



The effect of tax aggressiveness on firm value (Empirical study on manufacturing companies listed on the Indonesia stock exchange in 2020-2022)

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Abstract

The aims from this study is investigate the relationship between tax aggressiveness on firm value. The independent variables used in this research is tax aggressiveness which is measured using the effective tax rate and the permanent book-tax difference. Then the dependent variable in this research is firm value.

The population used in this study consists of companies in manufacturing sector listed on the Indonesian Stock Exchange. Using purposive sampling method, 237 samples used from companies in manufacturing sector which published annual reports for the period 2020-2022. This study uses panel data regression analysis with E-Views 12 to test the hypotheses.

The result from this study show that the effective tax rate has a positive influence on firm value, while the permanent book tax difference has a negative influence on firm value. Meanwhile, the two independent variables do not have a significant impact on firm value.

Keywords: Tax aggressiveness, effective tax rate, permanent book-tax difference, firm value

Introduction

Tax aggressiveness can be said to be a tax planning activity aimed at reducing taxable income without reducing accounting profit by utilizing the shortcomings of existing tax regulations and policies (Richardson, 2013) ^[24]. Meanwhile, according to Frank, *et al* (2009) ^[13], tax aggressiveness is a manipulation practice by company management aimed at reducing income used as the basis for taxation. This effort can be done with legal steps (tax avoidance) or prohibited steps (tax evasion). The advantage of companies carrying out the practice of tax aggressiveness is to reduce the tax liability they have to pay and lead to an increase in corporate profits. Therefore, the traditional view sees tax aggressiveness as a transfer of wealth from the government to the company (Chen, *et al* 2014) ^[9] which will ultimately affect the increase in shareholder wealth (Desai and Dharmapala, 2009) ^[10].

The increase in profits that can be obtained from corporate tax aggressiveness is not the only thing that can result from these activities, there are also possible real and potential costs that can affect firm value. In line with this, Campbell J L, *et al* (2020) ^[7] argue that tax aggressiveness activities can lead to fines that may occur if the tax authorities conduct an audit. Drake, *et al* (2017) ^[12] also said the same thing that corporate tax aggressiveness can have an impact on the company's reputation if investors see these actions as negative because companies do not fully pay their obligations to the government. Therefore, in addition to considering the costs incurred by companies when conducting tax aggressiveness, companies must also hide this activity from tax authorities (Desai and Dharmapala, 2009) ^[10]. In line with the above statement, companies in practice will also try to limit information with the aim of not being detected by the tax authorities (Dhaliwal, *et al* 2011) ^[11].

The company can increase shareholder wealth when the firm value is high (Wahyudi and Pawetri, 2006). Tax avoidance is also said to be a determining element of firm value as Martani, *et al* (2012) said in their research that tax

avoidance can optimize firm value. However, research written by Bamber, *et al* (2010) ^[5] reveals different things that tax avoidance will actually reduce the value of the company in a sustainable period of time.

The company's efforts to increase firm value can trigger agency conflicts. Agency conflict is a conflict that can be formed from the desire of managers as agents to obtain long-term return and value for the company, but potentially at the expense of the interests of shareholders as principals (Alijoyo and Zaini, 2004) ^[2]. The involvement of managers as agents and investors as principals causes research on this topic to use agency theory as in the research conducted by Hanlon and Slemrod (2009) ^[15]. Hanlon and Slemrod (2009) ^[15] see that tax avoidance activities have two perspectives, namely positive and negative. In a positive view, tax avoidance practices are considered as something positive because it is the company's effort in conducting tax efficiency. Meanwhile, tax avoidance practices can be considered negative because they are considered as practices that violate compliance and can result in decreased firm value.

Research related to the relationship between tax aggressiveness and firm value has been discussed in many literatures. However, these studies show inconsistencies in the conclusions obtained. Such as research by Drake, *et al* (2017) ^[12] which found that tax avoidance is considered a positive thing by investors as long as it is done with little risk. In line with that, Desai and Dharmapala (2009) ^[10] also explained that investors positively assess tax aggressiveness carried out by companies that practice good governance. Research written by Brooks, *et al* (2016) ^[6] also found a positive effect of tax avoidance on increasing firm value if it is carried out while remaining responsible for stakeholder interests.

