2018) also employed total risk in measuring firm risk with a sample of public non-financial

companies in Indonesia. Meanwhile, this study utilizes idiosyncratic risk in measuring firm risk with a sample of Indonesia's manufacturing companies. Tax avoidance as a tax policy implemented by managers can capture idiosyncratic and internal risks.

According to the semi-strong efficient market theory, stock prices in the capital market reflect all information available to the public, including firm risk (Bumi, 2013). Information about firm risk can be in the form of information on policies implemented by the company (Firmansyah et al., 2020b). One of the risky policies that managers can carry out is tax avoidance to increase company profits. Tax avoidance is a tax planning form that aims to minimize tax payments that cause company uncertainty (Rego & Wilson, 2012). Indications of tax avoidance can be easily identified through the value of companies' tax payments in the financial statements. Payment of taxes indicates tax avoidance because it shows the level of compliance with corporate tax obligations from tax payments on generated profits (Lietz, 2013). The statement of cash flow containing information on tax payments is easily obtained by investors and is a consideration in investment decisions. The company performance parameter in the financial statements for investors is the

Table 2.
Descriptive Statistics

	Mean	Med	Min.	Max	Std. Dev	Obs
IDIOVOL	0.3326	0.2471	0.0015	3.7373	0.3177	260
TAXAVOID	-0.3940	-0.2706	-5.7257	0.0000	0.5090	260
TAXAGR	0.0002	-0.0005	-0.0741	0.1970	0.0219	260
TRISK	0.2637	0.1046	0.0066	4.2943	0.5739	260
CG	0.7089	0.7200	0.2800	1.0000	0.1963	260
SIZE	28.9170	28.671	25.7957	33.494	1.6134	260
LEV	0.8217	0.5766	0.0005	4.1897	0.7078	260
PTBI	0.1088	0.0769	0.0017	0.7091	0.1125	260

Table 3.
Equation Model Regression Test Results

Variable	Model 1				Model 2			
	Coeff.	t-Stat	Prob.		Coeff.	t-Stat	Prob.	
C	-1.3635	-1.2338	0.1094		-2.1803	-1.8588	0.0323	**
TAXAVOID	0.0793	3.0258	0.0014	***	0.0375	0.4698	0.3195	
TAXAGR	-0.5604	-1.5471	0.0618	*	-1.8520	-1.5556	0.0607	*
TRISK	0.1896	3.4997	0.0003	***	-0.1953	-1.0887	0.1389	
LEV	0.1957	4.6387	0.0000	***	0.1720	4.1929	0.0000	***
SIZE	0.0501	1.3202	0.0942	*	0.0873	2.1268	0.0174	**
PTBI	0.6221	2.6250	0.0047	***	0.2556	1.0660	0.1439	
CGOV					-0.2565	-3.4826	0.0003	***
CETR*CGOV					0.0368	0.3020	0.3815	
DTAX*CGOV					2.4998	1.4573	0.0733	*
TRISK*CGOV					0.4871	1.8989	0.0296	**
R^2		0.7373				0.7641		
Adj. R^2		0.6400				0.6698		
F-Stats		7.5785				8.0987		
Prob, (F, Stats)		0.0000				0.0000		

Note ***significant at 1 percent level; **significant at 5 percent level; *significant at 10 percent level. This study employs a maximum significance level of 5%.

operating cash flow statement. Thus, tax avoidance that contains uncertainty can be recognized by investors through the cash flow statement published by the company. This condition allows tax avoidance as a risky policy to capture idiosyncratic risk.

Tax avoidance aims to minimize tax payments to obtain more cash tax savings that can be utilized for the company's benefit. Tax avoidance can be conducted by reducing legally justifiable tax payments (Mayberry, 2012). Although tax avoidance can increase cash tax savings, this action also raises high potential costs. Companies must bear some tax avoidance consequences, such as a longer time to complete audits, higher tax consulting costs, and the potential underpayment of taxes (Hutchens et al., 2020). Tax avoidance can also increase uncertainty when there is a possibility for an audit by the tax authority to result in interests and penalties (Firmansyah & Muliana, 2018).

In addition, one of the impacts that companies face when undertaking tax avoidance is reputational cost. Tax avoidance detected by a tax authority will harm the company's image, resulting in investors avoiding investing (Hanlon & Slemrod, 2009). It leads to higher uncertainty than the company's benefits (Cen et al., 2017). Tax avoidance also reduces the transparency of financial reports to shareholders and tax authority (Desai & Dharmapala, 2009). Lack of transparency in financial statements reduces external parties' trust in the company, resulting in potential losses.

