THE DYNAMICS OF LEVERAGE AND PROFITABILITY: A COMPREHENSIVE REVIEW OF PRE-TAX EARNINGS

Raden Roro Diana Atika Ghozali

Tax Accounting Program Study, Applied Vocational, Diponegoro University, Indonesia
Radenrorodianaatikag@lecturer.undip.ac.id

ARTICLE HISTORY

Received: 26 July 2024
Revised:
Accepted: 29 July 2024

Keywords:
Leverage, Profitability, Tax Avoidance, Banking Sector, Effective Tax Rate, Debt-to-Equity Ratio, Return on Assets

A B S T R A C T

This study investigates the relationship between leverage, profitability, and tax avoidance within the Indonesian banking sector. Utilizing a sample of 48 banks from 2010 to 2022, the study employs a simultaneous equation model to analyze how leverage, measured by Debt-to-Equity Ratio (DER), and profitability, measured by Return on Assets (ROA), influence tax avoidance, represented by the Effective Tax Rate (ETR). The findings reveal that leverage does not have a significant impact on tax avoidance, likely due to high variability in ETR and other dominant factors such as company-specific tax policies and strategies. In contrast, a significant negative relationship is observed between profitability and ETR, indicating that more profitable banks tend to engage in greater tax avoidance. This can be attributed to economies of scale, where larger and more profitable banks can distribute the fixed costs of tax avoidance strategies more efficiently. These results highlight the importance of considering tax avoidance in financial analysis and policy-making, suggesting further longitudinal studies and cross-sector comparisons to enhance understanding of these dynamics.

1. Introduction

Banks are a major sector in the economic development of a country. Banks themselves provide services in the form of saving and borrowing. Banks are also intermediaries between creditors and debtors (Black & Strahan, 2002). Easy access to credit and capital resources can help the development of the company. Research in the banking industry will provide additional information related to corporate funding. The global financial crisis that occurred in 2007 / 2008 and the Europe debt crisis greatly affected the banking industry (Black & Strahan, 2002). Research on the impact of complex leverage on profitability through reducing the cost of capital and increasing operational efficiency. Other studies show that excessive leverage can reduce profitability due to high interest expense and increased financial risk.

From this problem, the researcher captures the flow that analyzes how leverage will affect the company's profit before tax. Profit before tax is one indicator of the financial performance of a company that reflects the operating profit generated by the company before tax and interest

expenses. The dynamics of leverage and profitability, we can provide deeper insights related to the company. This study uses banking companies in Indonesia as a research sample. the reason the banking industry was chosen is because the banking industry is one of the sectors that is very influential on the economic development of a country (Black & Strahan, 2002).

This study aims to provide a comprehensive review of the relationship between leverage and profitability, specifically focusing on pre-tax profit in the banking industry. The study will identify the key factors that influence this relationship and examine the managerial implications of firms in managing leverage to achieve sustainable financial performance. Through this study, it is expected to make a significant contribution to the banking industry literature and time period to provide a better picture of the dynamics of leverage and profitability. This research helps us understand the effect of debt ratio and profit before tax. One of the main keys to a bank's success is its debt ratio.

2. Theoritical Framework and Hypothesis

A number of theoretical models contribute to the understanding of the relationship between tax avoidance, profitability and leverage. According to the trade-off theory, firms should weigh the benefits of debt in relation to the costs of financial distress. According to this argument, leveraged firms are more likely to take advantage of the tax deduction for interest by engaging in tax avoidance. On the other hand, Pecking Order Theory states that firms prefer internal funding and only use debt as a last resort, which impacts their tax tactics (Myers & Majluf, 1984).

Diverse empirical findings support different theories regarding the relationship between tax avoidance, profitability, and leverage. Leverage and tax avoidance were found to be positively correlated across a number of different businesses by (Hanlon & Heitzman, 2022). Similar findings were made by Lanis & Richardson (2011), who found that firms with significant levels of leverage engage in more aggressive tax avoidance. On the other hand, Chen et al. (2010) showed that the relationship may change depending on the institutional context, indicating the importance of the regulatory regime.

Looking at the Trade-Off Theory regarding the tax benefits of debt. Debt interest in a company can have an impact on reducing taxable income, which will effectively reduce the company's tax burden. Companies with high leverage tend to have an incentive to utilize tax avoidance to maximize the benefits of tax reduction.

H1: Leverage has a positive effect on Tax Avoidance

In the case of profitability, more profitable firms tend to have large cash flows. This large cash flow allows them to explore various tax avoidance strategies without having to worry about financial difficulties. More profitable companies have greater tax income, which encourages

companies to reduce their tax burden. Companies with high profitability are more likely to engage in tax avoidance to maximize shareholder value. High profitability provides companies with more data sources to invest in complex and possibly expensive tax avoidance strategies.

H2: Profitability has a positive effect on Tax Avoidance.

