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The Role of Integrated Reporting in Income Smoothing, Tax Avoidance, Idiosyncratic Risk – Case of Manufacturing Sector

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ABSTRACT

Purpose : Idiosyncratic risk directly affects investment. The failure to foresee the risk may cause investors to suffer an enormous capital loss. Thus, this study investigates the effect of corporate policies, i.e., income smoothing and tax avoidance, on idiosyncratic risk. The use of integrated reporting as moderating variable is essential in these associations.
Method : The analysis includes 90 manufacturing companies listed on the Indonesia Stock Exchange from 2016 to 2020, obtaining a total sample of 450 firm-year. Multiple linear regression models for panel data are employed to test the hypotheses.
Findings : Our findings suggest that tax avoidance positively correlates with idiosyncratic risk, while integrated reporting strengthens these relationships. In contrast, income smoothing is not associated with idiosyncratic risk. However, the interaction between income smoothing and integrated reporting is negatively associated with idiosyncratic risk. Our finding proves that idiosyncratic risk can be costly due to porous corporate policies. It bridges investors understanding of idiosyncratic risk and improves their foresight, allowing them to anticipate managers' transgression. A better understanding of idiosyncratic risk may also help local tax authorities to improve compliance risk management for taxation purposes. This study demonstrates that market regulators may benefit from enhanced integrated reporting implementation by listed companies.
Novelty : This study includes integrated reporting, which encourages companies to be more transparent in providing information to the public, as a moderating variable in testing the effect of income smoothing and tax avoidance on idiosyncratic risk, which are rarely used in previous references.

INTRODUCTION

The trade-off between risk and return is the underlying concept of equity investment. One of the major issues in equity trading is investors' failure to foresee the overall risk of an investment. There are two types of risk in the stock market, i.e., systematic risk or market risk that is driven by macro-economic factors or events outside the company's operation, such as inflation, recession., and unsystematic risk or idiosyncratic risk that is endogenous to a company, such as an illiquidity, bankruptcy, and lawsuits (Chang et al., 2015). However, the modern portfolio theory has led investors to place idiosyncratic risk in the second tier behind systematic risk, as it can arguably be minimized through a well-diversified portfolio (Fu, 2021). Idiosyncratic risk also determines companies' resilience in dampening the shock originating from the market risk. In the stock market, the market risk and the idiosyncratic risk interact and create a timely adjustment to the stock price.

In recent years, Indonesia has managed to draw a significant amount of investment to its manufacturing industry, which led Indonesia to become the manufacturing powerhouse of Southeast Asia. The Indonesian Ministry of Industry reported that in the first semester of 2022, 39.5% of the total investment in Indonesia was invested in the manufacturing industry amidst the disruption caused by the COVID-19 pandemic (Kementerian Perindustrian RI, 2022). Intense competition for capital among manufacturing companies may provide the perfect incentive for managers to engage in porous corporate policies such as income smoothing and tax avoidance to dampen perfor-

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mance volatility and secure their growth momentum. Developing countries like Indonesia often struggle with poor financial literacy, which indicates that many investors involved in the capital market struggle to understand and utilize the information produced by the companies. The relatively smaller stock market size in most developing countries may further restrain investors from being able to form a more risk-neutral portfolio, increasing the severity of the idiosyncratic risk.

Idiosyncratic risk weakens companies from within and lowers the ability to overcome external distress. Failure to foresee idiosyncratic risk is mainly attributable to management's intention and capability to conceal the company's shortcomings. Experts cultivate sophisticated schemes to confuse the market. Possession and control over information allow corporate managers to blindly take advantage of the market and tailor their policies to procure personal benefit at investors' expense (e.g., capital loss). A capital loss occurs due to lower selling against buying price. Therefore, porous corporate policies cause Idiosyncratic risk to be costly. The semi-strong efficient market suggests that the stock price continuously adjusts to all publicly available information, which alters the stock market's supply and demand (Firmansyah, Utami, et al., 2020). Therefore, investors' foresight to anticipate managers' transgression is less of an option and more of an obligation, especially since investors purchase future earnings based on present performance.

Previous studies have been conducted to examine the determinants of idiosyncratic risk. Using data from the United States, Dalbor et al. (2014) examined the effect of firm fundamentals on idiosyncratic risk. Using data from Australia, Liu et al. (2014) also examined a similar test. Meanwhile, several studies also examined similar tests using developing countries' data (Firmansyah, Sihombing, et al., 2020; Januardi & Afrianto, 2017; Kumari et al., 2017). Other financial information which is employed to examine idiosyncratic risk is earnings management (Firmansyah & Suhanda, 2021; Prakosa et al., 2022; Rajgopal & Venkatachalam, 2011; Zhou et al., 2016), leverage (Geno et al., 2022), and earnings volatility (Widyansyah et al., 2021). Furthermore, the previous examinations of idiosyncratic risk were conducted using non-financial company information such as corporate governance (Ghafoor et al., 2019), corporate social responsibility disclosure (Kong et al., 2020; Tzouvanas et al., 2020), board of commissioners (Butar Butar, 2020), and manager competence (Tan & Liu, 2016; Wu et al., 2020).

Manager policies determine the company's future direction. The impact of the policy can be seen from the company's information provided to the public. One of the manager's policies reflected in the financial statements is the policy of influencing company earnings. Managers intend larger and more stable earnings to attract the attention of investors and potential investors. However, if these activities are carried out with motives that benefit the manager, it can increase firm risk. The policy on earnings information is reflected in tax avoidance and income smoothing activities.

Regarding corporate manager policy, earlier studies that examined the association between income smoothing and idiosyncratic risk were conducted by Markarian & Gill-de-Albornoz (2012) and Zhang (2016). While in Indonesia, Putra & Rahmanti (2013) and Noviant & Marsono (2013) examined the effect of income smoothing on stock risk, not specific on idiosyncratic risk. In addition, another manager's policy is tax avoidance. Research on the effect of tax avoidance on corporate risk was led by Guenther et al. (2017) and Hutchens et al. (2020) using data from the United States as well as Carolina et al. (2019) and Firmansyah & Muliana (2018) using data from Indonesia. Thus, this study expands on previous tests examining tax avoidance on general risk.

Managers often use accrual accounting policies for earnings management because the accrual components in financial statements are components that do not require physical evidence of cash, so they are easy to manipulate in size (Prakosa et al., 2022). Income smoothing employs accounting discretions to reduce the variability of income streams (Fudenberg & Tirole, 1995). It is aimed to meet investors' expectations of steadily growing profitability to flatten the upheaval movement of stock price. Discretionary accrual is employed to manage earnings since it is easier to manipulate. The accrual components in financial statements do not affect the actual cash flow. Using samples of Chinese listed firms, Zhang (2016) found that income smoothing negatively affects idiosyncratic risk. Markarian & Gill-de-Albornoz (2012) obtained the same result using data from U.S companies. However, that study also found that in cases where income smoothing increases information risk or otherwise lacks credibility to signal reduced equity risk, it escalates stock return volatility.