Another study by Arora and Gill (2022) ^[3] produced opposite findings regarding the effect of tax aggressiveness on firm value. Their findings reveal that the costs used in order to carry out tax aggressiveness can be valued negatively because these costs can be considered unclear

and are actions that are not concerned with shareholders but for personal interests. In line with the research results above, Henry (2018) ^[16] concluded that tax aggressiveness can create large cash outflows in the future if the company is subject to an audit by the tax authorities. Research by Shevlin, *et al* (2019) ^[26] also found a positive relationship between tax aggressiveness and cost of debt. Similar results were also found in the research of Hanlon and Slemrod (2009) ^[15], this research says that news about tax aggressiveness can be followed by a decrease in the company's stock price. From the explanation that has been explained, the inconsistency of the results of previous research motivates the author in carrying out this research.

In addition to the explanation above, state revenue from taxation has exceeded its target in 2021 and 2022. However, in fact there are still companies that practice tax aggressiveness when viewed from the effective tax rate ratio of several companies in Indonesia. The effective tax rate value is the ratio between tax liabilities and profit before tax sourced from the company's annual report, the results were found in 2022 the effective tax rate of PT Gajah Tunggal Tbk amounted to 0.32%. Similar results were also found for PT Sumber Alfaria Trijaya Tbk, which had an effective tax rate of 15.5% in 2021. Both effective tax rate values are very far from the applicable tax rate, considering that in 2021 and 2022 the applicable tax rate is 22%. Therefore, this research will be able to see how investors respond to the practice of tax aggressiveness if the state revenue target from taxes has been exceeded or it can be concluded that taxpayers in Indonesia have collectively fulfilled their responsibilities.

In connection with the previous explanation, this is one of the factors why research on this topic is interesting to study. Citing research by Drake, *et al* (2017) ^[12] states that tax avoidance is considered to have an impact on the damage to the company's reputation because investors think the company does not fulfill its responsibilities to the government. In line with this, the revenue target from taxation that is met in 2021 and 2022 can be a differentiator in this research, because there have been many studies conducted in Indonesia that discuss this topic but only use the reporting year until 2020.

In addition, previous studies have widely used effective tax rates and book-tax differences including by including temporary differences in the calculation of tax aggressiveness. Meanwhile, according to Readhead, *et al* (2021) ^[2], temporary differences caused by differences in depreciation calculations will cause differences that are considered accounting profits in the initial year but remain a tax burden at a later date so that it can be said that the company does not actually make tax savings. In line with this, Rego, *et al* (2011) ^[23] used permanent book-tax difference as a proxy for tax aggressiveness in their research, namely by only using permanent differences and not using temporary differences because temporary differences only cause temporary differences between accounting and fiscal income, but at a certain time the value paid will remain the same. In addition, Kirkpatrick and Radicic (2020) ^[21] in their research also stated that permanent differences are considered to be more reflective of tax planning activities than temporary differences. Therefore, to distinguish previous research and to see the response of shareholders to the company's planned tax savings, this research uses permanent book-tax difference as a proxy in calculating tax aggressiveness.

Theoretical framework and hypothesis formulation

This section explains the theory used in the research, a framework that describes the relationship between research variables, and the development of research hypotheses.

Agency theory

Jensen and Meckling (1976) ^[8] in their research define agency theory as a contract between one or many parties who are principals in engaging other parties or agents to carry out tasks on behalf of the principal by giving authority in making decisions to the agent. Principals are parties who have an interest in the corporation such as investors. Meanwhile, the agent is the party authorized to carry out and manage the corporate business such as managers in the company.

Problems can arise if both the principal and the agent are opportunistic. Ghozali (2020) says agency theory assumes that agents will tend to behave opportunistically in order to maximize their personal interests. This opportunistic nature will create the possibility of agency problems because the agent will work to fulfill his personal interests and not work to carry out his obligations to the principal. Agency problems are conflicts of interest that occur in each relationship caused by one party (Jensen and Meckling, 1976) ^[18]. Jensen and Meckling's (1976) ^[18] research also concluded that this problem is related to the separation of owners with control in the company which can be done by creating a contract between the agent and the appropriate principal so as to provide commensurate incentives so that the agent's performance can provide welfare for the principal. In addition, in this way it can also limit or monitor if there are deviations by the agent.