The association between tax aggressiveness and firm risk

Based on the result of hypothesis testing, tax aggressiveness is not associated with firm risk. The result of this study confirms the research of Guenther et al. (2013). Guenther et al. (2013) distinguished tax avoidance and tax aggressiveness in this study. Tax avoidance and tax aggressiveness are tax efficiency undertaken by management to reduce its tax expense. However, this study contradicts the statement of Lietz (2013) that tax aggressiveness causes the possibility of being audited by the tax authority to be greater than tax avoidance. Thus, tax aggressiveness is riskier in generating future payments (Lietz, 2013). The difference in the results of this study may be due to differences in the tax authorities' audit conditions in Indonesia and other countries such as the United States.

Tax avoidance is a management effort to reduce tax payments in the current year. Tax avoidance is performed in several ways, such as choosing a policy to lower the tax rate. The policy can manage company share ownership or place the factories in bonded areas. In contrast to tax avoidance, tax aggressiveness is an action to reduce tax payments that do not comply with tax regulations, so tax avoidance and tax aggressiveness are not interchangeable (Lietz, 2013). Tax aggressiveness can increase net income by minimizing tax expenses. However, in contrast to tax avoidance, tax aggressiveness is more challenging to identify tax authority. Tax aggressiveness is included in abusive tax sheltering so that management will tend to hide this action to avoid sanctions from tax authorities (Lisowsky, 2010). The behavior of aggressive tax planning should be detected through an audit conducted by Indonesia's tax authority. However, the condition of tax law enforcement in Indonesia results in tax aggressiveness being less risky compared to tax avoidance.

Based on the Indonesian tax authority circular letter number SE-15/PJ/2018 and SE-06/PJ/2016 concerning the Audit Policy of the Authority, tax audits in Indonesia are divided into two audits, routine tax audits and special tax audits. Routine tax audits are carried out to fulfill tax rights and/or the taxpayers' tax obligations. In contrast, special tax audits are carried out based on risk analysis and other information in concrete data showing indications of non-compliance with tax obligations. Thus, tax aggressiveness that does not comply with tax regulations can be revealed through a special tax audit. However, the Indonesian

tax authority's tax audits are still dominated by routine tax audits. The number of special tax audits only reached 4.16% compared to routine audits, which reached 95.84% of the total tax audits (Nugrahanto & Nasution, 2019).

In addition to tax audits dominated by routine audits, tax audits by the Indonesian tax authority suggested that the audit coverage ratio (ACR) is still relatively low (Handaka & Darma, 2020). Low ACR makes it difficult for the tax authority to reveal tax aggressiveness (Handaka & Darma, 2020). ACR is a ratio of the number of audited taxpayers who must submit the tax return. Based on the Indonesian tax authority's annual report, corporate taxpayers' ACR in 2019 only reached 2.44%. In previous years, the ACR for corporate taxpayers only reached 3.23% in 2018 and 2.87% in 2017. According to the OECD Tax Administration (2019), corporate taxpayers' ACR international practice rate is generally above 5 %. This data shows that the ACR figure for corporate taxpayers in Indonesia is still low.

In Indonesia, tax audit policies and indications of tax aggressiveness that are not explicitly disclosed in financial statements make tax aggressiveness more challenging to reveal. Thus, reducing disputes between tax authority and companies engaging in tax aggressiveness. These conditions do not increase firm risk because it does not create uncertainties in tax avoidance. Managers suspect taking advantage of these conditions to improve tax efficiency through tax aggressiveness without raising the possibility of a dispute with the authority.

In addition, based on this research data, indications of tax aggressiveness are more challenging to identify than tax avoidance because they are not explicitly disclosed in the financial statements. This study utilizes DTAX to measure indications of tax aggressiveness. DTAX is a residue of the permanent book-tax difference, reflecting a permanent book-tax difference whose source cannot be explained (Rachmawati & Martani, 2017). The value of DTAX is not explicitly disclosed in the financial statements, so neither the tax authority nor investors nor other external parties will find an indication of tax aggressiveness in the financial statements. Meanwhile, companies' tax payments can easily detect indications of tax avoidance. Based on the semi-strong efficient market theory, stock prices in the capital market describe all information available to the public. This information includes information that reflects the company's condition, including the company's risks. The company's idiosyncratic risk will change according to the company's internal conditions, which is reflected in this information (Firmansyah et al., 2020b).