The tax management policy is intended to minimize the number of tax payments because tax payments can reduce the company's income, which must be distributed to shareholders. Tax management includes tax avoidance, steps taken legally by using loopholes in tax regulations that reduce the amount of tax the company pays (Firmansyah et al., 2022). Companies often bear significant tax charges due to high tax rates and overlapping tax imposition on various levels. Tax expenditures are considered unproductive or lack direct contributions toward the company's growth. Tax avoidance is one of the means to maintain the level of earnings distributable to shareholders. Companies also tend to carry out tax avoidance practices for a smoother cash flow.

Tax avoidance inhibits cash outflow, resulting in more tax savings. However, tax avoidance is also prone to scrutiny from boards, regulators, and the government. It is mainly due to the potential emergence of fines, litigation costs, and contingent liabilities. Using samples of U.S. listed firms, Guenther et al. (2017) found no relationship between tax avoidance and companies' total risk, while Hutchens et al. (2020) contended that most relationships between tax avoidance and total risk are negative. Meanwhile, in emerging markets like Indonesia, Carolina et al. (2019) found that tax avoidance positively affects total risk and Firmansyah & Muliana (2018) concluded that tax

avoidance is not associated with total risk.

This study empirically examines the effect of manager policies, i.e. income smoothing and tax avoidance on idiosyncratic risk. The difference between this study and previous research is that the effect of tax avoidance on idiosyncratic risk has never been tested. Meanwhile, previous studies have tested tax avoidance on total risk (Carolina et al., 2019; Firmansyah & Muliana, 2018; Guenther et al., 2017; Hutchens et al., 2020). Furthermore, the effect of income smoothing on idiosyncratic risk has never been specifically examined using Indonesian data. In addition, this study includes an assessment of the implementation of integrated reporting elements as moderating variables on the effect of income smoothing and tax avoidance on idiosyncratic risk.

Integrated reporting implementation is neither mandatory nor voluntary in Indonesia (Bhimantara & Dinarjito, 2021) because no official regulations, especially in Indonesia, confirm that the company should implement the integrated reporting framework. However, the company's annual report concept combines elements of integrated reporting, including organizational strategy, performance and prospects, management records, corporate governance, financial statements, and social and environmental activities reports in one integrated reporting (Geno et al., 2022). There have been no studies that discuss the effect of integrated reporting on idiosyncratic risk, income smoothing or tax avoidance. However, several studies found that implementing integrated reporting elements is positively associated with firm value (Cooray et al., 2020; El-Deeb, 2019; Komar et al., 2020).

Furthermore, this research employs three control variables, leverage, firm size and operating cash flows, to represent the company's characteristics. Several studies have proven that firm size lowers idiosyncratic risk because the shares of small companies are seen as riskier than those of large companies (Dalbor et al., 2014; Firmansyah, Sihombing, et al., 2020; Firmansyah & Muliana, 2018; Januardi & Afrianto, 2017; Kumari et al., 2017; Markarian & Gill-de-Albornoz, 2012; N. E. Putra, 2020). Butar Butar (2020), Dalbor et al. (2014), Geno et al. (2022) and Markarian & Gill-de-Albornoz (2012) found that financial leverage can increase idiosyncratic risk. Furthermore, several studies have proven that operating cash flow reduces idiosyncratic risk because companies with more operating cash flows are considered less risky than companies with smaller cash flows (Chang et al., 2015; Firmansyah, Sihombing, et al., 2020).

This research is expected to contribute academically by becoming a reference for other research in the future, especially research that discusses idiosyncratic risk, income smoothing, tax avoidance, or integrated reporting. Then for the contribution practically, this research is expected to be a reference for financial analysts, investment managers, creditors, and investors in making investment-related decisions. In addition, this research is also likely to be a reference for the Financial Services Authority of Indonesia in drafting regulations and a reference for the Indonesian Tax Authority in drafting tax regulations and policies.

The structure of this paper is as follows: Section 1 elaborates the introduction that consists of phenomena, phenomena gap, main research problem, mapping of previous works of literature, the aim of the study, and contribution. Section 2 reviews the relevant literature and hypothesis development. Section 3 analyses the methodology used to conduct empirical research based on the provided data. Section 4 provides results and discussions. This section analyzes data in descriptive statistics, hypothesis test results, and discussions. Section 5 provides the conclusion, the limitation of the study, and the implications.

Literature Review and Hypothesis Development

Based on agency theory, investors (shareholders) and managers as company representatives have different motivations (Jensen & Meckling, 1976). Managers as agents are motivated to maximize their economic and psychological needs, while investors or shareholders as principals are encouraged to enter into contracts that can prosper themselves (Ng & Daromes, 2016). The difference in interest can lead to a conflict of interest. Managers use accrual accounting policies to manage earnings, one of which is income smoothing. According to the earnings management perspective, namely the opportunistic perspective, income smoothing is carried out by managers so that earnings disclosures become inaccurate and misleading. It leads to misinterpreting investors' assessment of its risk (D. Putra & Rahmanti, 2013). This false earnings disclosure can cause asymmetric information. These agency problems occur when managers generally have more information about the entity's operating and actual financial position than the owner (Scott, 2015).

Markarian & Gill-de-Albornoz (2012) concluded that average income smoothing is negatively associated with idiosyncratic risk in a large sample. This study found that when income smoothing is carried out excessively, is highly visible, or is carried out in poorly performing companies, income smoothing positively affects idiosyncratic risk. In line with market efficiency theory, especially semi-strong market efficiency, stable income will make investors consider the company has good business operations and performance, which is in line with investors' expectations, even though this is different from the facts. Companies that report earnings that tend to be stable generally will not invite much market reaction on the earnings announcement date (Noviant & Marsono, 2013). Income smoothing can make earnings have more noise because managers intentionally distort profit figures (Tucker & Zarowin, 2006). Income smoothing can result in a lack of transparency of information regarding earnings and signals sent because income smoothing practices can reduce the uncertainty of future income (increasing risk), thus facilitating the "forecasting" of future income flows (Zhang, 2016).

