Corporate Financial Ratios and the Financial Reporting-Tax Trade-Off

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ABSTRACT

The research aims to determine the trade-off between the aggressiveness of financial reporting and taxation faced by management. By taking a sample of 230 company observations on the Indonesia Stock Exchange (BEI) for the 2019-2021 period using a purposive sampling method, this study analyzes the influence of five financial variables on the trade-off between financial reporting aggressiveness and taxation, including debt ratio, debt maturity, financing deficit., internal and external capital market funding ratios, and profitability. The analysis used is multiple linear regression. The research results show that the level of debt ratios, long-term debt and financing deficits have a positive influence on the aggressiveness of financial reporting, while the funding ratio in the external capital market and profitability have a significant negative influence. This study provides guidance to auditors to carefully examine a company's financial statements to ensure compliance with accounting standards and fairness.

Keywords: Book-tax trade off; Financial ratio; Earnings management; Tax aggressiveness

Rasio Finansial Perusahaan dan Trade-Off Pelaporan Keuangan-Perpajakan

ABSTRAK

Penelitian bertujuan mengetahui trade-off antara agresivitas laporan keuangan dan perpajakan yang dihadapi manajemen. Dengan mengambil sampel 230 amatan perusahaan di Bursa Efek Indonesia (BEI) periode 2019-2021 menggunakan metode purposive sampling, studi ini menganalisis pengaruh lima variabel keuangan pada trade-off antara agresivitas pelaporan keuangan-perpajakan, termasuk rasio utang, jatuh tempo utang, defisit pembiayaan, rasio pendanaan pasar modal internal dan eksternal, serta profitabilitas. Analisis yang digunakan adalah regresi liner berganda. Hasilnya penelitian menunjukan tingkat rasio utang, utang jangka panjang, dan defisit pembiayaan memberikan pengaruh positif terhadap agresivitas pelaporan keuangan, sementara rasio pendanaan pada pasar modal eksternal dan profitabilitas memberikan pengaruh negatif yang signifikan. Studi ini memberikan panduan kepada auditor untuk memeriksa laporan keuangan perusahaan dengan hati-hati demi memastikan kepatuhan terhadap standar akuntansi dan keadilan.

Kata Kunci: Trade-off pelaporan; rasio keuangan; manajemen laba; agresivitas pajak

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INTRODUCTION

Managers are responsible for fulfilling company's tax obligations in accordance with tax law provisions. At the same time, companies are obliged to apply accounting principles in accordance with applicable standards. In addition to complying with these two regulations, management also plays a big role when it comes to strategic decisions that affect the company's sustainability(Koh & Lee, 2015). This creates incentives and pressure for management to keep tax compliance in mind and maintain good corporate performance while minimizing corporate tax costs.

Management who are able to properly minimize their taxes can be one of many sources of funding. However, if a company wants to do tax saving, they cannot report high commercial profits. Conversely, if management decides to be more aggressive with financial reporting to maximize profits, this will, of course, be directly proportional to the increased tax costs payable. If management does not want to do this, they will be forced to file aggressive tax returns which will lead to unfavorable impact on the company, since the performance reported is lower. This dilemma faced by management leads to book-tax trade-offs for companies to choose between being aggressive in tax planning or earnings management. (Hashim et al., 2016; Surahman & Firmansyah, 2017). Excessive financial reporting aggressiveness can lead to and create risks for businesses in the manipulation of corporate financial statements, while tax aggressiveness can also lead to tax avoidance and evasion. For this reason, the factors that influence the occurrence of inevitable trade-offs in financial statements and those that companies encounter are issues that warrant further investigation.

Tradeoffs between tax and financial reporting are closely related to company financial factors. Shortages of funds have a significant impact on management's tax and financial reporting decisions. As financial constraints emerge and create barriers to funding, companies are encouraged to maximize performance through revenue management. On the other hand, firms seek to minimize their tax burden in order to reduce the burden and maximize internal funding (Edwards et al., 2016).

Previous research on financial and tax reporting aggressiveness related to financial factors was separately examined. Having leverage has been shown to negatively impact financial reporting aggressiveness(Widagdo et al., 2021), and financial distress is positively associated with tax reporting aggressiveness (Tilehnouei et al., 2018). Agustia & Suryani (2018) also proved that leverage has a significant impact on revenue management. Lastly, profitability was shown to have a positive impact on tax avoidance (Marlinda et al., 2020). Against these backgrounds, the author wants to investigate the trade-offs faced by companies when choosing aggressiveness towards one of the reports in terms of financial ratios. This research is done in different economic background from previous researches, since the sample will be taken from developing countries and during the outbreak pandemic years. These financial ratios are the level of debt ratio, debt maturity, financing deficit, external and internal capital market ratio, and profitability.

