Effective Tax Rate of Sharia Banks in Indonesia: How Profitability Moderates the Effect of Mergers, Size, and Leverage

Tiena Suhartini1), Lela Nurlaela Wati2), Faizul Mubarok3)

1,3 Faculty of Economics and Business, Universitas Terbuka, Indonesia; 2 Faculty of Economics and Business, Universitas Teknologi Muhammadiyah Jakarta, Indonesia; tiena.sesak@gmail.com

ABSTRACT

The role of taxes is very important for state revenue, but the tax avoidance practices that occur are very detrimental to the state. This research aims to analyze tax avoidance practices, proxied by the effective tax rate (ETR), coinciding with Sharia bank merger momentum, which affects size and leverage with profitability’s moderating effects. Purposive sampling method, determining merged Sharia banks as research samples. This study uses cross-sectional data from Sharia banks’ quarterly financial reports (2015-2022), analyzed with moderated regression analysis. The results show that mergers, size, leverage, and profitability simultaneously significantly influence ETR. Partially, mergers and company size have no negative effect on ETR. Leverage and profitability have a significant negative effect on ETR. Profitability significantly strengthens the negative effect of leverage on ETR but not the effect of mergers and size on ETR. The research highlights the importance of tax strategies in the context of mergers and bank profitability, emphasizing the need to understand the tax impact of mergers. The research underscores the Sharia banks' crucial role in contributing taxes to state revenues. The results provide valuable guidance for Sharia bank management and tax agencies in optimizing the tax contribution from Sharia banks in Indonesia.

Keywords: Effective Tax Rate(ETR), Leverage, Sharia Bank Mergers, Profitability, Size

ABSTRAK

Ini Peran pajak sangat penting bagi penerimaan negara, tetapi praktik penghindaran pajak yang terjadi sangat merugikan negara. Penelitian ini bertujuan menganalisis praktik penghindaran pajak yang diproksikan effective tax rate (ETR), bertepatan momentum merger bank syariah, yang berdampak pada ukuran perusahaan dan leverage dengan efek moderasi profitabilitas. Metode purposive sampling, menetapkan bank syariah merger sebagai sampel penelitian. Data penelitian merupakan data cross-section laporan keuangan triwulan bank syariah (2015-2022), dianalisis dengan moderated regression analysis/MRA. Hasil penelitian menunjukkan merger, ukuran perusahaan, leverage dan profitabilitas berpengaruh secara simultan dan signifikan terhadap ETR. Secara partial, merger dan ukuran perusahaan tidak berpengaruh negatif terhadap ETR; leverage dan profitabilitas berpengaruh negatif signifikan terhadap ETR. Profitabilitas secara signifikan memperkuat pengaruh leverage terhadap ETR, tetapi tidak pada pengaruh merger dan ukuran perusahaan terhadap ETR. Penelitian ini menyoroti pentingnya pertimbangan strategi perpajakan dalam konteks merger dan profitabilitas bank; menekankan perlunya pemahaman tentang dampak perpajakan yang timbul oleh aktivitas merger. Penelitian ini menggarisbawahi peran penting bank syariah terkait kontribusinya bagi penerimaan negara dalam bentuk pajak. Hasil penelitian memberi
Taxes are an important source of revenue for almost all countries in the world. The taxation revenue sector, whatever the source of income and how it is classified, is the most powerful, efficient, and reliable source of income for both developed and developing countries (Oyedokun, 2022). The self-assessment tax collection system, where taxpayers are given the authority to calculate, pay, and report their own taxes, creates an opportunity for fraud from the taxpayer's side to reduce the amount of tax they should pay, or what is known as tax avoidance. Tax avoidance is a form of resistance to taxes to reduce the tax burden borne legally and does not violate applicable tax provisions (Stawati, 2020).

Although considered legal under tax law, the impact of tax avoidance activities is very detrimental to the state. The United States has the highest level of tax avoidance in the world with a state loss of 337.3 million USD, followed by Brazil with a state loss of 280.1 USD, and Italy is in third place with a state loss of million USD. 238.7 USD (Morse, 2015). Tax Justice Network data states that globally, losses due to tax avoidance practices each year amount to 427 USD. Tax avoidance practices in Indonesia are estimated to cause state losses of IDR 69 trillion each year (Putra & Rahayu, 2023). More specifically, the potential loss to the state due to tax avoidance practices by banking sector companies, according to the results of the Perkumpulan Prakarsa team’s investigation, is approximately IDR 10 trillion to 12 trillion each year (Putriningsih et al., 2018).

In a unique circumstance, tax avoidance can also be done by state-owned companies. It is empirically proven that state-owned companies (BUMN) in Indonesia were found to be carrying out tax avoidance practices (Ilmi et al., 2017). This is contrary to one of the roles of state-owned companies, as stated in Law Number 19 of 2003 concerning BUMN: “BUMN is also a significant source of state revenue in the form of various types of taxes, dividends, and privatization proceeds”. Tax avoidance practices of state-owned Sharia banks that have occurred include BNI Syariah in 2007 for murobahah contract transactions with a total amount of tax that had not been paid of IDR 128.2 billion, consisting of principal tax of IDR 108.2 billion and administrative sanctions of IDR 20 billion (Apriliani et al., 2021).

Tax avoidance general indicators practices proxied by the effective tax rate include company size, asset structure, leverage, profitability, and deferred taxes, which are the latest indicators (Rodríguez et al., 2021). Tax avoidance research has developed into problems related to corporate merger and acquisition activities (Belz et al., 2013). Based on the issue, the variables that will be raised in this research are...
the effective tax rate, mergers, company size, leverage, profitability, and involving deferred tax to measure the effective tax rate.