The purpose of the company to practice income smoothing is to show that the company seems to have a stable income so that investors will assume that the company's management is working well so that investors do not need to worry about poor performance in the future. Capital-intensive companies in the manufacturing industry need to maintain investors' favor and confidence, so they may satisfy their needs for capital to procure fixed assets, such as property, plant, and equipment (PP&E) needed to expand or maintain the ongoing business operation. Investors' perception of risk may affect their expected return, which means that a higher perception of risk may translate to an increased cost of capital that the company attempts to avoid. Although income smoothing is meant to dampen performance volatility, excessive use of income smoothing may raise market suspicion and leads to a timely downward price adjustment. The practice of income smoothing can be conducted by utilizing accrual accounting policies by managers. The parties interested in doing income smoothing are only the company's internal management and will not involve investors because the managers are very aware of the important role of profit information for investors as company owners. Misunderstanding of the company by investors can lead to mispricing of the company's stock price, so if the company is proven to be practicing income smoothing, this can lead to a fall in stock prices. If the practice of income smoothing is very clearly visible or known to investors, investor confidence in the financial statements issued by the company will decrease.

H_1: Income Smoothing is Positively Associated with Idiosyncratic Risk

Tax is one of the cost components that play an important role in a company (Wang et al., 2020) because it is a component that reduces net income and net cash flow after tax available to investors (Kovermann, 2018) and also can affect the capital structure (Titman et al., 2018). Managers will take tax avoidance as planning actions to maximize its utility. Tax avoidance is associated with any activity undertaken to reduce the amount of tax that should be paid by the company relative to its pre-tax accounting income (Dyreng et al., 2008). The main benefit derived from tax avoidance activities is the savings in tax payments because they can allocate costs for other needs. Managers in carrying out tax avoidance activities have the advantage of obtaining compensation from shareholders for tax arrangements that have been made to streamline the tax expenses. Another benefit of tax avoidance is decreased profits (Kasipillai & Mahenthiran, 2013).

Previous studies proved that tax avoidance is positively associated with a firm value (Cook et al., 2017). Tax avoidance that can redirect tax expenses into resources needed to fuel the companies' investment or increase the cash available to shareholders through the distribution of dividends may be considered positive by shareholders (Drake et al., 2019). On the contrary, other studies have also found that tax avoidance is negatively associated with firm risk (Yee et al., 2018). Also, several studies concluded that tax avoidance could increase firm risk (Carolina et al., 2019; Hutchens et al., 2020).

Being cost-intensive, manufacturing companies may struggle to maintain their profitability and operating cash flows. Costs are added at every stage of the production process. Meanwhile, market competition often drives companies in this industry to cut-off margins to remain competitive, especially those producing primary consumer goods. This cause the price paid or required for producing goods to be high relative to the income earned. Maintaining an adequate amount of operating cash flow can be the perfect incentive for these companies to engage in tax avoidance to relieve some of the company's cash constraints.

Tax avoidance practices can cause a conflict of interest because although managers can benefit from increasing investment value, shareholders may suffer from the costs incurred by the company from a tax investigation (Guenther et al., 2017). Gray areas in tax regulations can lead to different interpretations between taxpayers and tax auditors. When the tax audit officer decides to carry out a tax audit, there is a possibility that the tax auditor will examine all types of taxes so that there is a legal risk that creates a greater tax liability because the tax auditor will re-correct the taxpayer's fiscal financial statements (Carolina et al., 2019). Tax avoidance can increase firm risk because tax avoidance can increase the uncertainty of future corporate tax payments, either through increased uncertainty about challenges arising from tax authorities, tax savings transactions, or enforcement of tax laws that provide tax benefits (Blouin, 2014). Although tax avoidance actions taken by managers do not violate tax provisions, that activity may involve certain managers' motives that can result in asymmetric information between managers and shareholders. In addition, this action still has the potential for future tax audits by the government tax agency.

H_2: Tax Avoidance is Positively Associated with Idiosyncratic Risk

Income smoothing practices carried out by companies can cause asymmetric information because they are carried out to make earnings disclosures inaccurate so that they can obscure investors' assessment of company risk (D. Putra & Rahmanti, 2013). In line with stakeholder theory, integrated reporting can provide much non-financial information investors need in making decisions. The root of the earnings management problem, one of which is the practice of income smoothing, lies in the manager's opportunistic perspective to hide the company's actual condition (Vito et al., 2022). The impact of income smoothing is information asymmetry. Meanwhile, integrated reporting applies the concept of integrated thinking that directs companies to take integrated decisions and actions that consider value creation in the short, medium, and long term (IIRC, 2013). If the company implements integrated thinking well, investors expect the manager's opportunistic perspective to be more controlled. If income smoothing is obvious or can be easily known by investors, investor trust will decrease. Thus, managers will reconsider if they

intend to practice income smoothing, and companies will tend to apply better accrual accounting policies.

Manufacturing companies form a continuous production chain to convert raw materials into finished goods, starting from purchasing raw materials, processing raw materials, producing finished goods, and storing the ready-to-sell finished goods. Thus, manufacturing companies have a very complex accounting system. Integrated reporting allows investors to employ financial and non-financial information to develop a more comprehensive understanding of the company's business practices. Integrated thinking may help to improve investors' foresight and allows wider scrutiny from various stakeholders to reduce manager opportunism and prevent companies from engaging in detrimental practices.

H_3: The Positive Association Between Income Smoothing and Idiosyncratic Risk Will be Lower in Companies Implementing Integrated Reporting

Disclosure of company information through integrated reporting can lead to behavioral changes and improved organizational performance (Herath & Gunarathne, 2016). Integrating thinking in integrated reporting can foster positive social responsibility in managers by reducing aggressive tax avoidance strategies in tax management policies and increasing tax transparency disclosures (Venter et al., 2017). In line with stakeholder theory, implementation of integrated reporting will reduce the opportunistic nature of the company because the company will consider the risks that must be faced if it decides to violate tax regulations to save taxes, which include administrative sanctions or criminal tax sanctions as well as diminishing credibility for investment. The implementation of integrated reporting can meet the needs of investors to continuously monitor the tax risks that exist in the company from tax avoidance practices (Widyansyah et al., 2021). By disclosing tax rights and obligations in the integrated report, investors can also see that the company is a tax-abiding corporate taxpayer. With the implementation of integrated reporting by the company, the shareholders expect that the company remains on the legal track in implementing tax management to bring maximum benefits for the company and shareholders.

The size of Indonesian manufacturing companies varies, with some being large enough to have the resources to cultivate sophisticated tax avoidance schemes by managing operations across several jurisdictions, setting up special purpose companies, or establishing headquarters in low-tax jurisdictions. Integrated reporting provides information absent from the financial statement but is needed to assess the company's overall business practices. It helps investors to detect and predict the scale of tax avoidance that the company is capable of, as well as assess whether several recent occurrences may require the company to save more money through excessive tax avoidance. Thus, it allows risk-averse investors to make gradual price adjustments through piecemeal risk diversification to any indication of tax avoidance instead of imminent downward stock price adjustments when sanctions, fines, and litigation costs finally occur.