In this research, agency theory is used with the aim of bridging the relationship between shareholders as principals and company management as agents. The relationship between shareholders and company management can be in the form of giving responsibility in terms of decision making by the principal to the agent, as a result this relationship can create asymmetric information between shareholders and company management. Asymmetric information experienced by shareholders and company management causes differences in perceptions regarding tax aggressiveness on firm value. Arora and Gill (2022) ^[3] in their research say that tax aggressiveness is related to costs that are unclear in nature and provide space for company management to hide costs that are not intended for the benefit of shareholders but for personal gain.

Framework of thought

The framework describes the relationship between research variables in schematic form. This study uses dependent variables, independent variables, and control variables.

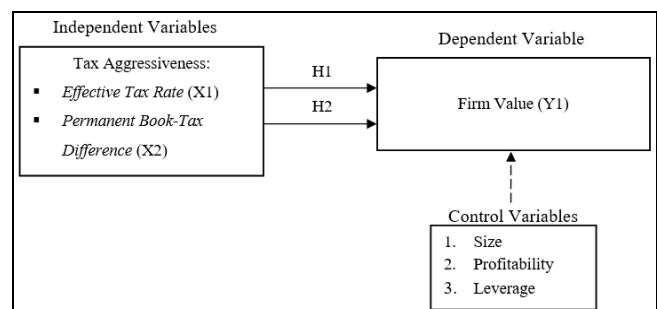


Fig 1: Framework of Thought

Hypothesis formulation

Effective tax rate to firm value

The company's efforts in conducting tax aggressiveness have implications for firm value, this is because efforts in conducting tax aggressiveness are related to managers' decisions which can have an impact on dividend payment policies, cash retention, capital costs, and the company's capital structure (Herron and Nahata, 2020) ^[17]. In line with this, decisions taken by managers in increasing corporate income and reducing tax burdens are not necessarily considered or understood by investors in the same perspective, this is because there is asymmetric information between managers and investors.

Arora and Gill (2022) ^[3] found that the lower the effective tax rate has a significant negative impact on firm value, this is triggered by asymmetric information related to costs incurred in order to carry out tax aggressiveness which is negatively assessed by investors. The costs incurred can be considered unclear and are considered by investors as actions that are not concerned with shareholders and are used for personal gain. In addition, shareholders can assess management's actions in conducting tax aggressiveness which were originally intended to reduce profit expenses and increase revenue as unethical actions. Based on this explanation, therefore the first hypothesis in this study is:

H1: Effective tax rate has a positive effect on firm value.

Permanent book-tax difference to firm value

Another proxy used in this research to measure the level of corporate tax aggressiveness is the permanent book-tax difference. In line with the first hypothesis in this research, agency theory can explain the relationship between permanent book-tax difference and firm value. Khurana and Moser (2009) state that companies with high permanent book-tax difference indicate the high tax aggressiveness activities that corporations carry out.

The policies taken by managers are not necessarily considered or understood by investors as good. Quoted from Desai and Dharmapala (2006), Frank, *et al* (2009) ^[13], and Kim, *et al* (2011) ^[20], policies that can be carried out by managers in conducting tax aggressiveness are covering unfavorable information, not disclosing in detail, and manipulating income. Based on this statement, the manager's policies above can be carried out because there is asymmetric information between investors and managers and can lead to agency conflicts. The same thing is also said by Balakrishnan, *et al* (2018) ^[4] which states that tax aggressiveness reduces company transparency so that there is asymmetric information between managers and investors. As for these policies are risky things, investors are considered reluctant to carry out risky tax aggressiveness which can be reflected in the decline in the value of a company (Drake, *et al* 2017) ^[12]. Based on several findings with previous research sources, the second hypothesis is formulated as follows:

H2: Permanent book-tax difference negatively affects firm value.

Research methods

This section describes the research population and sample, the variables used and their measurements, and the research model.