In order to investigate management decisions in choosing one strategy, this research will take a number of samples of companies listed on the Indonesia Stock

Exchange. Back in 2016, the Indonesian government reformed the third tax provisions to reduce the loopholes contained in the previous tax provisions. The number of companies listed on the Indonesian Stock Exchange is also increasing, which will lead to a significant increase in corporate investment from 2018 to 2022. Therefore, this issue is interesting, related to exploring the effect of companies' financial factors on book-tax trade-offs in Indonesia.

The contribution to be made through this research is to increase literacy on the conflicts faced by management regarding aggressive decisions towards one of the reports, both in Indonesia and globally. In addition, this research can help the tax authorities to determine taxpayers who have a higher risk of tax evasion for companies that have aggressiveness in tax reporting. This research will also help auditors to be more careful in examining financial reports if companies are indicated to be aggressive in financial reporting to ensure that the financial reports prepared are fair and in accordance with applicable accounting standards.

The trade-off theory (Modigliani & Miller, 1963) assumes that there are tax benefits due to the use of debt. However, on the one hand, financial costs have increased due to high financing costs. Therefore, companies need to sacrifice several things in order to achieve a balance between costs and profits. When it comes to financial and taxation reporting, the management tends to face trade-offs in making decisions. In order to achieve balance, companies are forced to choose one reporting tendency.

Agency theory emerges when there is a contractual relationship between the principal and agent to act and decide on behalf of the principal. Management as agent is obliged to manage the firm's resources. This theory acknowledges that conflict of interest exists between the principal and agent to pursue their own interest. Supervision for the agents or directors to act on the principal's behalf will incur a cost for the principal (Jensen & Meckling, 2019). When it comes to taxation, conflict of interest occurs between the principal (tax authorities) and agent (company). Companies are asked to pay taxes according to the tax laws by the government. On the other hand, management tries to minimize tax burden to maximize company's cash flows and profit through tax aggressiveness.

Financial reports hold a variety of important information, such as industry information, economic conditions, company market share, management quality and others. To meet management's objectives related to financial performance, management will tend to report higher commercial profits, which is referred to as aggressive financial reporting. On the other hand, regarding the obligation to pay taxes, management tends to report lower profits for the sake of lower tax burdens, known as tax reporting aggressiveness. As a result, in making tax and financial reporting decisions, managers often face a book-tax trade-off. Moreover, public companies listed on the Indonesia Stock Exchange are required to report their annual reports to their shareholders. Managers will try to attract investors and satisfy all stakeholders by taking aggressive actions in terms of financial reporting to maximize the profits reported in the company's financial statements. Financial reporting aggressiveness can be defined as actions to maximize profits through earnings management, by complying with or violating existing accounting standards (Frank et al., 2009). Not only stakeholders, third parties such as banks and other financing agencies are also one of the factors driving a company to carry

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out financial reporting aggressively. In order to obtain financing funds from external parties, the manager will increase the company's profits. As a result, the action to report high book income will also lead to increased tax costs.

In contrast, aggressiveness in tax reporting is a situation where managers try to minimize company profits through tax planning to reduce tax costs that must be incurred (Frank et al., 2009). One of the incentives to minimize costs is the tax burden which is one of the supporting factors for companies to carry out tax aggressive reporting. By reporting a minimum profit, the tax cost will be reduced. The practice of tax aggressiveness reporting will make the company's book-income smaller. Meanwhile, shareholders prefer high corporate profits over low book-income. It can be concluded that investor decisions can be affected due to trade-offs faced by managers in tax and financial reporting decisions(Ledewara et al., 2020).

Leverage is often linked with earnings management practices. According to the covenant hypothesis, managers who violate credit agreements tend to choose accounting methods that have the effect of increasing profits. This encourages management to try to give a good impression of the company's performance in order to meet reasonable debt limit arrangements, thereby motivating managers to practice earnings management (Ghazali et al., 2015; Suffian et al., 2015 ; Wardhani & Anggraenni, 2017). Managers also don't want their performance to be judged unfavorably if earnings are reported as conservative. The higher the debt-to-equity ratio, the higher the risk the company faces, which forces the company to convince external stakeholders to finance. This is what drives a company to have a high enough debt ratio to maximize accounting returns on financial statements and minimize financial reporting costs (Watts & Zimmerman, 1986).