H_4: The Positive Association Between Tax Avoidance and Idiosyncratic Risk Will be Lower in Companies Implementing Integrated Reporting

RESEARCH METHODS

This quantitative research uses secondary data, including data published on the Indonesia Stock Exchange website (web.idx.co.id), Yahoo! Finance (finance.yahoo.com), and related sites of the company. The type of data used in this research is panel data. Research data includes companies manufactured listed on the IDX for 2016 – 2020. The year 2016 is chosen as the initial year of observation following the issuance of the Regulation of the Financial Services Authority of Indonesia No. 29/POJK.04/2016 on the issuer's or public company's annual report. This regulation is the main reference in preparing annual reports for companies operating in Indonesia. The annual report is a data source for testing the implementation of integrated reporting elements.

The sample selection in this study was carried out by purposive sampling, i.e., a representative sample was obtained from the population that met the predetermined criteria. The results of purposive sampling can be seen in table 1. The Fama & French (1993) 3-factor model measured idiosyncratic risk as a dependent variable. The Fama & French (1993) 3-factor model is a CAPM development that includes firm size and short-term momentum effects in the model equation (Butar Butar, 2020). Regression was conducted on all companies that became the research sample in a time series. The Fama-French 3-factor model equation can be described as equation 1.

$$R_{it} - R_{Ft} = \beta_0 + \beta_1(R_{Mt} - R_{Ft}) + \beta_2 SMB_t + \beta_3 HML_t + \varepsilon_{it} \quad \text{.....1}$$

Where:

R_{it} = excess return monthly company shares i

R_{Ft} = risk-free rate monthly, using the monthly yield on 10-year government bonds (Firmansyah et al., 2020a)

R_{Mt} = excess return market monthly (RM), using the monthly market return

SMB_t = relative returns monthly from small versus large firms, calculated using market capitalization data

HML_t = relative returns monthly high versus low ratio, calculated by the book to market value

Based on the previous year's market capitalization ranking data on the research population, two portfolios were formed consisting of the Big (B) group portfolio, namely the top 50% shares and the small (S) group, namely

Table 1. Purposive Sampling Results

Sample Criteria	Amount
As of December 31, 2020, manufacturing sector companies comprise the basic and chemical industry sub-sectors, consumer goods, and various industries.	193
Companies that do not meet the purposive sampling criteria:	
Companies registered before 2010 because the proxy for tax avoidance variables requires cumulative financial statements since 2012 and income smoothing variable proxies since 2010.	-75
Companies are suspended, delisted or relisted during 2015 – 2020.	-6
Companies apply accounting periods other than January – December.	-2
Companies do not publish complete financial statements for 2010 – 2020 and annual reports for 2016 – 2020.	-7
The stock return of the companies during 2016 – 2020 is worth zero for one full year for each year of observation.	-8
Companies have negative equity.	-5
Number of selected companies	**90**
Number of research periods (years)	5
Number of samples	**450**

Source: data processed

the bottom 50% shares (Liu et al., 2014). Meanwhile, based on market capitalization ranking data, formed also three portfolios based on ranking data book to market value previous year on the research population, which consists of a portfolio of the high group (H), which is the top 30% of stocks; low group (L), which is the bottom 30% of shares; and the remaining 40% shares (Liu et al., 2014). After regression using the Fama & French (1993) 3-factor model, the idiosyncratic risk value is obtained through the monthly residual value (ε_{it}), then the standard deviation is performed, and the results are annualized (multiplied by 12) (Firmansyah, Utami, et al., 2020). The formula 2 describes the elaboration of the idiosyncratic risk formula.

$$IDIORISKFM = \sqrt{\frac{\sum_{i=1}^{n}\left[\varepsilon it - \left(\varepsilon it - \bar{\varepsilon}\right)\right]^2}{n}} X\sqrt{12} \quad \text{.....2}$$

The Fama & French (1993) 3-factor model has been used in various studies (Butar Butar, 2020; Chang et al., 2015; Firmansyah, Utami, et al., 2020; Kong et al., 2020; Tan & Liu, 2016; Zhang, 2016). The advantage of this model is that the risk measurement involves stock sensitivity by regressing the excess return using three factors: (1) returns of market portfolio ($R_{Mt} - R_{Ft}$), (2) relative returns of SMB portfolio, and (3) relative returns of HML portfolio.

Income smoothing as an independent variable was measured using the correlation of changes in discretionary accruals (ΔDAP) and changes in pre-discretionary income (ΔPDI) for the period t to t-5 developed by Tucker & Zarowin (2006). To measure discretionary accruals (ΔDAP), we use a cross-sectional model from Kothari et al. (2005).

$$\frac{\text{Accruals}_{it}}{\text{Assets}_{it-1}} = \beta_0 \frac{1}{\text{Assets}_{it-1}} + \beta_1 \frac{\Delta\text{Sales}_{it}}{\text{Assets}_{it-1}} + \beta_2 \frac{\text{PPE}_{it}}{\text{Assets}_{it-1}} + \beta_3 \frac{\text{ROA}_{it}}{\text{Assets}_{it-1}} \varepsilon_{it} \quad \text{.....3}$$

Where

Accruals_{it} = total accruals of firm i in year t, i.e., net income (NIit) minus cash flow from operations (CFOit)
Sales_{it} = change in sales of the company i in year t
PPE_{it} = property, plant, & equipment company i in year t
ROA_{it} = return on assets company i in year t
Assets_{it-1} = lagged total assets, total assets of the company i in year t-1

All variables in the accrual expectation model are scaled with lagged total assets. Non-discretionary accruals (NDAP_{it}) are the fitted values of the regression equation (1). To find NDAP_{it}, the values of β_0, β_1, β_2, β_3, and ε_{it} from equation (1) are substituted into equation (2).

$$\frac{\text{NDAP}_{it}}{\text{Assets}_{it-1}} = \beta_0 \frac{1}{\text{Assets}_{it-1}} + \beta_1 \frac{\Delta\text{Sales}_{it}}{\text{Assets}_{it-1}} + \beta_2 \frac{\text{PPE}_{it}}{\text{Assets}_{it-1}} + \beta_3 \frac{\text{ROA}_{it}}{\text{Assets}_{it-1}} \varepsilon_{it} \quad \text{.....4}$$

Then, discretionary accruals (DAP_{it}) are obtained from the accrualsit selection from equation (1) and NDAP_{it} from equation (2).

$$\text{DAP}_{it} = \text{Accruals}_{it} - \text{NDAP}_{it} \quad \text{..... 5}$$

DAP_{it} from the results of equation (3) is then used to calculate pre-discretionary income (PDI_{it}), which is obtained from net income (NI_{it}) minus DAP_{it} (Tucker & Zarowin, 2006).