Population and sample

The population used in this research is manufacturing companies that are consistently listed on the Indonesia

Stock Exchange in the 2020-2022 period. As for this research using purposive sampling by using the criteria as below:

1. Manufacturing companies that are consistently listed on the Indonesia Stock Exchange during 2020-2022
2. Manufacturing companies that publish annual reports and financial statements in 2020-2022.
3. Manufacturing companies with an effective tax rate value between 0-1 because companies that have an effective tax rate value outside 0-1 will complicate the calculation.
4. Manufacturing companies that have positive taxable income. Companies that have negative taxable income will complicate the calculation of permanent book-tax difference.
5. Manufacturing companies that use rupiah currency units in presenting financial statements in 2020-2022.
6. Companies that can provide the data needed by this research in measuring the variables in this research.

Variables and their measurement

The independent variables used in this study are effective tax rate and permanent book-tax difference with firm value as the dependent variable and firm size, profitability, and leverage as control variables. The following are the variables used in this study and their measurements:

Table 1: Variable & measurement

Variables	Measurement
Independent Variable	
Effective Tax Rate	Tax Expense / Profit Before Tax
Permanent Book-Tax Difference	(Income Before Tax - Taxable Income - Temporary Difference) / Assets(t-1)
Dependent Variable	
Firm Value	(Total Market Value + Total Book of Liabilities) / Total Book Value of Assets
Control Variables	
Firm Size	Ln (Total Assets)
Profitability	Net Income / Total Assets
Leverage	Long-term Liabilities / Total Assets

Research model

This research applies the panel data regression research method by utilizing the EViews 12 application because the data used is a combination of cross section and time series data. Panel data is obtained by observing several units of the same object at different time periods. This approach provides a complete picture of the behavior of these objects over a period of time (Tarigan, 2012) ^[27]. The panel data regression method is carried out by determining the model with the chow test, hausmann test, and lagrange multiplier test and then followed by the classical assumption test and hypothesis testing.

Research results and discussion

Description of research sample

This study uses secondary data sources. The population used consists of manufacturing companies listed on the Indonesia Stock Exchange in 2020-2022. This research uses purposive sampling so that there are 79 companies that meet the criteria and are eligible to be used as research samples. The research time span is 3 years long, so that the total number of observations in this research is N = 237 as described in table 2.

Table 2: Sample selection

No.	Sample Criteria	Total
1.	Manufacturing companies listed on the Indonesia Stock Exchange in 2020-2022	416
2.	Manufacturing companies with an effective tax rate value outside 0-1 in 2020-2022	(191)
3.	Manufacturing companies that have negative taxable income in 2020-2022	(49)
4.	Manufacturing companies that do not include annual reports and financial reports on the company's official website in full in 2020-2022	(56)
5.	Manufacturing companies that do not use rupiah currency units	(17)
6.	Companies that do not include temporary differences in annual reports and financial statements in 2020-2022	(24)
Number of companies that meet the sample requirements		79
Number of research samples (79 x 3)		237

Descriptive statistics

Table 3 shows descriptive statistics for the variables used, which contains the average (mean), standard deviation, minimum and maximum values. Provides descriptive statistics for the variables used in the analysis. Based on table 3, it is found that the company size variable has an average value of 28.54182. The maximum value is 32.82638 which comes from PT Indofood Sukses Makmur Tbk and the minimum value is 25.07900 which comes from PT Sinergi Inti Plastindo Tbk. The standard deviation value is 1.600239, which means that the data variation studied has an even distribution because the average value exceeds the standard deviation value.

In this research, profitability is calculated using return on assets (ROA) which shows the company's capability in achieving profits. Return on assets in this research shows a minimum value of -0.036088 and a maximum value of 0.363621. The average value is 0.074806 and the standard deviation is 0.059809. The average value that is higher than the standard deviation means that the variation of the data studied has an even distribution.

The leverage variable is measured using the ratio between long-term liabilities and total assets of the company which can show the company's capability to fulfill its long-term obligations. The maximum value of this variable is 0.582929 and the minimum value is 0.003139. The average value is 0.130635 and the standard deviation is 0.132947. The standard deviation value which is higher than the average means that the variation in the data studied is getting bigger.