On the other hand, debt financing is not only related to financial reporting but also to tax savings, which results in the alleged relationship between debt ratios and earnings management not being monotonic as described in the debt covenant hypothesis. Funding through debt will generate tax benefits because there are interest costs that can be used as a deduction from company profits. Consequently, companies with higher debt ratios result in lower tax costs (Koh & Lee, 2015). However, excessive debt financing increases the company's tax costs. Jeon (1997) and Koh (2015) proved in their research conducted in Korea that companies with too high debt costs resulted in an increase in effective tax rates (ETR). Almost the same as Korean regulations, the Law on Harmonization of Tax Regulations on the Income Tax Cluster stipulates certain limits regarding the limits on debt costs that may be used as a deduction from gross profit, namely the DER ratio (debt equity ratio) of 4:1.

H1a: Firms below a certain debt ratio level have a positive impact on financial reporting aggressiveness

H1b: Firms above a certain debt ratio level have a positive impact on tax reporting aggressiveness.

Based on its maturity, there are two different types of debts, namely short-term debt and long-term debt. When a company has significant short-term debt, it will greatly affect the liquidity risk. Due to poor cash flow, the company will hardly obtain funding. This encourages companies to present their financial reports better in the eyes of lenders. For this reason, companies that have

significant short-term debt will tend to be aggressive in financial reporting (Koh & Lee, 2015)

However, on the other hand, a high proportion of long-term debt can be one of many indicators of financial distress faced by companies. This circumstance will motivate managers to boost their income upwards by earning management. This is supported by the debt covenant hypothesis, which states that managers will refrain from violating debt agreements since doing so could result in fines from creditors, such as suspension of their ability to conduct business. Thus, using earnings management as a management tool can help to lessen the likelihood of debt covenant violations. (Christiawan & Rahmiati, 2014)

H2: Firms with significant long-term debt have a positive impact on financial reporting aggressiveness.

Facing a financing deficit will be one of many factors for firms to obtain a supply of funds from outside parties, such as banks or issuing bonds and shares. Based on the pecking order theory related to capital structure, it explains that management has a preference for internal funding before external funding. Unfortunately, it will be difficult for companies with poor financial performance, especially firms with financing deficits to get loans or issue bonds and stocks at good prices. This will trigger the managers to be aggressive in financial reporting in order to attract the attention of fund providers (Koh & Lee, 2015)

H3: Firms with financing deficits have a positive impact on financial reporting aggressiveness.

Firms can obtain funding both externally and internally. When a company has more external capital market financing, they will tend to have lower financial reporting costs because there are fewer incentives available to make companies more attractive to investors. Similarly, when a company has more internal capital market financing, the pressure it faces will decrease in line with financial reporting costs. The pressure faced by companies will be lower for companies having more internal financing compared to external financing, given that there will be fewer debt contract constraints(Koh & Lee, 2015). Summarizing these two things, it is suspected that companies that high level of external and internal, namely the external capital market financing ratio (ECM) and internal capital market financing ratio (ICM) will tend to do tax avoidance compared to earnings management.

H4a: Firms with higher external capital market financing have a positive impact on tax reporting aggressiveness.

H4b: Firms with higher internal capital market financing have a positive impact on tax reporting aggressiveness.

According to agency theory, a conflict of interest will be faced by the tax authorities and the firm. While the tax authorities as the principle try to maximize the tax revenues, firms on the other hand as the agent will try to generate the taxable profit to minimize the tax burden. Profitability ratio rises as the firm's profit increases. Due to high profit, the tax imposed on company profit will get even higher. Companies with a high profitability ratio will be very reluctant to pay high amounts of taxes and tend to practice tax avoidance (Marlinda et al., 2020;Pitaloka & Merkusiwati, 2019;Sonia & Suparmun, 2019; Wiratmoko, 2018)

H5: Firm's profitability ratio has a positive effect on tax reporting aggressiveness.

RESEARCH METHOD

The sampling method that is used in this research is purposive sampling method. Initially, this research sample consists firms listed on Indonesian Stock Exchange (BEI) for the period between 2019 and 2021. Due to the unique nature of financial data, we eliminate all the financial companies from the sample. This research also takes out companies that listed outside the top 200 market cap to equalize the scale of companies taken as samples. Additionally, for homogeneity, we eliminate firms with non-December year-end and firms with insufficient financial data from the sample. The data are collected from the Bloomberg databases. We exclude companies with both high (low) earning management and tax avoidance from the sample because of the firms' unclear strategy since they are high (low) in both. Outliers were also winsorized for better outcomes. Procedures mentioned above led to the final sample, which included 230 firm-years samples.