$PDI_{it} = NI_{it} - DAP_{it}$ 6

Income smoothing correlates changes in discretionary accruals with pre-discretionary income: Corr (ΔDAP, PDI) for five observations (Tucker & Zarowin, 2006). The advantage of using this proxy is that this measurement assumes that the manager uses discretionary accruals to smooth the reported series so that income smoothing can be increasingly proven in a more negative correlation between DAP and PDI (Tucker and Zarowin, 2006). Therefore, the calculation of income smoothing using - Corr (ΔDAP, PDI). Previous research has used this proxy (Firmansyah & Herawaty, 2019; Markarian & Gill-de-Albornoz, 2012; Zhang, 2016).

Tax avoidance as an independent variable was measured using long-run cash effective tax rates (ETR) developed by Dyreng et al. (2008). Long-run cash ETR is defined as cash taxes paid over a long period (five years) from year t-4 to year t divided by pre-tax book income over the same five-year period (Guenther et al., 2017).

$$LCETR_i = \frac{\sum_{t=1}^{N} CashTaxesPaid_{it}}{\sum_{t=1}^{N} PretaxBookIncome} \quad \text{.....7}$$

The advantage of using long-run cash ETR as a proxy for tax avoidance is that long-run cash ETR can better describe a company's tax policy because long-run cash ETR can show a company's long-term strategy to reduce income taxes and average long-run cash ETR. The five-year average can capture tax strategies over a longer period than short-term tax planning (Guenther et al., 2017). To ensure that the long-run cash ETR has a reasonable economic interpretation, the long-run cash ETR will be winsorizing to a value between 0 and 1 (Guenther et al., 2017). The purpose of winsorizing is to replace extreme values that are too low or too high from the data before data analysis is carried out so that the data values will change but not with the substance of the data. The higher the LCETR value, the lower the tax avoidance. The five-year long-run cash ETR proxy has also been used by Hutchens et al. (2020). The tax avoidance value is the LCETR value multiplied by -1.

This study's moderating variable of integrated reporting is measured using the integrated reporting index (IR index). This proxy follows Stent & Dowler (2015), which Herath & Gunarathne (2016) developed. The integrated reporting index proxy has also been employed in previous studies (El-Deeb, 2019; Komar et al., 2020)

$$IR_{it} = \frac{\text{Value number of integrated reporting indicator}}{\text{Maximum number of indicators from integrated reporting}} \quad \text{.....8}$$

Then the assessment results of all indicators are added and divided by the total maximum value of all indicators (maximum value = 76).

As the control variable in this research, financial leverage is measured using the debt to equity ratio (DER), total liabilities divided by total equity. DER is a common and widely used proxy, as Ghafoor et al. (2019) and Januardi & Afrianto (2017). Firm size is measured by ln (natural logarithm) of total assets, as has been employed by Januardi & Afrianto (2017) and Kong et al. (2020). Then the operating cash flow, another control variable in this research, is measured by lagged CFO, divided by average total assets. CFO proxy has been used in research by Chang et al. (2015) and Firmansyah, Sihombing, et al. (2020). Hypothesis testing is conducted by using multiple linear regression analysis for panel data. The two main models used in this study are Model 1 and Model 2.

Model 1 (to test the hypothesis number 1 and 2)

$$IDIORISKFM_{it} = \beta_0 + \beta_1 IS_{it} + \beta_2 TAXAV_{it} + \beta_3 DER_{it} + \beta_4 SIZE_{it} + \beta_5 CFO_{it} + \varepsilon_{it} \quad \text{.....9}$$

Model 2 (to test the hypothesis number 3 and 4)

$$IDIORISKFM_{it} = \beta_0 + \beta_1 IS_{it} + \beta_2 DER_{it} + \beta_3 TAXAV_{it} + \beta_4 SIZE_{it} + \beta_5 CFO_{it} + \beta_6 IR_{it} + \beta_7 (IS_{it} \times IR_{it}) + \beta_8 (TAXAV_{it} \times IR_{it}) + \varepsilon_{it} \quad \text{.....10}$$

Where

$IDIORISKFM_{it}$ = The idiosyncratic risk of the company i in year t using a proxy Fama-French 3-factor model.
IS_{it} = Income smoothing company i in year t.
DER_{it} = Financial leverage company i in year t.
$TAXAV_{it}$ = Tax avoidance i in year t.
$SIZE_{it}$ = Company size company i in year t.
CFO_{it} = The operating cash flow of company i in year t.
IR_{it} = Integrated reporting company i in year t.

This study uses additional sensitivity analysis through Model 3 and Model 4 robustness tests. The research results from the main model will be compared with the results from the robust test to determine the consistency of the research results from the main model. This study employs an additional regression model similar to the main model, but the proxy variable of idiosyncratic risk is replaced using the market model (IDIORISKMM). The market or single index model has been used in various studies, for example, by (Chang et al., 2015; Firmansyah, Utami, et al., 2020; Ghafoor et al., 2019).

Model 3 (to test the robustness of hypothesis number 1 and 2)

$$IDIORISKMM_{it} = \beta_0 + \beta_1 IS_{it} + \beta_2 TAXAV_{it} + \beta_3 DER_{it} + \beta_4 SIZE_{it} + \beta_5 CFO_{it} + \varepsilon_{it} \quad \text{.....10}$$

Model 4 (to test the robustness of hypothesis number 3 and 4)

$$IDIORISKMM_{it} = \beta_0 + \beta_1 IS_{it} + \beta_2 DER_{it} + \beta_3 TAXAV_{it} + \beta_4 SIZE_{it} + \beta_5 CFO_{it} + \beta_6 IR_{it} + \beta_7 (IS_{it} \times IR_{it}) + \beta_8 (TAXAV_{it} \times IR_{it}) + \varepsilon_{it} \quad \text{.....11}$$

Market models (IDIORISKMMit) implement the single index model with fewer limitations (assumptions). The market model equation can be described as equation 12.

$$R_{it} = \beta_0 + \beta_1 R_{Mit} + \varepsilon_{it} \quad \text{..... 12}$$

Where:

R_{it} = return company monthly share i
R_{Mt} = level return of the monthly Indonesian Composite Index
β_0 = component of the company's monthly stock independent of market performance (idiosyncratic volatility).
β_1 = beta is the coefficient that measures the change in R_{it} due to the change in R_{Mt}.

After regression with the use of market models, the idiosyncratic risk value is obtained through residual value (ε_{it}) monthly that has been obtained, then standardized and annualized (multiplied by 12) (Firmansyah, Utami, et al., 2020).