The association between tax risk and firm risk

The hypothesis testing result suggests that tax risk is positively associated with firm risk. In this study, tax risk is a tax uncertainty from internal companies. This study confirms the results of the previous studies (Guenther et al., 2013; Hutchens & Rego, 2015). However, this study's result is not in line with Firmansyah & Muliana (2018), who did not find a relationship between tax risk and firm risk. This difference in results can be caused by differences in the sample companies under investigation, observed period, and firm risk measurement. Firmansyah & Muliana (2018) employed total risk in measuring firm risk with a research sample of non-financial public companies in Indonesia from 2013 to 2015. Meanwhile, this study utilizes manufacturing companies listed on the Indonesia Stock Exchange as a research sample from 2016 to 2019. Also, this study employs idiosyncratic risk, which reflects the company's internal risk in measuring firm risk. This difference shows that tax risk cannot capture the total risk in Indonesia, which is a combination of systematic and unsystematic risk. By contrast, tax risk can only capture idiosyncratic risk due to the policy carried out by the management.

One form of risk that can be managed by a company and expose a

dangerous impact on the company is tax risk (Guenther et al., 2013). Tax risk is the uncertainty caused by the tax policy, including any tax-related uncertainties such as business transactions, operating, accounting decisions, and the company's reputation (Hutchens & Rego, 2015). This policy causes uncertainty because it can raise costs related to corporate taxes, such as managing tax staff and using consultant services.

The government continuously changes tax regulations and technical compliance with tax obligations for companies. Managers can apply various policies to adjust to changes in taxation regulation. Tax risk can arise when the manager makes internal policies that respond to taxation rules by the tax authority (Firmansyah & Muliana, 2018). Managers can use this condition to implement policies that create uncertainty in corporate tax payments and liabilities. This tax-related uncertainty increases idiosyncratic risk as an unsystematic risk to the company.

In the semi-strong form of efficient capital market theory, investors will use all data available to the public in making decisions concerning their investments. The decision covers firm risk based on data available to market participants. The information reflected in tax payments changes in the statement of cash flow is a component that investors and investment analysts consider in assessing a firm risk (Hutchens & Rego, 2015). Investors will consider a corporate riskier when the company has a tax policy that creates uncertainty in cash flow (Drake et al., 2019). Thus, tax risk is part of the firm risk considered by investors. This study confirms the efficient capital market theory that tax risk reflected in the company's financial statements will affect the company's non-systematic risk.

Tax risk is a type of risk that can be controlled by a company and is directly related to the company's potential losses (Guenther et al., 2013). Thus, tax risk is a risk that is directly related to a company's unsystematic risk. When a manager cannot control tax risk in the company environment, this condition will create internal risk. The future uncertainty resulting from tax risk can disrupt the company's future (Firmansyah & Muliana, 2018).

The moderation role of corporate governance on the association between tax avoidance and firm risk

The hypothesis examination result suggests that corporate governance does not weaken the positive association between tax avoidance and firm risk. Based on the descriptive statistics of this study, the average value of corporate governance has increased from year to year. In 2016, the corporate governance average score was 0.63, then increased in 2017 to 0.70 and in 2018 and 2019 to 0.73 and 0.77. Meanwhile, the average tax avoidance did not change significantly from 2016 to 2018, ranging from 0.355 to 0.377. However, in 2019, the average value of tax avoidance has increased relatively high. Based on these data, although corporate governance tends to increase yearly, the value of the indications of tax avoidance has not changed significantly and even increased in 2019. This condition shows that the increase in the implementation of corporate governance cannot suppress corporate tax avoidance.

The corporate governance component implemented by a manager that does not work effectively is thought to be one reason it cannot weaken the effect of tax avoidance on firm risk. Several corporate governance mechanisms implemented by companies in Indonesia are not functioning correctly (Firmansyah & Triastie, 2020). Many governance components do not affect tax policy applied to the management (Khurana et al., 2018). Most existing corporate governance components in Indonesia do not affect tax avoidance (Tandean & Winnie, 2016; Wardani & Rumahorbo, 2018). Only the audit quality & managerial ownership components can influence tax avoidance actions in Indonesia.