Table 1. Sample Selection

Category	2021	2020	2019
Non-financial companies listed on IDX	613	613	613
Non-financial companies listed outside the top 200 market cap	(413)	(413)	(413)
Non-financial companies with non-December year-ends	(6)	(6)	(6)
Non-financial companies with insufficient financial data	(8)	(6)	(7)
High BTD – High DA	(53)	(53)	(60)
Low BTD – Low DA	(50)	(65)	(38)
Outlier	(4)	(2)	(6)
Final Sample	79	68	83

Source: Research Data 2021

This research model uses modified Jones model as a proxy of financial reporting aggressiveness and Modified Desai and Dharmapala Model to measure tax aggressiveness. Since the dependent variable in this experiment (EMTM) is dummy variable, therefore logistic regression is being used to explore further the impact of financial factors on the book tax trade-offs faced by firms:
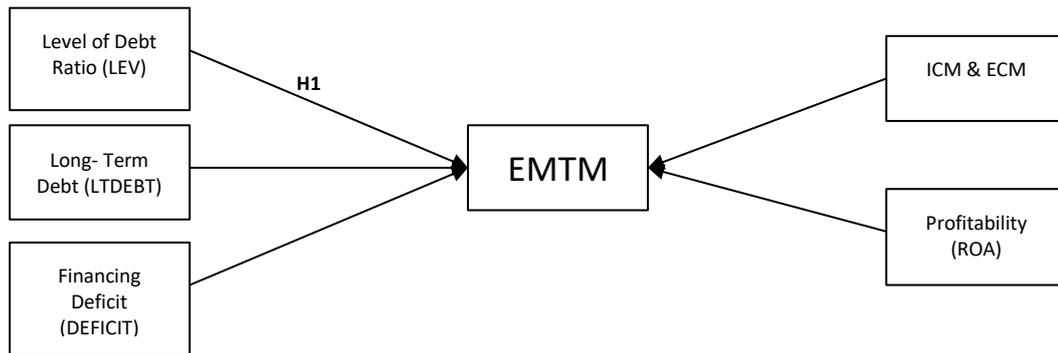
$$\text{EMTM}_{i,t} = \beta_0 + \beta_1 LEV_{i,t} + \beta_2 LEV^2_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 REV_{i,t} + \beta_5 OWN + \beta_6 FOR_{i,t} + \beta_7 BIG_{i,t} + \beta_8 \sum IND + \varepsilon_{i,t} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

$$\text{EMTM}_{i,t} = \beta_0 + \beta_1 LTDEBT_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 REV_{i,t} + \beta_4 OWN + \beta_5 FOR_{i,t} + \beta_6 BIG_{i,t} + \beta_7 \sum IND + \varepsilon_{i,t} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (2)$$

$$\text{EMTM}_{i,t} = \beta_0 + \beta_1 DEFICIT_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 REV_{i,t} + \beta_4 OWN + \beta_5 FOR_{i,t} + \beta_6 BIG_{i,t} + \beta_7 \sum IND + \varepsilon_{i,t} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (3)$$

$$\text{EMTM}_{i,t} = \beta_0 + \beta_1 (ECM \text{ or } ICM)_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 REV_{i,t} + \beta_4 OWN + \beta_5 FOR_{i,t} + \beta_6 BIG_{i,t} + \beta_7 \sum IND + \varepsilon_{i,t} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (4)$$

$$\text{EMTM}_{i,t} = \beta_0 + \beta_1 ROA_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 REV_{i,t} + \beta_4 OWN + \beta_5 FOR_{i,t} + \beta_6 BIG_{i,t} + \beta_7 \sum IND + \varepsilon_{i,t} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (5)$$

Image 2. Research Model

Source: Research Data 2023

Firms level of debt is measured by LEV1 where total debt is divided by total asset. LTDEBT1 is the proportion of long-term debt divided by total. DEFICIT represents financing deficit as the total payments including capital expenditure, working capital, dividend paid and debt maturing for the year minus the cash flow from operating activity divided by assets. Meanwhile, return on assets as an indicator of firms' profitability. Proxies of to the capital market financing ratio are ICM or ECM. ICM is an internal capital market and measured by the proportion of debt from related parties divided by total asset, while ECM as external capital market proxies measured from dividing liability and market value by total assets ROA as profitability proxy in this study is measured by net income divided by total asset. Firm size (SIZE) is the natural logarithm (ln) of the total assets of the firm. Change in sales to total assets (REV) is defined as the ratio of changes in sales to total assets. Foreign ownership shareholder (FOR) is determined by the total proportion of common shares held by foreigners. OWN is determined by proportion of common shares held by major shareholders. BIG is dummy variable for external auditor. If the company is audited by the Big 4 auditors the score will be = 1; otherwise, the score will be 0, and IND is industry dummy.