RESULTS AND DISCUSSIONS

Table 2 shows descriptive statistics from all variables used in this study. The variable data on implementing integrated reporting elements are described in Table 3. Furthermore, based on the selection of the model through the Chow test, Hausman test, and the Breusch-Pagan Lagrange Multiplier test, it was concluded that the random effect model was the most suitable model to test Model 1, Model 2 and Model 3, while the fixed effect model is the most appropriate model to test Model 4. The summary of the results of hypothesis testing for each model is described by Table 4.

The Association Between Income Smoothing and Idiosyncratic Risk

The result of the main model test (Model 1) suggests that income smoothing is not associated with idiosyncratic risk. This result is supported by an additional sensitivity test (Model 3). The result of this study aligns with Markarian & Gill-de-Albornoz (2012), Noviant & Marsono (2013) and Zhang (2016). Based on the semi-strong market hypothesis, financial information of companies in Indonesia, including earnings information for the analysis of income smoothing practices, has been reflected in stock prices through financial statements. However, there is no significant change in the stock price because it does not affect the idiosyncratic risk. This condition occurs because stock market participants are suspected of not responding to the income smoothing information. The average value of the IS is 0.7503. It can be seen that most of the samples of manufacturing companies are suspected of practicing income smoothing.

In line with agency theory, income smoothing practices should cause asymmetric information because managers intentionally distort earnings figures to make earnings information have more noise (Tucker & Zarowin, 2006). The existence of asymmetric information lead managers to generally have more information about the entity's operating position and the owner's actual financial position (Scott, 2015). However, stock market participants do not respond to information on income smoothing because investors are suspected of having difficulty detecting and understanding the impact of income smoothing itself. Manufacturing companies form a continuous production chain to convert raw materials into finished goods, starting from purchasing raw materials, processing raw materials, producing finished goods, and storing the ready-to-sell finished goods. Thus, manufacturing companies have a very complex accounting system and are difficult for average investors to understand. This is also supported by the 2016 Indonesian financial literacy index for equity investment products is only 1% of the entire population (Otoritas Jasa Keuangan, 2017). The percentage of people who invest in shares in Indonesia in 2017 is only around 0.2% of the

Table 2 Descriptive statistics

Var	Mean	Med.	Max.	Min.	Std. Dev.	Obs.
IDIORISKFM	0.3614	0.2777	2.8199	0.0436	0.3165	450
IDIORISKMM	0.4162	0.3113	2.9557	0.0428	0.3736	450
IS	0.7503	0.9205	0.9999	-0.9805	0.3961	450
TAXAV	-0.3056	-0.2529	0.0000	-1.0000	0.2725	450
IR	0.5793	0.5526	0.9079	0.3421	0.1152	450
DER	1.0998	0.8874	8.2613	0.0272	0.9602	450
SIZE	28.8185	28.5408	33.4945	25.6405	1.6628	450
CFO	0.0773	0.0646	0.5706	-0.2181	0.1052	450

Source: data processed

Table 3. Comparison of application values of IR elements

Elements of Integrated Reporting	Maximum Number	Integrated Reporting Element Deployment Data									
		mean		med		max		min		std. dev.	
		Score	%	Score	%	Score	%	Score	%	Score	%
Organizational overview and external environment	14.00	11.37	81.2%	12.00	85.7%	14.00	100.0%	5.00	35.7%	2.10	15.0%
Business models	15.00	6.72	44.8%	6.00	40.0%	14.00	93.3%	2.00	13.3%	3.02	20.2%
Risks and opportunities	8.00	4.15	51.9%	4.00	50.0%	8.00	100.0%	0.00	0.0%	1.27	15.9%
Strategy and resource allocation	6.00	3.96	66.1%	4.00	66.7%	6.00	100.0%	0.00	0.0%	1.14	19.0%
Governance	8.00	5.78	72.3%	6.00	75.0%	8.00	100.0%	4.00	50.0%	1.16	14.5%
Performance	13.00	4.60	35.4%	4.00	30.8%	11.00	84.6%	1.00	7.7%	2.25	17.3%
Future outlook	3.00	2.95	98.2%	3.00	100.0%	3.00	100.0%	1.00	33.3%	0.27	9.0%
Base of presentation	9.00	4.50	50.0%	4.00	44.4%	7.00	77.8%	3.00	33.3%	0.72	8.0%
Integrated Reporting Index	76.00	44.03	57.9%	42.00	55.3%	69.00	90.8%	26.00	34.2%	8.76	11.5%
Observation	450	450	450	450	450	450	450	450	450	450	450

Source: data processed

whole population of Indonesia (Kumparan.com, 2017), so the atmosphere of the capital market in Indonesia is thought to be less sensitive than in other countries such as China and the United States.

The Indonesian capital market is generally only sensitive to the current year or comparative data for the previous year. It can be seen from the operating cash flow control variable, which can reduce idiosyncratic risk. Companies in Indonesia are also only required to present comparative reports only for financial statements issued with the previous period's financial statements by the Financial accounting standards of Indonesia (Ikatan Akuntan Indonesia, 2019). The practice of income smoothing cannot cause a conflict of interest between investors and managers because investors do not consider the practice of income smoothing as an opportunistic act of managers in generating stable profits or as an act of management efficiency in generating future earnings (Firmansyah & Herawaty, 2019).

The Association Between Tax Avoidance Increases Idiosyncratic Risk

The result of the main model test (Model 1) suggests that tax avoidance is positively associated with idiosyncratic risk. This result is supported by an additional sensitivity test (Model 3). The result of this study aligns with Carolina et al. (2019), but it is not in line with Firmansyah & Muliana (2018), Guenther et al. (2017) and Hutchens et al. (2020). The information concerning tax avoidance practices can reduce stock prices because investors' trust in the company decreases. This decline in investor confidence can occur due to uncertainty in tax payments, resulting in uncertainty in the company's earnings and cash flows in the future. The uncertainty of corporate tax payments can increase due to increased uncertainty over challenges arising from the tax authority, tax savings transactions, or tax law enforcement (Blouin, 2014). Shareholders certainly wish the company to comply with tax laws and regulations. Although tax management policies to reduce corporate tax payments can have a positive expected investment value, on the other hand, there is a possibility that government tax agencies will challenge corporate tax positions, and potential losses in courts can make tax policies risky (Guenther et al., 2017). In addition, if the tax audit officer decides to carry out a tax audit, there is a possibility that the tax auditor will examine all types of taxes so that legal risks arise that can cause the company's tax liability to be greater because the tax auditor will re-correct the taxpayer's fiscal financial statements (Carolina et al., 2019).