Tax avoidance from the perspective of agency theory, popularized by Jensen & Meckling (1976) introduces an agency relationship, namely a contract where the principal employs an agent to carry out tasks and services in the form of delegation of authority regarding decision-making by the agent on behalf of the principal. In reality, the ideal relationship between the two cannot always exist in harmony. The problem of agency conflict, which occurs between principals and managers, arises because of the manager's tendency to obtain additional income from company resources for himself (Jensen & Meckling, 1976). One way to achieve this goal is to pay less taxes than one should pay (Shah & Devos, 2021).

Tax avoidance can also be explained by the trade-off theory popularized by Myers (1984). Myers stated that a company will be in debt up to a certain level of debt, namely achieving tax savings obtained because debt reaches the same level as the cost of financial difficulties (Umdiana & Claudia, 2020). The capital structure of debt will form the company's leverage. Debt interest will reduce company profits, thereby affecting the amount of tax the company must pay. The trade-off theory relates to profitability. Companies that have a high level of profitability will try to increase their debt ratio so that interest expenses increase, thereby reducing fiscal profits and thereby affecting the amount of tax the company must pay.

The effective tax rate is defined as the ratio to compare actual tax payments to profit before tax and is calculated using the tax burden formula minus deferred tax expense compared to profit before tax (Marfuah & Azizah, 2014). The understanding of the effective tax rate value is that if the effective tax rate value is low, then the level of tax avoidance carried out is high (Schwab et al., 2022). The effective tax rate quantifies the actual tax burden the company bears (Gita et al., 2021).

A merger is an activity to combine two or more organizations with the aim of forming a larger entity. Merger activity from the agency theory perspective: the relationship between principal and agent is expected to be harmonious regarding merger decisions, thereby minimizing agency costs and helping to achieve company goals. In merger activities, companies gain many benefits, including tax advantages (Todtenhaupt et al., 2020). Previous research found a close relationship between the tax benefits obtained from company mergers (Shah & Devos, 2021). In Indonesia, research regarding the relationship between mergers and the effective tax rate is still very limited.

Company size is a scale that groups companies into large or small groups, proxied by measuring the total amount of assets, total sales, and market capitalization (Moeljono, 2020). The bank size is determined by the total amount of assets, total sales, or total capital owned by the banks (Khamisah et al., 2020). Company size is measured using the natural logarithm formula (Ln) of the company's total assets (Moeljono, 2020). Previous research examining the relationship between size and the
effective tax rate states that company size influences the effective tax rate (Ayem & Setyadi, 2019; Handayani, 2018). Contrary research results show that company size does not affect the effective tax rate (Gita et al., 2021; Malau, 2021).

Leverage, measuring the level of debt's ability to finance company assets, is measured by comparing the total amount of company debt to the total amount of company assets. The leverage ratio in this research is the debt-to-assets ratio (DAR). Companies with a high level of leverage tend to have a low effective tax rate, and previous research found that leverage has a negative effect on the effective tax rate (Malau, 2021; Rahmawati & Mildawati, 2019). The contrary results state that leverage has a significant positive effect on the effective tax rate because the higher the leverage, the better the company's ability to manage these sources of financing, so the value of the effective tax rate will be high (Kasir, 2020; Pristanti et al., 2020; Thoha & Wati, 2021).

Profitability assesses the company's ability to gain profits calculated by comparing net profit after tax to the total assets. In accordance with what Bank Indonesia refers to, return-on-assets (ROA) uses assets as the basis for calculation because bank profitability comes from the results of asset management in the form of funds collected from customers (Noval & Aisyah, 2021). Profitability has a negative effect on the company's tax burden (Rodríguez et al., 2021). The effect of profitability on the effective tax rate is significantly negative (Pristanti et al., 2020). The higher the profitability, the lower the effective tax rate value, which means the level of tax avoidance activities carried out is high. The other research results are contradictory, stating that the higher the income or profitability, the higher the tax burden that must be paid, so the higher the effective tax rate will be, which means the level of tax avoidance is low (Ayem & Setyadi, 2019; Gita et al., 2021; Malau, 2021).

This research aims to analyze tax avoidance practices coinciding with the momentum of Sharia bank mergers, which impact increasing company size and changes in capital structure or leverage. This research focuses on the role of profitability as a moderator of the effect of mergers on effective tax rates. Hence, the difference from previous studies is the need for a deeper understanding of how profitability affects this relationship, especially given the mixed results of previous studies on profitability and effective tax rates. In addition, this research provides an opportunity to explain further the relationship between other variables, such as company size and leverage, and effective tax rates. Due to the contradictions in previous research results regarding this relationship, this research creates an opportunity to clarify the effective tax rate determinants in the context of Sharia banks in Indonesia.

This research can contribute firstly, and it explores taxation practices in Sharia banks in Indonesia, particularly in the context of how profitability affects the effect of incorporation on tax rates. Furthermore, this research fills a gap in academic research by clarifying the relationship between profitability, company size, leverage, and revenue with effective tax rates. This contribution is beneficial for researchers in
taxation and finance. This research also provides practical benefits for financial and tax practitioners in the Sharia banking sector. The results can be used in more effective tax planning. Finally, by combining the diverse results of previous research, this research provides a more comprehensive understanding of taxation practices in Sharia banks. All in all, this research provides valuable insights and contributes to the understanding of taxation in Sharia banks in Indonesia.