EMTM as the dependent variable in this study is an indicator showing firms' tendency between book-tax trade off. EMTM with 0 value indicates firms tend to be aggressive on their tax reporting while 1 means that firm tends to be aggressive on financial reporting by boosting financial income upward. Aggressive financial reporting firms are indicated by the high discretionary accrual value and low level of tax aggressiveness. On the other hand, firms with tax reporting aggressiveness have lower level of discretionary accrual and higher level of tax aggressiveness. Firm is having EMTM value of 0 when tax aggressiveness level is above the median value while earning management level is below the median value. Conversely, firm will have EMTM value of 1 when the level of earning management is above the median value while the tax aggressveness level is below the median value of the samples.

Tax aggressiveness level is measured using adjusted Desai & Dharmapala, (2006) model that is regressing abnormal book tax difference and discretionary accrual, since abnormal book tax difference is composed by level of earning management and level of tax aggressiveness.

$$ABTD_{i,t} = \alpha_1 DA + \varepsilon_{i,t}$$

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ABTD is estimated using Tang's Abnormal BTD (2011). Tang's abnormal book tax difference shows ABTD as the residual portion of regressing BTD on changes in the investment in PPE and intangible asset, changes in revenue, net operating loss and the value of compensation tax losses utilized.(Tang, 2015)

$$BTD_{i,t} = \alpha_1 \Delta INV_{i,t} + \alpha_2 \Delta REV_{i,t} + \alpha_3 NOL_{i,t} + \alpha_4 TLU_{i,t}\ \varepsilon_{i,t}$$

Discretionary accrual value is an indicator showing level of earning management within a firm. Discretionary accrual is measured by the difference between total accrual and non-discretionary accrual. Total accrual is measured by subtracting CFO from the Net income. The residual portion of this equation shows the value of discretionary accrual using Modified Jones Model (1995):

$$\frac{TACC_{i,t}}{TA_{i,t-1}} = \alpha_1 + \alpha_2 \frac{1}{TA_{i,t-1}} + \alpha_3 \frac{\left(\Delta REV_{i,t} - \Delta AR_{i,t}\right)}{TA_{i,t-1}} + \alpha_4 \frac{PPE_{i,t}}{TA_{i,t-1}} + \varepsilon_{i,t}$$

Where TACC is total accrual for the firm i and year t, TAi, t-1 is for the total asset firm i in the beginning period, REV is net sales revenue, AR is receivables, PPE i,t is the property, plant and equipment firm i and Δ is change operator.

The independent variables in this research are namely level of debt ratio (LEV), debt maturity (LTDEBT), financing deficit (DEFICIT), internal capital market financing (ICM) or external capital market financing (ECM), and profitability (ROA). Also, several control variables are being used in this study to mitigate the risk that the dependent variable is also affected by other factors beside the independent variables. The variables are such as firm size (SIZE), changes in sales to total assets (REV), which are suspected can affect firms' earning management (Watts & Zimmerman, 1986), foreign shareholder ownership (FOR), major shareholder ownership (OWN), since governance characteristics variables may have an impact on a company's earning management and tax aggressiveness(Desai & Dharmapala, 2006), external auditors (BIG), and industry (IND).

Data analysis stages in this study are as follows: (1) Descriptive analysis is performed in order to provide the description of the observation variables. (2) To assess model fit and feasibility test, Hosmer and Lemeshow's Goodness of Fit Test is used in this study. If the Hosmer and Lemeshow test values are less than 5%, the null hypothesis is rejected and indicates that the model is not able to predict the value of the observations. On the other hand, when the value of Hosmer and Lemeshow's value is above 5%, it shows that the model is feasible and able to predict the dependent variable. (3) McFadden's R square test. McFadden's R-squared is used by the reason of the dependent variable is dummy and ranges from 0 to 1. The purpose of this test is to show how well the dependent variable is explained by the model. (4) A statistical method known as logistic regression analysis is used in this study since the dependent variable is binary and limited between the value of 0 and 1. (5) Hypothesis testing. Generally, the 5% level of significance is used as the basis for comparison with probability values. If the probability value is lower than 5%, the regression is considered significant and the independent variable has a large and significant effect on the dependent variable. Conversely, it can be implied that the regression is insignificant where the probability value is above 5%.