At the same time, companies should pay attention to the effectiveness of governance, especially the components of

the commissioners' and directors' performance and composition, to control the actions of company management. The commissioners' and directors' performance and composition are the primary governance components, enabling the company to control management's actions (Hatane et al., 2019). In contrast, other components of governance, such as the performance of commissioners and directors, executive character, institutional ownership, the composition of the board of commissioners and directors, audit committee, independent commissioners, and institutional ownership, do not influence tax avoidance (Tandean & Winnie, 2016; Wardani & Rumahorbo, 2018). The implementation of governance aims to provide a more effective control function and align the interests of shareholders and management. However, in reality, governance implementation is often only a formality to meet the government's requirements and has not been interpreted as a need for the excellent company management (Puspitowati & Mulya, 2014).

Apart from these conditions, the relatively poor overall quality of corporate governance is thought to be the cause of corporate governance not weakening the effect of tax avoidance on firm risk. Based on data from the World Economic Forum GCI 4.0 - Corporate Governance, Indonesia's ranking is still relatively lower than other countries in the Asia Pacific region. Indonesia is ranked 57 in 2019 out of 130 countries globally on GCI 4.0 - Corporate Governance. Meanwhile, other countries in the Asia Pacific region have a much better ranking than Indonesia, such as Singapore, in second place, Malaysia in fifth place, Taiwan in eighth place, and Thailand in 23rd. The ranking reflects the quality of corporate governance listed in the World Bank's GovData360 statistical report that lists corporate governance worldwide. These data emphasized that Indonesia's corporate governance quality is relatively lower than other countries. This condition is confirmed by Firmansyah & Triastie (2020), who concluded that corporate governance in Indonesia is of poor quality. The corporate governance system in Indonesia is still weak compared to other countries.

Corporate governance as a mechanism for directing and controlling company management can reduce asymmetric information between company management and shareholders (Firmansyah et al., 2022). Corporate governance protects investors from expropriation by management (Shleifer & Vishny, 1997). Thus, based on agency theory, corporate governance implementation should minimize agency problems by aligning principal and agency interests. However, the low quality of corporate governance in Indonesia has failed in corporate governance to minimize agency problems optimally. Thus, corporate governance cannot control tax avoidance and cannot weaken the influence of tax avoidance on firm risk.

The moderation role of corporate governance on the association between tax aggressiveness and firm risk

The hypothesis testing result indicates that corporate governance failed to weaken the positive association between tax aggressiveness and firm risk. Thus, corporate governance failed to reduce tax efficiency by engaging in tax aggressiveness. Based on the previous discussion, tax aggressiveness cannot capture firm risk because it is relatively hard to identify tax aggressiveness. However, this condition can be overcome through existing mechanisms in corporate governance. Management's opportunistic behavior of tax aggressiveness can be recognized and suppressed through corporate governance (Halioui et al., 2016). Investors' interests can be protected when transparency can be guaranteed by corporate governance (Jacoby et al., 2017). Corporate governance is a procedure that investors can use to protect their interests from agency problems when management takes actions that are not in line with investors' interests (Wawo, 2010). Thus, corporate governance should allow tax

aggressiveness to capture firm risk. In addition, corporate governance should reduce management behavior that can increase firm risk, such as tax aggressiveness that can harm investors as shareholders. However, corporate governance that is not optimally running cannot weaken aggressiveness on firm risk.

OJK circular letter number 32/ SEOJK.04/2015 concerning guidelines for governance of public companies is a governance guideline for publicly listed companies in Indonesia so that the company has good governance and can protect shareholders' rights. However, the3 OJK decree number 21/POJK.04/2015 concerning implementing governance guidelines for public companies still do not oblige all public companies to apply this guideline. The regulation still allows the companies not to comply with the GCG Guidelines by explaining the reason. This condition has resulted in many public companies that do not yet have corporate governance under the OJK circular letter.

Based on this research data, the implementation of corporate governance guidelines in Indonesia is still adapting from year to year. In 2016, the average value of implementing the corporate governance guidelines was 0.63 and increased in 2019 to 0.77. This data shows that since the issuance of the Corporate Governance Guidelines in 2015, most companies in this study are still adapting and have not fully implemented these guidelines. Besides, until 2019, the implementation of the corporate governance guidelines still varies widely. Disclosure of corporate governance in Indonesia is still uneven because the presentation of corporate governance in Indonesia is still voluntary, which creates a high gap in corporate governance disclosure between companies in Indonesia (Firmansyah & Triastie, 2020). Based on the data in this study, the implementation of the corporate governance guidelines has a high level of variation, with a minimum value of 0.28 and a maximum of 1.00. This tremendous gap indicates that companies can fully implement the corporate governance guidelines while still, companies can only apply 28% of the total criteria in the Corporate Governance Guidelines. In contrast to developed countries, the implementation of corporate governance in developing countries such as Asia still has a high degree of variation (Wibowo, 2010).