The Research Model and Hypothesis

This research will test the influence of tax avoidance indicators proxied by the effective tax rate based on the phenomenon of Sharia bank mergers. In this case, Sharia bank merger activity, as previously discussed, impacts increasing company size and changes in capital structure or leverage. And this combination automatically relates to profitability. Based on the relationship among the indicators, the research model is described as follows:

![Figure 1. Research Model](image)

Mergers in the eyes of agency theory Jensen & Meckling (1976) related to the relationship between the principal and agent, where harmony is expected to occur. The merger’s main objective is to increase ownership profits, which will occur with a change in ownership and is expected to create value, either by increasing future cash flows or reducing risk (Belz et al., 2013). The decision to merge companies is not only aimed at gaining benefits in the form of reducing the company’s tax burden but also as an anticipatory step if they have to face an increasing tax burden and there is a close relationship between the tax benefits obtained from a company merger (Shah & Devos, 2021). Based on the problem, the hypothesis was built as follows:

**H1**: Mergers have a negative effect on the effective tax rate of Sharia banks.

Company mergers affected the accumulation of assets in the newly merged bank. From Jensen & Meckling (1976) agency theory perspective views, the
increasing company size due to mergers may cause agency problems in managing companies during the merger transition period. Larger companies have the freedom to utilize their resources in carrying out tax planning for savings purposes, so the lower the effective tax rate will be (Stickney & Mcgee, 1982). The hypothesis for this problem is developed as follows:

**H2**: Size has a negative effect on the effective tax rate of Sharia banks.

According to the trade-off theory Myers (1984), the company will go into debt until the level of debt is equal to the amount of tax savings the company is able to achieve, equal to the cost of financial distress. Company debt carries the consequence of bearing interest costs on debt, which is a deductible cost in financial statements, according to Law Number 36 concerning Income Tax, article 6 paragraph 1 that interest on debt or loans is a cost that can be deducted from taxable income thereby reducing taxable profit (Thoha & Wati, 2021). The hypothesis is built on the logic that debt interest expenses will reduce taxable income so that the effective tax rate decreases.

**H3**: Leverage has a negative effect on the effective tax rate of Sharia banks.

Profitability is one of the benchmarks for a company's financial performance. Based on agency theory Jensen & Meckling (1976), the principal wants to maximize wealth and financial profits by optimizing the level of profit that the company can achieve. Tax is calculated based on the company's profit level. The level of company profitability is related to the level of tax avoidance as measured by the effective tax rate (Belz et al., 2013). The higher the profitability, the stronger the company is suspected of carrying out tax avoidance activities so that the effective tax rate will be smaller. The hypothesis is built based on these problems as follows:

**H4**: Profitability has a negative effect on the effective tax rate of Sharia banks.

Based on agency theory Jensen & Meckling (1976), the principal has the authority to determine the direction of company policy, including merger plans. Company mergers have a positive impact on companies, including, from a financial perspective, increasing competitiveness and tax benefits (Todtenhaupt et al., 2020). Profitability, as an indicator of a company's financial performance, represents that the higher the level of profitability, the better the company's financial performance. The level of profit and tax benefits are positive benefits of corporate mergers. The hypothesis is built on the conjecture that company mergers supported by profitable companies, have an effect on tax avoidance, which is represented by a low effective tax rate value.

**H5**: Profitability strengthens the negative effect of mergers on the effective tax rate of Sharia banks.

Size is related to the level of company stability when facing uncertainty. Stable companies will have more freedom to manage capital. Large and stable companies with high levels of profitability tend to use long-term funding that comes from debt.
Tread-off theory Myers (1984), stated that the company would balance the use of debt to obtain benefits from the debt. To achieve the desired level of profitability, companies must be able to minimize the costs incurred, including the tax burden. The larger the company, supported by profitable company conditions, the greater the company's ability to carry out tax planning and seek tax savings, which is reflected in the low effective tax rate. The research hypothesis is built as follows:

**H6**: Profitability strengthens the negative effect of size on the effective tax rate of Sharia banks.

According to the trade-off theory Myers (1984), leverage is based on the idea that an optimal company capital structure can be achieved when the company is able to utilize debt capital to maximize profits. It was also mentioned that the company's decision to obtain funding from debt was based on the motive to save taxes. When a company has a high level of leverage, the interest expense on the company's debt will also be high. That's when the company enjoys the benefit of reduced tax payments. The principal's desire to maximize wealth as intended by agency theory can be achieved by ensuring that the company's debt is used to maximize the potential of the resources it owns. The hypothesis is built on the conjecture that a company's ability to balance leverage, which is supported by a profitable company, affects tax avoidance, as represented by a low effective tax rate.

**H7**: Profitability strengthens the negative effect of leverage on the effective tax rate of Sharia banks.

**RESEARCH METHODE**

This research is categorized as explanatory research, intended to explore the factors that influence a variable. The unit of analysis for this research is the level of tax avoidance as measured by the effective tax rate, which will be tested with variables based on theory and previous research that are closely related to the effective tax rate, namely mergers, size, leverage, and profitability. The research uses a quantitative approach with secondary data from Sharia Bank's quarterly financial reports downloaded from the official website of the Financial Services Authority (www.ojk.go.id). Purposive sampling determined the research sample Sharia banks, which were Bank Syariah Mandiri, Bank BNI Syariah, Bank Rakyat Indonesia Syariah, and the merged one, Bank Syariah Indonesia. The research used cross-sectional data from 2015 to 2022.