3. Research Methodology

The sample of this study includes 48 banks in Indonesia. The data of all banks in this study are from 2010 to 2022. Data is taken from the Bloomberg FEB Undip database. Based on previous research, the author uses a simultaneous equation model to explain the relationship between bank leverage, bank profitability, and tax avoidance (Desai & Dharmapala, 2009; Hanlon & Heitzman, 2022; Lanis & Richardson, 2011; Linantis et al., 2021). The model used in this study is as follows:

$$TA = \alpha + \beta 1Lev + \beta 2Prof + e$$

In the equation above, TA represents Tax Avoidance at the bank, α represents the intercept of the Tax Avoidance equation, β is the slope of the independent variable Leverage represented by Lev and the slope of the independent variable Profitability represented by Prof. And e represents the error value.

In this study, the measuring instruments used to describe each variable are as follows, the Tax Avoidance variable is obtained from the ETR value. ETR is a metric used to measure the average percentage of tax paid by a company on its taxable income (Lanis & Richardson, 2011). ETR is also used as an indicator of how efficiently the company manages its tax obligations. A low ETR may indicate that companies are reducing their tax burden through Tax Avoidance strategies, or vice versa. The Leverage variable is obtained from DER, which is Total Debt divided by Total Equity. DER can be used to measure the extent to which the company uses debt compared to equity. The Profitability variable is obtained from Return on Assets, which is net income divided by total assets.

Panel data analysis is used in this study. Utilizing data variation over time and across companies to improve estimation efficiency and validity of results. Robustness checks are also required so that the regression analysis is consistent and not affected by data or model problems.

4. Results and Discussion

Statistical results of Indonesian banking companies used in regression analysis of leverage and profitability on tax avoidance. According to table I, the ETR value which is the value in tax avpoidance is worth -34.37%, which means that the EQUITY DEVELOPME company will experience losses in 2023. The highest value for ETR in the MNC KAPITAL INDO company in

2017 was 10974.72% which indicates that there may be no tax avoidance. DER, which is a measure of the leverage variable according to statistical data, the highest value in the WAHANA OTTOMITRA company in 2014 was 784.95%, indicating that the company has a lot of debt compared to equity to finance its assets and operations. The lowest ROA value was -21.55% in the 2012 TRIMEGAH SEKURIT company which explained that the company was experiencing net losses during the 2012 period and the company did not generate enough revenue to cover operational costs. ADIRA FINANCE has the highest value of ROA in 2010 of 24.61% which indicates that the company is very efficient in using its assets to generate profits.

Table 1

Descriptive Statistics

Variable	Observation	Mean	Sd	Min	Max
ETR	266	60.72	682.35	-34.37	10974.72
DER	266	171.09	181.92	0	784.95
ROA	266	3.44	4.64	-21.55	24.61

Source: SPSS

Regressions were processed with IBM SPSS 25 with linear regression tests to measure leverage and profitability on tax avoidance. The estimation results are shown in table 2. We found an insignificant relationship between leverage and tax avoidance. Results for profitability on tax avoidance, we found a relationship. A 1 percent increase in a company's ROA concentration ratio decreases ETR by 17.45 which indicates a 17.45 percent decrease in tax avoidance.

Table 2

Test Results

	Beta	**Sig**
	169.56	
DER	-0.28	0.22
ROA	-17.42	0.05

Source: SPSS

5. Conclusion

The results show that Leverage has no significant relationship with Tax avoidance. This conclusion is based on several factors. The variability of ETR as a tax measurement tool is high and other factors also dominate. ETR can vary greatly depending on company-specific tax policies, tax incentives received, and tax avoidance strategies implemented. It is this variability that obscures the direct effect of DER. Another factor is that DER may be invisible because there are other factors that could include profitability, firm size, industry, and geographic location that have more influence on ETR than leverage as measured by DER. Different economic and environmental regulatory conditions may affect how debt and taxes are managed.

Results related to the negative significant relationship between profitability as measured by ROA and ETR as a measure of tax avoidance. This conclusion indicates that companies with higher levels of profitability tend to have lower ETRs reflecting greater levels of tax avoidance. seen with economies of scale, larger and more profitable companies can take advantage of economies of scale in their tax avoidance strategies. This means the fixed costs associated with tax avoidance can be spread more evenly across greater revenues, making the strategy more efficient and effective. Therefore, tax avoidance should be an important consideration in financial analysis and tax policy making. In addition, our results suggest longitudinal research into tax avoidance changes over time. Another area is to expand to other industry sectors to see if similar findings apply outside of banking.This section contains conclusions, implications, research limitations, and suggestions for future research. Implications are the practical impact of the research results. Research limitations contain aspects that need to be improved for further research as well as suggestions for further research.

6. References

Black, S. E., & Strahan, P. E. (2002). Entrepreneurship and bank credit availability. *The Journal of Finance*, *57*(6), 2807–2833.

Chen, S., Chen, X., Cheng, Q., & Shevlin, T. (2010). Are family firms more tax aggressive than non-family firms? *Journal of Financial Economics*, *95*(1), 41–61.

Hanlon, M., & Heitzman, S. (2022). Corporate debt and taxes. *Annual Review of Financial Economics*, *14*(1), 509–534.

Lanis, R., & Richardson, G. (2011). The effect of board of director composition on corporate tax aggressiveness. *Journal of Accounting and Public Policy*, *30*(1), 50–70.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, *13*(2), 187–221.