RESULTS AND DISCUSSION
Table 3. Descriptive Results

Variable	Obs	Mean	Std. dev.	Min	Max
EMTM_binary	230	0.370	0.484	0.000	1.000
LEV1	230	0.429	0.266	0.003	3.139
LEV1²	230	0.255	0.660	0.000	9.851
LTDEBT1	230	0.220	0.239	0.000	0.926
ROA	230	0.042	0.066	-0.229	0.270
ICM	230	0.017	0.029	0.000	0.151
ECM	230	1.559	1.142	0.216	7.537
DEFICIT	230	0.001	0.189	-0.316	2.289
SIZE	230	29.057	1.682	24.570	33.537
REV	230	0.038	0.257	-0.841	1.762
OWN	230	0.558	0.209	0.000	0.925
FOR	230	0.259	0.305	0.000	0.982
BIG	230	0.413	0.493	0.000	1.000
IND	230	3.730	1.930	1.000	7.000

Source: Research Data 2021

There are 145 observations of the 230 total samples classified as aggressive in tax reporting and (EMTM = 0) and there are 85 observations out of 230 total samples for the EMTM 1 indicating firms classified as financial aggressive. Firms level of debt is measured by LEV1 has the mean value of 0.4292191, standard deviation of 0.266411, minimum value of 0,002672 and maximum value of 3.138601. The proportion of long term debt of financial structure shown by LTDEBT1 has an average value of 0.219995, standard deviation of 0.239011, minimum value of 0 and maximum value 0.925695. Financing Deficit (DEFICIT) has mean value of 0.000925, and it has minimum value of -0.31637 and maximum value of 2.289036. The minimum value of financing deficit is below zero due to the operating cashflows is bigger than the capital expenditures and net increase in working capital. Meanwhile, return on assets as an indicator of firms' profitability has a mean value of 0.042444, minimum value of -0.22927 and maximum value of 0.269563, and standard deviation of 0.065922. ICM is an internal capital market has mean value of 0.017047, minimum value of 0 and maximum value of 0.150746, and standard deviation value of 0.08867. Meanwhile, ECM has mean value, standard deviation, minimum and maximum value of 1.558582, 1.142223, 0.215835, 7.536538. Compared to the other variables, ICM has the lowest value of standard deviation, while ECM has the highest value of standard deviation. This means that the value of the sample is more diverse for the external capital market financing and less diverse value for debt from related parties.

Table 4. Feasibility of Regression Model – Hosmer-Lemeshow Test

	LEV1	LTDEBT1	DEFICIT	ICM	ECM.	ROA
Hosmer - Lemeshow chi²	14.110	3.350	11.690	5.370	14.000	14.200
Prob> Chi square	0.079	0.911	0.167	0.717	0.082	0.077

Source: Research Data 2021

Hosmer and Lemeshow's Goodness of Fit test is used to assess the feasibility of the logistic regression model in this study. If the probability chi square value of this test is more significant than 0.05, it means the logistic regression model is able to predict the value of the observations. In other words, the model can be used since the observational data is able to predict the population and resulting the model indicates a good fit or the model matches the data of observations. The test results in **Table 3** shows that for all the independent variables including LEV, LTDEBT, DEFICIT, ICM, ECM, and ROA have the sig (opportunity) value of 0.079, 0.9107, 0.1655, 0.7172, 0.0819, and 0.0767. Hence, all logistic regression models in this study are feasible and adequate to explain, further analysis, and conclude the population based on sample data.

Table 5. Feasibility of Regression Model – McFadden R-squared

	LEV1	LTDEBT1	DEFICIT	ICM	ECM.	ROA
McFadden R-squared	0.238	0.285	0.210	0.139	0.151	0.324

Source: Research Data 2021

Table 4 shows the Pseudo R-squared by McFadden for the models. It concludes that the dependent variables in the models can be explained by the independent variables: LEV by 23.8%, LTDEBT by 38.51%, DEFICIT by 20.98%, ICM by 13.86%, ECM by 15.12%, and ROA by 32.38%.