From the 4 research sample banks, quarterly financial report data for sharia banks was obtained. The financial report data used for the purposes of this research consists of balance sheets, profit and loss reports, and quarterly financial ratios, which are routinely reported by Islamic banks. Of all the data collected, not all met the criteria for conducting research. In other words, outlier data was found that had very prominent differences in character or greatly deviated from the character of the
data in general. Details of the research sample data are presented in Table 1 as follows:

Table 1. Research Sample Companies

<table>
<thead>
<tr>
<th>No.</th>
<th>Criteria</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sharia bank mergers and merger results during the observation period (2015 to 2022)</td>
<td>4 banks</td>
</tr>
<tr>
<td>2.</td>
<td>Number of bank samples meeting the observation criteria (2015 to 2022)</td>
<td>4 banks</td>
</tr>
<tr>
<td>3.</td>
<td>Total bank quarterly financial report data from 4 sharia banks during the observation period (2015 to 2022)</td>
<td>financial statement</td>
</tr>
<tr>
<td></td>
<td>Bank Syariah Mandiri</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Bank Nasional Indonesia Syariah</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Bank Rakyat Indonesia Syariah</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Bank Syariah Indonesia</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>The total amount of financial report data</td>
<td>80</td>
</tr>
<tr>
<td>4.</td>
<td>Details of the amount of data per type of financial report item</td>
<td>80 data</td>
</tr>
<tr>
<td></td>
<td>(Quarterly balance sheet report data, Quarterly income statement data, and Quarterly financial ratio data)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of outlier data</td>
<td>20 data</td>
</tr>
<tr>
<td></td>
<td>The amount of data per type of financial report item is worth researching</td>
<td>60 data</td>
</tr>
</tbody>
</table>

Source: processed secondary data, 2023

Data processing was carried out using descriptive analysis and moderated regression analysis (MRA) using Eviews 12. The regression analysis model is arranged in a model as follows:

\[
ETR = a + b_1 \text{MER} + b_2 \text{SIZE} + b_3 \text{LEV} + b_4 \text{PROFIT} + b_5 \text{MER} \times \text{PROFIT} +
\]
\[
b_6 \text{SIZE} \times \text{PROFIT} + b_7 \text{LEV} \times \text{PROFIT} + e
\]

Where:

\[
ETR = \text{effective tax rate} \\
\text{MER} = \text{merger} \\
\text{SIZE} = \text{company size} \\
\text{LEV} = \text{leverage} \\
\text{PROFIT} = \text{profitability}
\]
RESULT AND DISCUSSION

Descriptive Statistical Analysis

Statistical analysis described the data collected as being general in nature and not leading to decision-making. The research data amounted to 60 data points. A descriptive analysis of research data is presented in Table 2.

Table 2. Descriptive Statistical Analysis

<table>
<thead>
<tr>
<th></th>
<th>ETR</th>
<th>MER</th>
<th>SIZE</th>
<th>LEV</th>
<th>PROFIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.2843</td>
<td>0.1333</td>
<td>17.8642</td>
<td>0.9053</td>
<td>1.3020</td>
</tr>
<tr>
<td>Median</td>
<td>0.2725</td>
<td>0.0000</td>
<td>17.7349</td>
<td>0.9054</td>
<td>1.4200</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.6117</td>
<td>1.0000</td>
<td>19.5382</td>
<td>0.9250</td>
<td>2.2400</td>
</tr>
<tr>
<td>Minimum</td>
<td>-0.1506</td>
<td>0.0000</td>
<td>16.8362</td>
<td>0.8599</td>
<td>0.4300</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.1329</td>
<td>0.3428</td>
<td>0.8011</td>
<td>0.0123</td>
<td>0.4785</td>
</tr>
<tr>
<td>Observations</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>

Source: Processed Data Eviews 12, 2023

The effective tax rate has a mean value of 0.2843, the maximum value of 0.6117, and the minimum value of -0.1506. The standard deviation of the effective tax rate is smaller than the mean value, so the data distribution is not varied. This also applies to size, leverage, and profitability. The merger is varied, with a maximum value of 1.0000, a minimum value of 0.0000 and a mean value of 0.1333.

The size has a mean of 17.8642, a maximum value of 19.5382, and a minimum value of 16.8362. The maximum value is the condition when the company has undergone a merger, and the minimum value is the condition when the company has not merged. The leverage has a mean of 0.9053, a maximum value of 0.9250, and a minimum value of 0.8597. Profitability has a mean of 1.3020, a maximum value of 2.2400, and a minimum value of 0.4300.

Classic Assumption Tests

The research data was tested using the classic assumption tests, which consist of a normality test, a multicollinearity test, a heteroscedasticity test, and an autocorrelation test.
The normality test uses the Kolmogorov-Smirnov test method with a degree of confidence of 0.05. Based on the test result, the probability value of 0.258488 is greater than 0.05. The test results show that the data was normally distributed.

### Table 3. Multicollinearity Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient Variance</th>
<th>Uncentered VIF</th>
<th>Centered VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.1051</td>
<td>5578.793</td>
<td>NA</td>
</tr>
<tr>
<td>Merger</td>
<td>0.0045</td>
<td>3.054158</td>
<td>2.6469</td>
</tr>
<tr>
<td>Size</td>
<td>0.0008</td>
<td>1369.709</td>
<td>2.7035</td>
</tr>
<tr>
<td>Leverage</td>
<td>1.5378</td>
<td>6363.032</td>
<td>1.1623</td>
</tr>
</tbody>
</table>

Source: Processed Data Eviews 12, 2023

The multicollinearity test uses the centered Variance Inflation Factor (VIF) value method, or the tolerance value (Gio & Rosmaini, 2016). There is no multicollinearity in the data if the VIF value is smaller than 10. The results of the multicollinearity test show that the centered VIF values for the merger, size, and leverage consecutively are 2.6469, 2.7035, and 1.1623. All variables' VIF is below 10, which means that multicollinearity does not occur.