Tax aggressiveness is measured using effective tax rate and permanent book-tax difference. The effective tax rate shows the ratio between income tax expense and profit before tax. The lower the effective tax rate value indicates that the company is more aggressive in avoiding taxes and vice versa. In this research, the smallest effective tax rate value is 0.003232 owned by PT Gajah Tunggal and the largest value is 0.936774 which comes from PT Cahayaputra Asa Keramik. The average value of this variable is 0.035751 and the standard deviation is 0.078702, with this result indicating that the data has a large data variation due to a higher average than the standard deviation.

Another proxy used in this variable is permanent book-tax difference which is a variant of book-tax difference. Permanent book-tax difference excludes temporary

differences from its measurement with the assumption that temporary differences do not result in tax savings because the income tax expense paid will remain the same in future periods. Permanent book-tax difference has a maximum value of 0.314235 which comes from PT Arwana Citramulia and the smallest value which has a value of -0.567141 which comes from PT Satyamitra Kemas Lestari. The average value is 0.031394 and the standard deviation is 0.075699. These results indicate that the data has a large data variation due to the standard deviation value that exceeds the average standard.

Firm value is measured using Tobins'q ratio with the minimum value being 0.126652 and the largest value being 7.470574. The average value is 1.733965 and the standard deviation is 1.139872. The standard deviation value which is higher than the average means that the data variation studied has an even distribution.

Table 3: Descriptive statistics

	N	Min	Max	Mean	Std. Deviation
TOBINSQ	237	0.126652	7.470574	1.733965	1.139872
ETR	237	0.003232	0.936774	0.207717	0.096438
PERM_BTD	237	-0.567131	0.314235	0.035751	0.078702
SIZE	237	25.07900	32.82638	28.54182	1.600239
ROA	237	-0.036088	0.363621	0.074806	0.059809
LEV	237	0.003139	0.582929	0.130635	0.132947

Source: Output E-Views 12, 2023

Model selection

Chow test

Table 4 presents the results of the chow test which shows the chi square probability value <0.05 so that the Fixed Effect Model (FEM) is a better model than the Common Effect Model (CEM).

Table 4: Chow test

Redundant Fixed effects Test Equation: Untitled Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	13.442408	(78,153)	0
Cross-section Chi-square	488.432031	78	0

Source: Output E-Views 12, 2023

Hausman test

Table 5 presents the results of the Hausman test which shows the cross section random probability value <0.05 so that the Fixed Effect Model (FEM) is a better model than the Random Effect Model (REM).

Table 5: Hausman test

Correlated Random effects – Hausman Test Equation: Untitled Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	18.254774	5	0.0026

Source: Output E-Views 12, 2023

Classical assumption test

Multicollinearity test

In order to identify the presence of multicollinearity, the value of each independent variable on the other independent variables can be observed. If the value exceeds 0.85, multicollinearity appears and if the value is below 0.85 there

is no multicollinearity. From these results, it is obtained that ETR against PERM_BT D shows a number of -0.149024

which can be interpreted as not experiencing multicollinearity.

Table 6: Multicollinearity test

	ETR	PERM_BT D	SIZE	ROA	LEV
ETR	1.000000	-0.149024	-0.087584	0.022451	-0.138910
PERM_BT D	-0.149024	1.000000	0.166317	0.136326	0.189665
SIZE	-0.087584	0.166317	1.000000	0.006441	0.329407
ROA	0.022451	0.136326	0.006441	1.000000	-0.244334
LEV	-0.138910	0.189665	0.329047	-0.244334	1.000000

Source: Output E-Views 12, 2023

Heteroscedasticity test

Heteroscedasticity takes place when the probability value is less than 0.05. In this case ETR is worth 0.8796 which means there is heteroscedasticity. Then PERM_BT D is worth 0.9608 which means there is no heteroscedasticity. From some of the results themselves, it can be concluded that the data is homogeneous and does not experience heteroscedasticity.

Table 7: Heteroscedasticity test

Dependent Var Method Sample N	RESABS_TOBINSQ Panel Least Squares 2020-2022 237			
Variable	Coefficient	Std. Error	T-Statistic	Prob
C	5.234932	3.500410	1.495520	0.1368
ETR	0.030808	0.203101	0.151689	0.8796
PERM_BT D	-0.012302	0.249789	-0.049249	0.9608
SIZE	-0.172475	0.123228	-1.399646	0.1636
ROA	-1.091446	0.537997	-2.032460	0.0438
LEV	-0.120790	0.401294	-0.301002	0.7638

Source: Output E-Views 12, 2023

Regression test

From the model selection results in the previous step, the regression uses the Fixed effect Model with the regression test output shown in table 8.