Manufacturing companies are major contributors to tax revenue in Indonesia. The Indonesian Ministry of Finance reported that in 2018 and 2019, the contribution of tax revenue from the manufacturing sector was recorded at 30.0% and 29.4% of the total non-oil sector tax revenue, respectively (Kementerian Perindustrian RI, 2022). It makes manufacturing companies more prone to intense scrutiny from the tax authorities to safeguard the state revenue and avoid shortfall (Kementerian Perindustrian RI, 2022). Therefore, when it derives from tax avoidance conducted by manufacturing companies, investors tend to be risk-averse, which may lead to downward price adjustments in stock prices. In response to investors' behavior, the average manufacturing company has complied in

Table 4. Summary of Hypothesis Test Results

Var	Model 1				Model 2				Model 3				Model 4			
	Coef.	**T-Stats.**	**Prob**		**Coef.**	**T-Stats.**	**Prob**		**Coef.**	**T-Stats.**	**Prob**		**Coef.**	**T-Stats.**	**Prob**	
C	0.814	2.355	0.009	***	-0.931	-0.886	0.188		0.894	2.206	0.014	**	0.903	2.142	0.016	**
IS	0.045	1.077	0.141		0.127	1.364	0.087	*	0.054	1.091	0.138		-0.084	-0.386	0.349	
TAXAV	0.110	1.972	0.025	**	-0.521	-2.321	0.01	**	0.137	2.074	0.019	**	-0.798	-2.08	0.019	**
DER	0.045	2.552	0.006	***	0.024	1.728	0.042	**	0.056	2.678	0.004	***	0.061	2.989	0.002	***
SIZE	-0.017	-1.371	0.086	*	0.017	0.461	0.323		-0.018	-1.253	0.105		-0.032	-2.112	0.018	**
CFO	-0.289	-1.813	0.035	**	0.067	0.659	0.255		-0.297	-1.575	0.058	*	-0.279	-1.504	0.067	*
IR					1.323	3.322	0.001	***					0.647	1.675	0.047	**
IS*IR					-0.231	-1.561	0.06	*					0.236	0.633	0.264	
TAXAV*IR					0.909	2.389	0.009	**					1.601	2.432	0.008	***
R^2	0.040				0.579				0.039				0.064			
adj. R^2	0.029				0.463				0.029				0.047			
F-stats.	3.700				4.983				3.666				3.746			
Prob (F-stat.)	0.003				0.000				0.003				0.000			

Source: data processed

*** = Significance at 1% level, ** = Significance at 5% level, * = Significance at 10% level

paying taxes and has tried to suppress tax avoidance practices. In addition, Indonesia imposes one of the highest corporate income tax rates in Southeast Asia, at 20%, for public companies (Kementerian Perindustrian RI, 2022). Manufacturing companies are also subject to value-added taxes, sales taxes on luxury goods, local taxes, and regional levies, and thereby, tax investigation may result in substantial additional tax expense and liability.

In line with agency theory, the practice of tax avoidance is an opportunistic behavior that can cause asymmetric information because it can increase the complexity of financial reports and disclosures, thereby reducing transparency and increasing uncertainty of future cash flows (Firmansyah & Muliana, 2018). Companies seek to practice tax avoidance because tax payments can deplete the income earned by the company and the profits that the company must distribute to shareholders. However, excessive tax avoidance can lead to potential tax evasion actions that cross the line, so there are concerns about tax avoidance practices and sanctions for tax disputes that may occur in the future. Companies that are not transparent in their tax avoidance can increase their risk (Carolina et al., 2019).

Information concerning tax avoidance practices can lower stock prices because investors' trust in companies tends to decrease. The decline in investor confidence can occur because tax avoidance practices cause uncertainty in tax payments, leading to uncertainty in the company's profits and cash flows in the future. If the company is subject to a tax audit by the tax auditor, then there is a possibility that the tax auditor will examine all types of taxes so that legal risks arise that can cause the company's tax liability to be greater. The practice of tax avoidance is an opportunistic behavior of managers that can cause asymmetric information because it can increase the complexity of financial reports and disclosures, thereby reducing transparency. Companies that are not transparent in their tax avoidance can increase their risk. Asymmetric information revealed due to tax disputes can lead to stock price crash risk, the risk of the company's stock price suddenly dropping drastically in a short time due to mispricing of stock prices, which can lead to investors suffering capital loss.

The Association Between Income Smoothing and Idiosyncratic Risk in The Company Which Disclose More Integrated Reporting Items

The result of the main model test (Model 2) suggests that the interaction between income smoothing and integrated reporting is negatively associated with idiosyncratic risk. However, additional sensitivity model testing (Model 4) shows that the interaction of income smoothing and integrated reporting does not affect idiosyncratic risk. For further analysis, this study employs the main model test result. Integrated reporting has a role in maximizing control over income smoothing activities in reducing idiosyncratic risk. Based on stakeholder theory, the implementation of integrated reporting has met the needs of investors for transparency in accrual accounting policies, especially regarding the practice of income smoothing. With integrated reporting, investors can be more sensitive to income smoothing information which is considered an efficiency measure taken by managers. Investors are more interested in the impact of integrated reporting on the company's reported earnings, which is important information used in making investment decisions (Shirabe & Nakano, 2019). The result of this study does not confirm some previous works of literature that state that the implementation of integrated reporting elements based on the integrated reporting framework is still not maximally carried out in Indonesia (Chariri & Januarti, 2017). Although Bhimantara & Dinarjito (2021) stated that information from the disclosure of integrated reporting elements does not provide much information value to investors, this condition does not apply to income smoothing activities by managers.

Currently, in Indonesia, the nature of disclosure of integrated reporting in Indonesia is still voluntary (Bhimantara & Dinarjito, 2021; Chariri & Januarti, 2017). Based on stakeholder theory, the needs of stakeholders can be more effectively fulfilled by the company if it is supported by mandatory implementation through law (Parmar et al., 2010). Therefore, implementing integrated reporting should be more effective if rules require it. However, the mandatory implementation of integrated reporting does not have much impact in the short term (1 – 3 years) but can have a positive impact on integrated performance levels in the medium term (4 – 5 years) (Loprevite et al., 2018). Given a very complex accounting system of manufacturing companies, Integrated reporting allows investors to employ financial and non-financial information to build a more comprehensive understanding of the company's business practices. Integrated thinking may help to improve investors' foresight and allows wider scrutiny from various stakeholders to reduce manager opportunism and prevent companies from engaging in detrimental practices.