### Table 4. Heteroscedasticity Test

<table>
<thead>
<tr>
<th></th>
<th>F-statistic</th>
<th>Prob. F(3,56)</th>
<th>Obs*R-squared</th>
<th>Prob. Chi-Square(3)</th>
<th>Scaled explained SS</th>
<th>Prob. Chi-Square(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>3.3286</td>
<td>0.2592</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obs*R-squared</td>
<td>9.0801</td>
<td>0.2825</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scaled explained SS</td>
<td>10.2042</td>
<td>0.1691</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The heteroscedasticity test is to test whether there is an inequality of variance from one residual observation to another in the regression model. The test used the Glejser test, which requires that heteroscedasticity not occur in the data if the probability value is greater than 0.05. The result of the Glejser test show a probability value of 0.259, which is greater than 0.05. The result means there is no heteroscedasticity in the data.

Table 5. Autocorrelation Test

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean dependent var</td>
<td>1.40E-15</td>
</tr>
<tr>
<td>S.D. dependent var</td>
<td>0.106214</td>
</tr>
<tr>
<td>Akaike info criterion</td>
<td>-1.470461</td>
</tr>
<tr>
<td>Schwarz criterion</td>
<td>-1.261026</td>
</tr>
<tr>
<td>Hannan-Quinn criter.</td>
<td>-1.388539</td>
</tr>
<tr>
<td>Durbin-Watson stat</td>
<td>2.000077</td>
</tr>
</tbody>
</table>

Source: Processed Data Eviews 12, 2023

The autocorrelation test aimed to test the existence of a correlation between confounding errors in period t and the previous one. The test uses the Durbin-Watson (DW) method to show there is no positive or negative correlation in the data if the DW value is greater than the dU value and smaller than the 4-dU value. The DW value from the test is 2.000077, which is between dU (1.688) and 4-dU (2.312). It was concluded that there was no autocorrelation in the residual data.

The Chow Test, The Hausman Test, and The Lagrange Multiplier Test

The data was then tested to determine the most suitable regression method through the Chow test, the Hausman test, and the Lagrange multiplier test, described as follows:

Table 6. The Chow Test

<table>
<thead>
<tr>
<th>effects Test</th>
<th>Statistic</th>
<th>d. f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>0.967977</td>
<td>(1,54)</td>
<td>0.3296</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>1.066003</td>
<td>1</td>
<td>0.3018</td>
</tr>
</tbody>
</table>

Source: Processed Data Eviews 12, 2023

The Chow test to select a regression model is carried out by testing the cross-section F-value. If the cross-section F-value is less than 0.05, the fixed effect model is selected; if it is more than 0.05, the common effect model is selected. The test result of the cross-section F-value is 0.3296, which is greater than 0.05, so the suitable model is the common effect model.
Hausman test to choose between a random effect model or a fixed effect model using the Chi-Square value test. If the Chi-Square value is less than 0.05, the fixed effect model is selected, and if it is more than 0.05, the random effect model is selected. The Chi-Square test result was 0.1044, which was greater than the value of 0.05, so the random effect model was chosen.

The Lagrange Multiplier LM as a follow-up test was carried out to select a common effect model or a random effect model, using the Breusch-Pagan method to test the F and Chi-Square values. If the F and Chi-Square values are greater than 0.05, the common effect model is selected; if they are less than 0.05, the random effect model is selected. The results of testing the Breusch-Pagan numbers show that the value of 0.4459 is greater than the value of 0.05, so the regression model chosen and most appropriate is the common effect model.
Moderated Regression Analysis Result

Table 9. Moderated Regression Analysis Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>13.0856</td>
<td>2.1891</td>
<td>5.9777</td>
<td>0.0000</td>
</tr>
<tr>
<td>MER</td>
<td>0.2347</td>
<td>0.4340</td>
<td>0.5409</td>
<td>0.5909</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.0998</td>
<td>0.0896</td>
<td>-1.1137</td>
<td>0.2705</td>
</tr>
<tr>
<td>LEV</td>
<td>-12.2478</td>
<td>2.6003</td>
<td>-4.7102</td>
<td>0.0000</td>
</tr>
<tr>
<td>PROFIT</td>
<td>-7.5585</td>
<td>2.1115</td>
<td>-3.5798</td>
<td>0.0008</td>
</tr>
<tr>
<td>MER*PROFIT</td>
<td>-0.1627</td>
<td>0.2552</td>
<td>-0.6374</td>
<td>0.5266</td>
</tr>
<tr>
<td>SIZE*PROFIT</td>
<td>-0.1627</td>
<td>0.0688</td>
<td>0.7800</td>
<td>0.4389</td>
</tr>
<tr>
<td>LEV*PROFIT</td>
<td>7.3535</td>
<td>2.5869</td>
<td>2.8426</td>
<td>0.0064</td>
</tr>
</tbody>
</table>

Source: Processed Data Eviews 12, 2023

Based on the result of the moderated regression analysis, the regression equation was built as follows:

ETR = 13.0856 + 0.2347MER - 0.0998SIZE - 12.2478LEV - 7.5585PROFIT - 0.1627MER*PROFIT - 0.1627SIZE*PROFIT + 7.3535LEV*PROFIT + e

The constant a is 13.0856, an estimate of the effective tax rate. If the merger, size, leverage, profitability, and interaction of merger, size, and leverage with profitability are in a fixed or unchanged state, the effective tax rate will remain high. The positive or negative sign of the coefficient value for each variable indicates the direction in which it affects the effective tax rate. The t-table value is determined based on the number of research samples (60) and the variables (5), so the degree of freedom (DF) value is 55. With a degree of confidence of 0.05, the t-table value is 2.004.