Inadequate quality and inequitable corporate governance have not been able to function optimally and, therefore, cannot oversee tax policies optimally (Firmansyah & Triastie, 2020). Although corporate governance should be able to moderate the effect of tax aggressiveness on firm risk, the level of implementation of corporate governance that is still not optimal and has high variations in this study is thought to be the cause of corporate governance being unable to weaken the effect of tax aggressiveness on firm risk.

The moderation role of corporate governance on the association between tax risk and firm risk

Based on the result of hypothesis testing, corporate governance failed to weaken the positive association between tax risk and firm risk. The inability of corporate governance to weaken the risk of enterprise tax risk can be led by a manager who has not recognized the importance of tax risk in corporate governance in Indonesia, resulting in the company not knowing its level of tax risk. This condition allows the company to implement internal policies which increase firm risk.

Firm risk reflects an uncertainty that, if not managed, causes losses to the company. Therefore, corporate governance as a mechanism to control and direct the company in risk management is essential to optimize manager policies, including managing firm risk. Good governance is expected to minimize inaccurate risk management, reducing the likelihood of implementing harmful policies (Cheung et al., 2011). On this basis, corporate governance should be able to reduce agency problems. However, there are

several conditions of corporate governance in Indonesia, causing corporate governance not to run appropriately.

Tax risk is the uncertainty companies face regarding taxes, including the uncertainty of tax payments and corporate tax liabilities. In today's business environment, tax risk is a risk that needs even more attention because it impacts both the company's finances and reputation. Managers should pay attention to tax strategies and risk management to maintain a competitive position and a more sustainable tax policy. Thus, a manager needs to recognize and engage in tax risk management. By recognizing and calculating tax risk in risk management, managers can control it by the company's risk profile. However, the complex and technical nature of tax risk causes it not to be appropriately understood by upper management, so it causes unexpected impacts (Neubig & Sangha, 2004). Tax risk was almost untouched by the corporate governance system, causing the violation of the core principles of risk management to mitigate all the risks that affect the company (Neubig & Sangha, 2004).

The manager runs key business process risks such as market, supplier, distribution, and production and ignores tax risks. Most companies still have not made tax risk the main agenda in corporate governance. Tax risk is not seen at the strategic level of the company like other risks in the central business processes. This condition causes management to implement policies without taking tax risk into account properly.

Based on descriptive statistics, the average value of the implementation of corporate governance from 2016 to 2019 is 0.708. This data indicates that in terms of implementing the corporate governance guidelines, the company has, on average, fulfilled about 70% of the total criteria. The average value of governance also increased from 0.63 in 2016 to 0.77 in 2019. However, these increasing corporate governance practices were not accompanied by company tax risk changes. The tax risk value has remained in the range of 0.24 to 0.29 from 2016 to 2019. The company has only implemented governance to fulfill administrative obligations but was not accompanied by good corporate governance practices because corporate governance has not been seen as a management essential need. Corporate governance is merely complementary elements of administrative requirements that apply to corporate governance in Indonesia and has not provided an optimal impact (Puspitowati & Mulya, 2014).

In addition, this study result may be related to the implementation of corporate governance in Indonesia has not shown ideal risk disclosure. In the corporate governance guidelines issued by the OJK as a guide for the implementation of governance in companies registered in Indonesia, there are no criteria that specifically address risk management, especially tax risk. There is no regulation regarding the extent of minimum risk information disclosure in Indonesia that must be submitted by non-financial companies, including manufacturing companies (Firmansyah & Triastie, 2020). Although several regulations governing risks bind manufacturing companies, such as KEP-431/BL/2012 concerning the submission of listed companies' annual reports, these regulations do not regulate what risks must be disclosed by the company. Thus, corporate governance's current element of risk disclosure cannot encourage more ideal risk management activities.

Tax risk management is a vital element that must be considered in risk management. Companies need adequate risk management regarding tax risk because it has a material impact on their financial statements (OECD, 2014). Thus, tax risk is one part of the risk that needs to be managed like other risks in risk management. Management that does not recognize and understand tax risk results in management carrying out policies that can increase tax-related uncertainty.