Table 6. The results of logistic regression for debt ratio

	Coeff	P>z	Odd Ratio
LEV1	6.616	0.000	746.945
LEV1²	-1.877	0.002	0.153
SIZE	-0.205	0.096	0.815
REV	4.047	0.000	57.222
OWN	0.745	0.368	2.106
FOR	-1.061	0.076	0.346
BIG	-0.978	0.015	0.376
IND	0.218	0.014	1.244
_cons	2.137	0.532	8.471

Source: Research Data 2021

Table 5 shows the logistic regression between debt ratio (LEV1) and EMTM. The results proved that LEV1 has a positive coefficient of 6.615991 with significance 0.000 and Pseudo-R2 value of 0.2380. This means that there is a significant impact between the leverage variables and the aggressive decision of the statements. Positive variable coefficient of LEV1 indicates that there is a positive impact from leverage towards financial reporting aggressiveness. High leverage gives motives for management to practice beneficial earning management to make a good impression for creditors about the company's overall performance. This finding is consistent with our hypothesis and research done by Ghazali et al., (2015), Suffian et al., (2015), Wardhani & Anggraenni (2017). This research conclude that H1a is accepted

The coefficient values of quadratic debt ratio (LEV1²) have a negative coefficient of -1.8771 and significant value of 0.002 and show that there is tendency of aggressive tax reporting as debt level increases when it exceeds a certain limit. This is mainly due to Indonesia's thin capitalization law regarding certain limits

on interest expense that may be used as a deduction from gross profit in calculating income tax payable, namely the DER ratio of 4:1. This is also consistent with our hypothesis and previous studies such as Koh & Lee (2015). Therefore, H1b is accepted.

Table 7. The results of logistic regression for long-term debt

	Coeff	P>z	Odd Ratio
LTDEBT1	5.344	0.000	209.236
SIZE	-0.350	0.010	0.705
REV	5.323	0.000	204.942
OWN	1.152	0.186	3.166
FOR	-0.609	0.325	0.544
BIG	-1.353	0.008	0.321
IND	0.211	0.023	1.235
_cons	7.227	0.054	1376.428

Source: Research Data 2021

Regarding Table 6, it can be inferred that long-term debt in Model 2 has a positive and significant impact towards the aggressiveness of financial reporting with significance level less than 0.05. The positive coefficient of LTDEBT1 approximates the long-term debt ratio of 5.343. Pseudo-R2 value for this model is 0.2851. The positive impact from long-term debt towards the aggressiveness of financial reporting indicates that financial reporting cost is higher than tax cost. In other words, firms with lower long-term debt tend to be tax aggressive. This is because management could benefit from debt interest expense for their long-term tax saving. On the other hand, interest expense from long-term debt will deduct income from the company for a long-term period. This means firms that have higher long-term debt will have a tendency to make their reporting profit higher. This outcome is in line with Christiawan & Rahmiati (2014); Kurniawati (2017) which shows a negative association between long term debt and tax aggressiveness. Therefore, referring to the logistic regression results, H2 is accepted.

Table 8. The results of logistic regression for financing deficit

	Coeff	P>z	Odd Ratio
DEFICIT	5.959	0.000	387.277
SIZE	0.012	0.918	1.012
REV	4.823	0.000	124.364
OWN	0.705	0.380	2.024
FOR	-0.897	0.131	0.408
BIG	-1.168	0.003	0.311
IND	0.158	0.064	1.172
_cons	-1.418	0.662	0.242

Source: Research Data 2021

Results of logistic regression for Model 3 are as shown in Table 7. The coefficient of 5.9591 with significant value of 0.0000 and Pseudo-R2 0.209 means that there is a positive impact from financing deficit and financial aggressiveness. Firms with financing deficits tend to manage their earnings upward to give positive signals for creditors and investors. The reason is that firms reporting their financial losses will result in financial funding constraints for the firm to obtain

loans from financial institutions. On the other hand, firms already have tax benefits since Indonesian tax law allows Tax law carryforward for the next 5 years. This will increase financial reporting cost for the firm and lower tax reporting cost. Therefore, a high level of financing deficit can incentivize managerial opportunism aimed at presenting the company as financially robust within its financial report. Results are consistent with our hypothesis so that H3 is accepted.