Testing hypothesis 1, the calculated t-test result of 0.5409 is smaller than the t-table value (0.5409<2.004). The decision rejects H1 and accepts H0, stating the merger has no negative effect on the effective tax rate. The probability value of 0.5909 is greater than the degree of confidence (0.5909>0.05), meaning the effect of the merger on the effective tax rate is not significant.

Testing hypothesis 2, the calculated t-test result of -1.1137 is smaller than the t-table value (1.1137<2.004). The decision rejects H2 and accepts H0, stating that size does not have a negative effect on the effective tax rate. The probability value of 0.2705 is greater than the degree of confidence (0.2705>0.05), meaning that size does not significantly influence the effective tax rate.
Testing hypothesis 3, the calculated t-test value of 4.7102 is greater than the t-table value (4.7102>2.004). The decision rejects H0 and accepts H3, saying that leverage has a negative effect on the effective tax rate. The probability value of 0.0000 is smaller than the degree of confidence (0.0000<0.05), meaning that the effect of leverage on the effective tax rate is significant. The significance value of 0.0000 means the level of confidence is close to 100%.

Testing hypothesis 4, the calculated t-test value of -3.5798 is greater than the t-table value (3.5798>2.004). The decision rejects H0 and accepts H4. Profitability has a negative effect on the effective tax rate. The probability value of 0.0008 is smaller than the degree of confidence (0.0008<0.05). This means that the influence of profitability on the effective tax rate is significant.

Testing hypothesis 5, the calculated t-test value of -0.6374 is greater than the t-table value (0.6374>2.004). The decision rejects H5 and accepts H0. The probability value of 0.5266 is greater than the degree of confidence (0.5266>0.05). Based on these two things, it is concluded that profitability does not weaken the effect of mergers on Sharia banks.

Testing hypothesis 6, the calculated t-test result of 0.7800 is greater than the t-table value (0.7800>2.004). The decision rejects H6 and accepts H0. The probability value of 0.4389 is greater than the degree of confidence (0.4389>0.05). Based on these two things, it is concluded that profitability does not weaken the effect of size on the effective tax rate.

Testing hypothesis 7, the calculated t-test result of 2.8424 is greater than the t-table value (2.8424>2.004). The decision rejects H0 and accepts H7. The probability value of 0.0064 is smaller than the degree of confidence (0.0064<0.05). Based on these two things, it is concluded that profitability weakens the influence of leverage on the effective tax rate significantly.

Table 10. Coefficient of Determination Test

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>R-squared</td>
<td>0.5169</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.4518</td>
</tr>
<tr>
<td>S,E, of regression</td>
<td>0.0984</td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>0.5035</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>58.2792</td>
</tr>
<tr>
<td>F-statistic</td>
<td>7.9477</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000002</td>
</tr>
</tbody>
</table>

Source: Processed Data Eviews 12, 2023
The R-squared/R² coefficient of determination test shows an R-squared value of 0.5169. This means merger, size, leverage, and profitability, as well as the interaction of merger, size, and leverage with profitability, influence the effective tax rate by 51.69%. The F-table value is 2.54, which is smaller than the statistical F-test results of 7.9477. The probability of the F-test is smaller than the degree of confidence (0.000002<0.05). It was concluded that the influence of merger, size, leverage, and profitability and the interaction of merger, size, and leverage with profitability simultaneously had a significant effect on the effective tax rate.

Discussion

The effect of merger on the effective tax rate

The decision rejects the hypothesis that mergers have a negative effect on the effective tax rate of Sharia banks, meaning that the merger activity that combined state-owned sharia banks (BRI Syariah, BNI Syariah, and Bank Syariah Mandiri into Bank Syariah Indonesia) has no negative effect on the decline in the effective tax rate figure. The government-owned Sharia bank merger process receives strict monitoring and supervision from the government, namely Otoritas Jasa Keuangan (Financial Services Authority) and Dewan Syariah Nasional (National Sharia Council). The goal of the merger is to lead Indonesia to enter the global market with a sharia economy by increasing market share, capital capacity and financing scale (Sayekti et al., 2020).

The research results are implicitly interpreted to mean that the merger activity of state-owned sharia banks does not indicate a tax avoidance motive. The management of state-owned banks, whether in the merger or post-merger process, must be guided by the provisions and commitments agreed upon during the merger. The research results have practical implications for encouraging management to remain focused on the objectives of the merger, namely increasing market share, capital capacity, financing scale, and contributing optimally to tax revenues.

Mergers, as an effort to optimize performance and increase company value, as intended in agency theory, have no effect on decreasing the effective tax rate value. In this situation, bank management must abide by the agreed-upon provisions and commitments because it will harm the government’s reputation as a principal if tax avoidance taints the merger’s noble goals.

The results of this study do not completely refute the results of Todtenhaupt et al., (2020) which state that in merger activities, companies gain benefits from financial, technological, and tax benefits. From a financial perspective, the merger of state-owned sharia banks in the second year had implications for its success in improving its performance. In September 2022, the total post-merger assets of Bank Syariah Indonesia grew by almost 20%, namely IDR 280 trillion compared to the start of the merger in the first quarter of 2021, which was recorded at IDR 234.43 trillion. In line with what Ohrn & Seegert (2019) stated, the rate of return on profits obtained by post-merger companies has increased. Improving asset performance cannot be
separated from the role of management and is under the monitoring of Otoritas Jasa Keuangan. Meanwhile, in terms of tax savings, mergers in this study are not related to obtaining tax savings benefits.

The effect of size on the effective tax rate

The size of the sharia bank company before and after the merger, based on the results of this research, is not an indicator that can influence the decline in the effective tax rate, which is thought to be an indicator of tax avoidance in sharia banks. The research results support the results of previous research conducted by (Ariani, Miza 2018; Fatmala et al., 2022; Gita et. al. 2021; Malau 2021; Sormin, 2020; Rahmawati & Mildawati 2020; Thoha & Wati 2021). On the other hand, this research result is contrary to the previous result by (Ayem & Setyadi, 2019; Handayani, 2018).