Based on the integrated reporting index, the weakest element in its implementation is the business model element and the performance element, which has just been fulfilled by an average of 44.8% and 35.4% of the maximum value of each element. It indicates that the disclosure of business processes and company performance details is still limited, or the company does not intend to be fully open to fulfill only voluntary disclosures. Managers possibly undertake selective disclosure in integrated reporting to manage risk. The integrated reporting framework has provided convenience, allowing companies not to disclose material information if the information can cause competitive losses (IIRC, 2013). Companies can choose which information from business processes needs to be disclosed by the company while still following the concept of disclosing business model elements and performance elements.

However, the disclosure of integrated reporting elements can reduce the asymmetric information carried out by managers. One element of integrated reporting that is influential in controlling this opportunistic perspective is the element of governance because the fundamental purpose of corporate governance is to ensure that managers place the interests of the company and shareholders above their interests and to help ensure that all stakeholders' financial interests get a return on their financial investment (Ghafoor et al., 2019). On average, manufacturing companies in Indonesia have implemented governance elements quite well, an average of 72.3% of the maximum number of elements. Companies with better corporate governance mechanisms tend to have lower idiosyncratic risk (Ghafoor et al., 2019). Then, the existence of an audit committee, the expertise of the audit committee (in accounting or finance), and the frequency of audit committee meetings (Chariri & Januarti, 2017) that go well can improve the quality of the implementation of integrated reporting elements in Indonesia. This condition can optimize the efficient contract of income smoothing that can benefit shareholders.

The Association Between Tax Avoidance and Idiosyncratic Risk in The Company Which Disclose More Integrated Reporting Items

The result of the main model test (Model 2) suggests that the positive association between tax avoidance and idiosyncratic risk becomes higher in the company which conducts integrated reporting. The result of this test is supported by an additional sensitivity test model (Model 4). Based on stakeholder theory, with the implementation of integrated reporting, investors' needs for transparency of corporate tax management can be fulfilled so that investor trust in company shares will increase. From the investor's perspective, excessive tax avoidance can lead to potential tax evasion actions that cross the line, resulting in concerns about tax evasion practices and concerns about sanctions for tax disputes that may occur in the future. This condition is strengthened by the existence of integrated reporting, which is considered unable to meet the needs of investors in monitoring the risks of tax avoidance practices carried out by managers. Integrating reporting should reduce conflicts between stakeholders and companies which is the biggest threat in agency theory so that companies can be managed better. The information submitted in the integrated reporting may be claimed unilaterally by the manager, which can be detrimental to the company.

The implementation of integrated reporting in Indonesia is still voluntary, and there is still no independent institution that assesses the implementation. Thus, unilateral claims from managers in implementing integrated reporting, which may not describe the actual activities and conditions, can be dangerous if there are other manager activities, such as tax avoidance.

Ideally, applying the concept of integrated thinking in integrated reporting can reduce the opportunistic nature of the company. Integrated thinking implies a robust system that can penetrate all layers of the organization and impact all strategic and operational goals and processes (Oliver et al., 2016). Integrated thinking can help companies identify and report material problems, both positive and negative, in the context of broader organizational value creation (Ahmed Haji & Anifowose, 2016). Disclosure of company information through integrated reporting can lead to behavioral changes and improved organizational performance (Herath & Gunarathne, 2016) because the implementation of integrated reporting aims to embed the concept of integrated thinking into business practices, resulting in better decision-making and good corporate actions (Shirabe & Nakano, 2019). The company will consider the risks that must be faced if it violates tax regulations to save taxes, namely the risk of being subject to administrative sanctions or tax criminal sanctions and the risk of a bad image in the investors' perception.

Based on the descriptive statistical information in Table 2, the organizational overview and external environment and the elements of risk and opportunities are quite good, with an average implementation value of 81.2% and 51.9% of the maximum value of each element. Elements of organizational overview and external environment should make the company pay more attention to the applicable regulations, including tax regulations that the company must comply with. Then the elements of risk and opportunities can make companies apply the organizational approach to any real risk for the organization's sustainable ability to create value and risks that can have extreme consequences, even when the likelihood of their occurrence may be considered quite small (IIRC, 2013), including tax risks and legal risks. However, a unilateral claim from the manager indicated that the actual condition was suspected of being unable to work properly because it resulted in tax avoidance being considered riskier. Although tax avoidance does not violate applicable laws and regulations, implementing integrated reporting can increase the company's risk. In addition, from the investor's point of view, it is expected that the implementation of integrated reporting has not been carried out well by manufacturing companies in Indonesia because it can reduce shareholder utility, including company value.

Being capital-intensive and cost-intensive, manufacturing companies are prone to tax avoidance to maintain an adequate amount of operating cash flow and improve profitability to keep investment inflow. In this case, Integrated reporting may add more tools for managers to manage public perception. Meanwhile, selective disclosure may further restrain stakeholders' scrutiny from avoiding the detection of tax avoidance. While financial reports are subject to heavy scrutiny from regulators, the same thing can not be said about integrated reporting. The absence of integrated reporting standardization in Indonesia provides tremendous leniency for the quality of information contained within integrated reporting. Instead of reducing asymmetric information, integrated reporting can be designed to create an information gap purposefully. The more concealed tax avoidance scheme prevents risk-averse investors from making gradual price adjustments through piecemeal risk diversification to any indication of tax avoidance, leading to imminent downward stock price adjustments when sanctions, fines, and litigation costs finally occur.

CONCLUSIONS

This study finds that income smoothing does not affect idiosyncratic risk. Company financial information (including earnings information for the analysis of income smoothing practices) has been reflected in the stock price, but there is no significant change in the stock price. This condition occurs because stock market participants are suspected of not responding to the income smoothing information. Also, this study finds that tax avoidance increases idiosyncratic risk. Information about tax avoidance practices can lower stock prices because investors' belief in companies decreases. Integrated reporting has a moderating role in weakening the effect of income smoothing to decrease idiosyncratic risk. However, the effect of tax avoidance on idiosyncratic risk is higher in the company which conducts integrated reporting. This finding shows that there has been an appropriate integrated reporting application, but there is also an application of integrated reporting, which is merely a unilateral claim from the manager.

This study still has a limitation. The existence of several criteria in determining the sampling has reduced the number of samples that can be used in this study. Future research can use larger sectors such as non-financial companies to obtain more comprehensive research results. In addition, further research can use data from other state companies to compare the test results with this study.

Based on the results of this study, the suggestions offered are as follows. This study suggests that the Indonesian Tax Authority considers idiosyncratic risk as part of the criteria for profiling taxpayers in preparing the Compliance Risk Management (CRM) program for corporate taxpayers listed on the IDX. The Indonesia Tax Authority can collaborate with The Indonesia Financial Service Authority to use big data technology to collect financial statement analysis data for companies listed on the IDX, including idiosyncratic risk data.

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