Table 8: Regression Test

Dependent Var Method Sample N	TOBINSQ Panel Least Squares 2020-2022 237			
Variable	Coefficient	Std. Error	T-Statistic	Prob
Adjusted R-Squared	0.844155			
Prob (F-Statistic)	0.000000			
C	14.67324	8.309096	1.765925	0.0794
ETR	-0.262231	0.482110	-0.543923	0.5873
PERM_BT D	-0.457332	0.592936	-0.771300	0.4417
SIZE	-0.460116	0.292512	-1.572981	0.1178
ROA	2.187965	1.274721	1.716427	0.0881
LEV	0.768650	0.952572	0.806921	0.4210

Source: Output E-Views 12, 2023

Simultaneous significance test (F Statistical Test)

In the F test, the result is less than 0.05, which is 0.0000000. Thus it can be said that the independent variables in this research can affect firm value as the dependent variable together.

Individual parameter significance test (T statistical test)

The test found that X1 (effective tax rate) has an insignificant effect (above 0.05) on Y1 (tobinsq) with an inverse direction. These results mean that when the effective tax rate increases, the firm value decreases. Then X2 (permanent book-tax difference) has an insignificant effect on Y1 (tobinsq) with a negative direction. These results mean that when the permanent book-tax difference increases, the firm value decreases.

Testing the coefficient of determination (R)²

In the R-Squared test, the result is 0.844155, which means that 84.41% of the firm value can be explained by the practice of tax aggressiveness and the remaining 15.59% is influenced by variables outside the study. So that this model can be said to be good enough to explain the dependent variable.

Discussion

Based on the hypothesis testing that has been carried out, the following conclusions can be drawn:

The results of hypothesis testing related to the effect of effective tax rate on firm value show a significance value of 0.5873 with a beta coefficient of -0.262231. Based on these findings, the first hypothesis in this study is rejected. The test results in this research produce the conclusion that the higher the effective tax rate value, the possibility of decreasing the company's value. This research produces different findings from the results of previous research by Arora and Gill (2022)^[3] and Rizka Shafira Dewi (2022)^[25] which show that the effective tax rate has a positive effect on firm value significantly. This difference in findings can be triggered by other aspects that can play a role in creating firm value as revealed by Chasbiandani and Martani (2018)^[8] that tax law enforcement in Indonesia affects investors' reactions to corporate tax aggressiveness. Tax law enforcement in Indonesia is considered by Chasbiandani and Martani (2018)^[8] to be less effective so that the benefits obtained by investors in the future are greater than the losses that the company must bear in the future.

Other aspects that influence investors' assessment of tax aggressiveness activities include corporate governance, risk, and disclosure of sustainability reports. Desai and Dharmapala (2009)^[10] explain that companies with good governance can reduce managers' opportunities to carry out rent extraction so that the tax aggressiveness activities carried out by corporations are considered by investors as managers' efforts to improve shareholder welfare. Correspondingly, tax aggressiveness with lower risk can lead to positive assessments by investors and will have a good impact on firm value (Drake *et al.*, 2017)^[12]. Rizka Shafira Dewi (2022)^[25] also states that there are aspects that can affect stakeholder assessments of tax aggressiveness

activities, namely the disclosure of sustainability reports. This aspect is seen as a form of company contribution in reducing asymmetric information which is the reason for agency conflicts so that it can have a good impact on firm value.

The difference in findings can also be explained through the results of descriptive statistics on the variables used in the study, it can be seen that the effective tax rate variable in the study has a standard deviation value that is greater than the average value so that it can indicate a large data variance in this study. Meanwhile, in the research of Rizka Shafira Dewi (2022) ^[25], the effective tax rate variable has an average value that is greater than the standard deviation value so that it can indicate that the data variance is quite even. This is one of the factors that make the results of this hypothesis not produce different and insignificant findings.