The empirical results of this research are examined based on agency theory regarding agency relationships, as follows: Management, as an authorized agent, understands its role and responsibilities in managing company assets during the pre-merger, merger transition, and post-merger periods. The government, as the principal, supervises state-owned banks through the central bank, namely Bank Indonesia, with government intervention as a shareholder. The government's supervision of banking companies has been handed over to the Financial Services Authority (OJK) since the enactment of Law Number 21 of 2011. The Financial Services Authority (OJK) is an independent institution, so it is neutral in carrying out its functions and provides more legal certainty for the parties involved. In this way, the relationship between the principal and the agent is established in harmony and does not indicate any agency problems.

The increase in company size in this study is one of the impacts of Islamic bank merger activities. The bank resulting from the merger, Bank Syariah Indonesia, succeeded in being ranked seventh as the bank with the seventh largest asset value in Indonesia. The research results have practical implications for management to remain focused on carrying out its function of managing and optimizing the use of Islamic bank assets to increase company value.

The effect of leverage on the effective tax rate

It is stated that leverage has a significant negative effect on the effective tax rate of Islamic banks. Increasing the leverage of sharia banks can significantly influence the decline in the effective tax rate of sharia banks. The hypothesis is accepted with a statistical significance level of 0.0000, meaning the level of confidence in the research results is close to 100%.

Acceptance of the hypothesis is theoretically in line with and supports the trade-off theory of Myers (1984). The company understands the concept of utilizing debt as part of the company's capital and has benefited from the use of this debt. Acceptance of the hypothesis also supports the initial research of Stickney & Mcgee (1982) who believe that companies with high levels of leverage will have a low
effective tax rate. The results supported by the previous research state that leverage has a negative effect on the effective tax rate (Malau, 2021; Rahmawati & Mildawati, 2019).

The research results that leverage has a negative effect on the effective tax rate are theoretically in line with and support the trade-off theory of Myers (1984), related to the use of debt as company capital. Leverage in this research is calculated by the DAR ratio (Debt to Assets Ratio), which compares the amount of debt to the total assets of Islamic banks. Based on descriptive analysis, the average value of the debt-to-capital ratio (DAR) is 0.905278, or more than 90% of the company's assets are financed using debt. This ratio value is higher than the normal DAR ratio value, namely from 0.6 to 0.7. Banks manage financial assets, which are funds originating from customers or third-party funds, whose status is debt on the bank's side.

The theoretical implications of the results of this research, once again as a test of the truth and strengthening of the trade-off theory, are in the form of proof regarding the influence of leverage as part of a company's capital structure on the effective tax rate. The statistical fact in this research is that leverage has a significant negative effect on the effective tax rate. For management, it is also a warning to remember the duties and functions of Sharia banks as state-owned companies to contribute in the form of optimal tax payments.

In capturing the facts of this research, tax agencies need to monitor material compliance more carefully. Tax agencies must also be more careful in understanding taxpayers' business processes that have specific characteristics, for example, related to the composition of the company's capital structure or leverage, because, based on the empirical results of this research, leverage is a significant indicator of a company's tax avoidance activities. A good and professional understanding of taxpayers (especially Sharia banks) will be able to optimize efforts to explore tax potential and test the fulfillment of tax obligations.

On the other hand, the results are contrary to previous research that states leverage has a positive effect on the effective tax rate (Kasir, 2020; Pristanti et al., 2020; Thoha & Wati, 2021). The higher the leverage, the more efforts the company should make to fulfill its obligations to pay these debts, and tax regulations need to be carefully pursued.

**The effect of profitability on the effective tax rate**

It is stated that profitability has a significant negative effect on the effective tax rate. Increasing the profitability of Islamic banks can significantly influence the decline in the effective tax rate. The results of this research support and strengthen the results of previous research regarding the relationship between the influence of profitability and the effective tax rate. Among them, as stated by Belz et al., (2013), profitability is an indicator related to the effective tax rate. Rodríguez et al., (2021) even said that the influence of profitability on the effective tax rate is significant.
The results of this research have theoretical implications for strengthening the existence of an agency relationship as referred to in agency theory, namely the principal’s desire to maximize the value of wealth, thus encouraging the agent to make decisions related to optimizing the company’s profit achievement. In order to achieve the desired level of profit, management strives for cost efficiency, including tax costs, and according to the results of this research, increasing profitability has an impact on reducing the effective tax rate.

The results practically implies to the management of Sharia banks as a reminder that, as a public company, implementing a bookkeeping system that complies with principles is very important for the interests of all parties, both internal management, shareholders, and external parties to the company, for example, tax agencies. In this case, the tax agency is indeed a party outside the company but has full authority as a law enforcement agency in the field of taxation.

The result of this research also has practical implications for tax agencies as input to be more careful in carrying out material compliance tests regarding the fulfillment of taxpayers' tax obligations in general. Corporate income tax is imposed on company income or profits, and companies will instinctively try to pay as little tax as possible by "playing" costs in the financial statements. Material testing of financial statements from the fiscal side is very important to assess the fairness of fulfilling tax obligations and to assess whether the company is indicated to be making efforts to avoid tax.

**Profitability in strengthening the effect of mergers on the effective tax rate**

It is stated that profitability does not weaken the negative influence of mergers on the effective tax rate. The type of moderation that profitability carries in terms of its role as a moderating variable is an explanatory/predictor moderator variable, because profitability in the first interaction has a significant effect on the effective tax rate. After there is an interaction between profitability and mergers, the effect on the effective tax rate is not significant. This means that profitability, as a moderating variable in the regression relationship that has been formed, only acts as an independent variable.