Table 9. The results of logistic regression external capital market ratio

	Coeff	P>z	Odd Ratio
ECM	-0.325	0.047	0.723
SIZE	-0.018	0.868	0.982
REV	3.822	0.000	45.705
OWN	0.056	0.942	1.057
FOR	-0.775	0.169	0.461
BIG	-1.130	0.002	0.323
IND	0.124	0.128	1.132
_cons	0.422	0.896	1.524

Source: Research Data 2021

Table 10. The results of logistic regression internal capital market ratio

	Coeff	P>z	Odd Ratio
ICM	4.674	0.395	107.085
SIZE	0.016	0.880	1.016
REV	3.740	0.000	42.114
OWN	-0.022	0.977	0.978
FOR	-0.731	0.195	0.482
BIG	-1.201	0.001	0.301
IND	0.139	0.089	1.149
_cons	-1.120	0.715	0.326

Source: Research Data 2021

Model 4 is to investigate the impact between financing source level from related and third parties to reporting aggressiveness, which results are shown in Table 8. The coefficient of ECM is -0.3249 with significance level below 0.05 shows that there is negative impact between external capital market financing ratio to aggressiveness in earning management. Particularly, the negative direction of the impact of ECM to earnings management aggressiveness leads to an increase in tax aggressiveness. This is because firms with good access to capital markets from third parties puts less pressure on management to manage its growing revenue. Instead, firms will tend to focus on minimizing tax cost or doing tax aggressiveness which is consistent with our hypothesis. On the other hand, ICM does not have significant impact towards firms' aggressiveness decisions. Significance level of 0.3950 shows that internal capital market financing ratio or debt from related parties have no significant effect on book-tax trade off. Internal capital market does not have significant impact on firms' trade-off between tax and accounting aggressiveness. This is due to the sample in this research which the absolute amount of debt from related parties is comparatively small in comparation with the overall financial structure of the organizations. This made the influence on tax and financial reporting aggressiveness may be overshadowed by the broader financial landscape. To conclude, H4a is accepted while H4b is not accepted.

Table 11. The results of logistic regression profitability

	Coeff	P>z	Odd Ratio
ROA	-25.001	0.000	0.000
SIZE	0.038	0.750	1.039
REV	7.677	0.000	2.157.434
OWN	0.791	0.373	2.205
FOR	-1.083	0.115	0.339
BIG	-1.016	0.024	0.362
IND	0.073	0.430	1.076
_cons	-1.205	0.730	0.300

Source: Research Data 2021

Lastly, Model 5 logistic regression outcome reveals that profitability has a negative impact on financial reporting aggressiveness as in Table 10. This is shown by negative coefficient of -25.0010 with significant value of 0.000 and the Pseudo-R2 value is 0.3238. Firms with high profitability tend to practice tax avoidance to minimize their tax cost. The results are in line with our hypothesis and previous research done by Marlinda et al., (2020), Pitaloka & Merkusiwati (2019), Sonia & Suparmun (2019), Wiratmoko (2018).

In addition, this study also found there is significant positive impact from company growth (REV) towards financial reporting aggressiveness in all of the model. Company with high growth in revenue will produce information asymmetry, and encourage managers to practice earnings management (Mujiyati et al., 2022)

CONCLUSION

This study aims to investigate the influence of financial ratios on the aggressiveness decisions of enterprises listed on the Indonesian Stock Exchange from 2019 to 2021, including level of debt, debt maturity, financing deficit, internal capital market or external capital market financing ratio, and profitability. Based on the results of logistic regression, debt ratio has a significant positive impact on EMTM, which means firms will be aggressive in financial reporting aggressiveness as debt ratio increases to a certain extent, while above certain extent debt ratio has significant negative impact on financial reporting aggressiveness. Firms with larger portions of long-term debt and a financing deficit have a significant positive impact on financial aggressiveness. On the other hand, firms with high level of the external capital market financing and high profitability have significant negative impact on EMTM. Firms with external capital market financing and profitability tend to be aggressive in tax reporting.

The findings of this research provide practical implications for the company to do tax management or earning management related to its financial structure, for the tax authorities to assessing taxpayers risk with its financial factors to indicate tax avoidance practices and for auditors in examining companies' financial reports to focus on firms that have financial factors indicating to be aggressive in financial reporting and to evaluate whether the financial reports are fair, reliable and in accordance with applicable accounting standards.

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However, this research has several limitations. This research hasn't examined the moderating effect from other variables, whereas there are other variables influencing corporate tendencies on book-tax trade-off. The research also hasn't examined the book-tax trade-off using other empirical models. For better outcomes, we suggest future researchers can investigate other additional financial variables determining firms reporting aggressiveness using different and modified empiric models. We also suggest different measurements for the dependent variable, namely book-tax trade-offs, and as well as examining the moderating influence from other variables.

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