Company policies that trigger uncertainty in taxes constitute agency

problems because they are not aligned with investors' interests in avoiding uncertainty. The primary preference of investors in making investment decisions is to avoid uncertainty (Arshad & Ibrahim, 2019). Agency conflicts from tax risk can be minimized using investor protection mechanisms. Corporate governance is a regulatory component in companies that provides investor protection in reducing information asymmetry between management and investors (Ball, 2001). The higher the protection of investors, the less likely company policies will create uncertainty (Ball, 2001). Investor protection can be carried out through corporate governance to protect investors, especially from information asymmetry. However, Indonesia's relatively low quality of corporate governance has not provided strong investor protection, so it does not minimize practices that can create tax-related uncertainty.

CONCLUSIONS

A manager uses tax avoidance to minimize corporate tax payments and generate more tax savings. However, tax avoidance as an internal company policy raises various uncertainties that increase firm risk. Tax avoidance creates uncertainty from potential costs that the company must bear, such as higher corporate tax administration costs, the possibility of inspection by tax authorities, and other impacts, such as a decline in the company's reputation. Furthermore, tax aggressiveness is an action to reduce corporate tax payments that are less likely to comply with tax regulations. However, in Indonesia, implementing special tax audits that should reveal taxpayers' non-compliance with tax regulations is still deficient compared to routine tax audits. Also, Indonesia's low audit coverage ratio (ACR) makes tax aggressiveness more challenging to reveal than tax avoidance. This condition allows low uncertainty due to a dispute between the tax authorities and companies engaging in tax aggressiveness. Furthermore, indications of tax aggressiveness cannot be identified from explicit financial statements. Thus, tax aggressiveness is more challenging to identify investors; tax aggressiveness tends to be less risky than tax avoidance.

The company will implement specific policies in response to changes in tax rules by the tax authority. However, the policies implemented in response to these rule changes may result in companies facing uncertainty in tax payments and risk. The emergence of this tax-related uncertainty causes the company to face increasing risks. Uncontrolled tax risk will increase firm risk, harming companies' future. The quality of corporate governance in Indonesia cannot capture the effect of tax avoidance on firm risk. Most corporate governance components in Indonesia cannot control tax avoidance activities. Also, corporate governance in Indonesia that is not yet optimal is thought to cause governance to be unable to oversee tax avoidance. Thus, corporate governance cannot control the increase in firm risk from tax avoidance. The governance guidelines as a reference for implementing governance in companies listed on the Indonesia Stock Exchange still do not require absolute implementation of these guidelines. The regulation issued by OJK still allows the governance guidelines not to be applied. Thus, many companies still have not fully implemented the governance guidelines. This condition causes the implementation of the governance guidelines to be very varied and uneven. The existence of inadequate and equitable governance causes corporate governance in Indonesia to be unable to function optimally, and corporate governance fails to influence the association between tax aggressiveness and firm risk. The company is not well aware of and understands the tax risks company. Companies tend not to consider tax risk like other business risks in risk management in corporate governance. In addition, the absence of regulations governing the extent of disclosure of minimum risk information cannot encourage risk management activities to be more ideal. Therefore, corporate governance cannot make the company understand and take into account tax risk properly to lead to policies

exposing tax-related uncertainty to the company.

LIMITATIONS AND SUGGESTION

This study has several limitations, especially related to data. Certain criteria in sampling resulted in a limited number of samples. Also, the corporate governance variable requires clear corporate governance disclosures, which resulted in several companies being excluded from the study sample. Future research can use a broader sample of listed and unlisted companies to explain variables more generally. In addition, the scope of further research can be expanded by using data from companies in other countries, both developing and developed countries, so that it can compare the results of this study with further research based on different scopes. Furthermore, measuring the firm risk variables in future studies can use other proxies to test the accuracy by conducting a sensitivity test between the existing measurements and the new measurements. Other measurements to test the sensitivity include idiosyncratic risk with the downside/upside market model, multi-factor model, quadratic market model, or the Fama-french three-factor model. Future research can use a governance index with other criteria, such as OECD governance criteria, ASEAN CG Scorecard, or criteria based on future corporate governance rules.

The Indonesia Tax Authority should pay special attention to company policies in tax efficiency because they can affect tax revenues. Also, the Authority should improve the law enforcement system to reveal non-compliance activities in companies. Increasing law enforcement can be conducted by formulating strategies to increase the Audit Coverage Ratio (ACR) and increase special tax audits of all audits performed. Furthermore, OJK, as the authority to regulate listed companies in Indonesia, should regulate to mandate the implementation of a minimum of corporate governance and provide clear guidance on risk management in corporate governance, including all risks that need management attention, including tax risk.

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