The connection between this problem and agency theory is that the agency relationship between principals and management is established in harmony when there is a decision to merge companies. Management understands the principal's desire to maximize wealth accumulation and financial gain. Based on the previous explanation, the good level of profitability and post-merger company performance achievements do not show any indication of an influence on the decline in the effective tax rate as a proxy for corporate tax avoidance.

**Profitability in strengthening the effect of size on the effective tax rate**

It is stated that profitability does not weaken the negative influence of company size on the effective tax rate. The type of moderation that profitability
carries in terms of its role as a moderating variable is an explanatory/predictor moderator variable. This is because profitability in the first interaction has a significant effect on the effective tax rate. After there is an interaction between profitability and company size, the effect on the effective tax rate is not significant. This means that profitability, as a moderating variable in the regression relationship that has been formed, only acts as an independent variable.

From the perspective of agency theory, agency relationships appear to work in harmony. The principal's desire to maximize profits is realized by management; increasing the size of the company after the merger is supported by the condition of the company being profitable. This company's condition is the result of the concept of economies of scale, namely that when the size of the company increases, the average operational costs will decrease, thereby potentially increasing profitability.

In this research, the combination of increasing company size and a good level of company profitability does not indicate the existence of tax avoidance practices. This is contradictory to the research results of Stickney & McGee, (1982) which stated that the larger the company, the lower the company's effective tax rate. The research on state-owned Sharia banks did not take advantage of the company's substantial resources as a chance to carry out planning in an effort to achieve the greatest possible tax savings. On the other hand, a combination of increasing company size (post-merger) and a good level of company profitability is consistently pursued so that Sharia banks are able to become highly competitive Sharia banks and increase the market share of Islamic banks (as is the aim of the merger). This will also be related to the solid image of large government-owned companies.

The combination of company size supported by a profitable company must be optimally utilized by management to make Sharia banks competitive in the global market by increasing market share, capital capacity, and financing scale. For tax agencies, the practical implications of the research results can be used as an overview of the profile of Islamic banks so that they can optimize the contribution of Sharia banks to paying taxes to the state.

**Profitability in strengthening the effect of leverage on the effective tax rate**

It is stated that profitability significantly weakens the negative influence of leverage on the effective tax rate of Sharia banks. The type of moderation carried by profitability is quasi-moderation or pseudo-moderation. This is because, before moderation, leverage had a significant negative effect on the effective tax rate. After there is moderation in profitability, the effect of leverage remains the same, namely that leverage has a significant negative effect on the effective tax rate. Quasi moderation occurs if the influence of the independent variable on the dependent variable remains significant, either without moderation or after moderation.

Based on the test result, the interaction between leverage and profitability is valued as positive. When leverage plays the role of an independent variable, it has a negative effect on the effective tax rate. Profitability has a strengthening moderation
effect on the negative relationship between leverage and ETR. The empirical result is a beta interaction of 7.3535 with a significance of 0.0064, while beta independence is -12.2478 with a significance of 0.000, and beta moderation is -7.5585 with a significance of 0.0008. According to these things, the role of profitability as a moderation variable strengthens the negative effect of leverage on the effective tax rate.

The results of this research have theoretical implications for supporting and strengthening the trade-off theory by explaining the relationship between the three variables (effective tax rate, leverage, and profitability). Based on trade-off theory, companies understand the composition of their capital structure through the use of debt or leverage. The business process of Sharia banks as collectors of customer funds means that the company’s capital composition is more than 90% funded by debt. The company understands the concept of utilizing debt so that it gets the benefit of debt interest as a deduction from profits, which will become taxable income, which ultimately determines the size of the effective tax rate.

The practical implication for management regarding profitability and leverage is that in order to achieve the desired level of profitability, the company must be able to optimize the most appropriate capital arrangement for the company or leverage. Companies must also be able to optimize capital resources that have debt status. The fact that the interaction between profitability and leverage is a strong indicator of tax avoidance practices by Sharia banks must be a focus of tax supervision. The facts of this research also encourage tax agencies to develop effective strategies so that Sharia banks are still able to contribute optimally to tax payments.

CONCLUSIONS AND RECOMMENDATIONS

The research results show that mergers, size, leverage, and profitability all together influence the effective tax rate by 51.69%. Partially, mergers and size have no negative effect on the effective tax rate. Leverage and profitability partially have a negative and significant effect on the effective tax rate. Profitability significantly strengthens the negative effect of leverage on the effective tax rate, but not on merger and size.

The research results imply that Sharia banks management better understands the tax impacts caused by merger activities and re-understands its important role in contributing to the country in the form of paying taxes. It is also implied that Sharia banks management is assisted in implementing tax provisions properly and optimizing contributions to tax payments. For tax agencies, the research results serve as guidance to be responsive to business-world phenomena that are correlated with taxation in the context of merger momentum and its subsequent effects in optimizing taxpayers' tax supervision. The tax agencies can extract the results of this research to develop steps to optimize the extraction of tax potential from Sharia banks in Indonesia.
Due to the limitations of this research, future research should consider a wider research sample coverage and also consider the observation period carried out. Future research is also expected to be able to find other factors or variables that influence the effective tax rate, apart from the variables studied in this research (mergers, company size, leverage, and profitability).

REFERENCES


Thoha, M. N. F., & Wati, Y. E. (2021). Pengaruh Leverage, Likuiditas, Ukuran Perusahaan, Dan Profitabilitas Terhadap Tax Avoidance (Studi Empiris Pada...