The relationship between permanent book-tax difference and firm value produces a significance of 0.4417 and a coefficient of -0.457332. Thus, it can be concluded that H2 is rejected. As for the permanent book-tax difference does not have a significant effect, the direction of its influence is in line with agency theory where asymmetric information that occurs in tax aggressiveness activities can lead to differences in views between managers and investors in assessing these activities. Tax aggressiveness carried out by managers with the aim of increasing profits can be considered by investors as an unethical activity and not fully responsible for the tax obligations that must be paid. This is because the asymmetric information experienced by investors can provide a gap for managers to cover up unfavorable information, not disclose in detail, and manipulate income. Therefore, to reduce this information asymmetry, accountability is needed by managers to investors regarding the tax aggressiveness of the corporation. The form of accountability that can be carried out by managers is to improve corporate governance and publish sustainability reports as a form of increasing corporate transparency (Desai and Dharmapala, 2009; Rizka Shafira Dewi, 2022) ^[10, 25].

The results of this research are in line with Abdul Wahab (2016) ^[1] and Khaoula, *et al* (2015) ^[19] which state that permanent book-tax difference can negatively affect firm value. As for having different significance, this can be explained by factors that influence investor assessments of tax aggressiveness activities such as the strength of law enforcement in Indonesia, the quality of corporate governance, the publication of sustainability reports and how much risk these activities pose.

Different levels of significance can also be explained through the results of descriptive statistics on the variables used in the study, it can be seen that the independent variable, namely the disclosure of permanent book-tax difference, has a minimum value of -0.567131 with a maximum value of 0.314235. However, in the research of Hajawiyah, *et al* (2021) ^[14], the permanent book-tax difference variable has a minimum value of -0.1487 with a maximum value of 0.1620. Based on this difference, it can be concluded that the data in this study has a wider variance and is one of the factors that make the results of this hypothesis not have a significant effect.

Conclusion and limitations

This section contains research conclusions, research limitations, and suggestions for future research.

Conclusion

This research intends to obtain information related to the implications of tax aggressiveness on firm value in manufacturing companies operating in Indonesia. The sample of companies included in this research consists of manufacturing entities listed on the Indonesia Stock Exchange for the period 2020-2022. The data in this research comes from Bloomberg Terminal and financial reports published on the company's official website. The test method is carried out using panel data regression analysis to analyze the implications of independent variables on the dependent variable.

Based on the research description and testing in the previous chapter, it can be concluded that tax aggressiveness as measured using the effective tax rate has a positive effect on firm value, while the permanent book-tax difference has a negative effect on firm value as measured using Tobin's Q. These findings are in line with Abdul Wahab (2016) ^[1] and Khaoula, *et al* (2015) ^[19] which state that permanent book-tax difference can have a negative effect on firm value. This finding is in line with Abdul Wahab (2016) ^[1] and Khaoula, *et al* (2015) ^[19] which state that permanent book-tax difference can negatively affect firm value. Based on agency theory, asymmetric information experienced by investors can lead to investor assessments of tax aggressiveness policies that are considered unethical and risky. Correspondingly, the information asymmetry can be utilized by managers to cover up unfavorable information, not make detailed disclosures, and manipulate earnings. Therefore, to reduce information asymmetry, it is necessary for managers to be accountable to investors regarding corporate tax aggressiveness so as to change investors' views and reduce the possibility of decreasing firm value. The form of accountability that can be carried out by managers is to improve corporate governance and publish sustainability reports as a form of increasing corporate transparency.

Limitations

In this study, several limitations were found, including:

1. This research sample uses manufacturing entities with an effective tax rate between 0-1 and entities with positive taxable profit, causing the sample to be limited.

Suggestions

Based on the research findings and considering the limitations of this study, there are several suggestions for further research, among others:

1. Future research can expand the scope of research objects by using or adding companies from other sectors such as the construction sector as a population because it is the sector that has the highest cases of fraud against financial statements based on the Report to the Nations 2018, 2020, and 2022.
2. Future research can use different proxies in measuring tax aggressiveness to add to the source of literature on research on tax aggressiveness in Indonesia. Some examples of other proxies such as GAAP effective tax rate, current effective tax rate, and cash effective tax rate.
3. Future research is suggested to add other variables to see other factors that can affect firm value such as financial distress, the strength of law enforcement in Indonesia, and the quality of corporate governance.

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