



Financial Derivatives, Financial Leverage, Intangible Assets, and Transfer Pricing Aggressiveness: Evidence from Indonesian Companies

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ABSTRACT

This study aim to examine the effect of financial derivatives, financial leverage, and intangible assets on transfer pricing aggressiveness. The samples are nonfinancial companies listed on the Indonesia Stock Exchange (IDX) from 2012 to 2016. Using purposive sampling method, 44 selected companies' data were selected (220 year-firm observations). The data was analyzed using multiple regression analysis with panel data. The results suggest that financial derivatives, financial leverage, and intangible assets have a positive effect on transfer pricing aggressiveness. This study shows that financial derivatives in Indonesia, both with the aim of hedging and with speculative purposes, have the same nature and are closely related to profit shifting conducted by the companies.

Derivatif Keuangan, Leverage Keuangan, Aset Tak Berwujud dan Agresivitas Harga Transfer: Bukti Empiris dari Perusahaan Indonesia

ABSTRAK

Penelitian ini bertujuan untuk menguji pengaruh derivatif keuangan, leverage keuangan, dan aset tidak berwujud pada agresivitas penetapan harga transfer. Sampel yang digunakan adalah perusahaan non finansial yang terdaftar di Bursa Efek Indonesia (BEI) dari tahun 2012 sampai dengan tahun 2016. Dengan menggunakan metode purposive sampling, 44 data perusahaan yang dipilih dengan 220 total pengamatan. Data dianalisis dengan menggunakan metode regresi berganda dengan data panel. Hasil penelitian menunjukkan bahwa derivatif keuangan, leverage keuangan, dan aset tidak berwujud berpengaruh positif terhadap agresivitas penetapan harga transfer. Penelitian ini menunjukkan bahwa financial derivative di Indonesia baik dengan tujuan hedging maupun dengan tujuan spekulatif memiliki sifat dasar yang sama dan erat kaitannya dengan profit shifting yang dilakukan oleh perusahaan.

1. Introduction

Transfer pricing is one of the most extended tax avoidance activities by multi-national company (MNC) in various parts of the world. The Organisation for Economic Co-operation and Development (OECD) (2017) states that more than 60% of the world's trade takes place in a multinational firm, the transfer pricing is

becoming more critical. Similarly, Richardson, Taylor, & Lanis (2013) stated the use of transfer pricing as a significant form of tax avoidance using income taxes from countries with high tax rates to countries with lower tax rates. In Indonesia, as one of the developing countries, foreign investment company (FIC) is indicated to avoid taxes using transfer pricing mechanisms.

The mechanism of tax avoidance through transfer rates sometimes is influenced by financial derivatives transactions. The experts of taxation identify the convenience derived from the use of derivative transactions that can be restructured, allowing taxpayers to take advantage of regulatory tax loopholes. It is in line with the rapidly increasing volume of financial derivatives transactions in the last two decades. Oktavia & Martani (2013) showed an increase in the volume of derivative transactions from IDR17,472.53 billion in 2001 to IDR60,705.55 billion in 2009.

Currently, the provisions for taxation of derivative transactions refer to general taxation provisions after the revocation of Government of Indonesia Regulation Number 17/2009 concerning Income Tax on Income from Derivative Transactions. The taxpayer used Indonesia Financial Accounting Standard Principles /PSAK No. 55 (IAI, 2018) because there are no specific tax rules related to derivative transactions. Thus, there is often a discrepancy with the Indonesia Tax Authority that corrects the charges arising from the derivative transaction loss. The Indonesia Tax Authority declared that it is defeated in cases of derivative transactions due to weak regulations on derivative transactions (Santos, 2016).

Another financial instrument which potentially exploited for tax avoidance activities through transfer pricing is long term debt. The financing decision includes an alternative source of funds that the company would use to run its business. Regarding the financing structure, a company is considered to use financial leverage if the company uses a loan or debt as a source of financing other than its capital. The use of these funds raises a fixed cost of interest expenses that must be paid regardless of the level of corporate earnings. Deductible interest expense from taxable income can provide an incentive for the company; hence the company prefers to fund its business from debt. It is reinforced by Badertscher, Katz, & Rego (2009), stating that the company has the

potential to obtain tax incentives by choosing to finance its business from debt. Furthermore, interest on debt can be a tax-deductible that becomes an incentive company in doing tax planning. Moreover, if debt transactions are conducted with related parties whose expenses or loan interest can be deducted from the gross income of the company.

In addition to financial derivative and financial leverage transactions, one of the transactions that companies also frequently make to avoid taxes through transfer pricing aggressiveness is transactions related to intangible assets. Indonesia Tax Court documented concerning intangible assets disputes are studied to understand the debate over issues relating to transfer pricing aggressiveness of intangible property. In Indonesia, discussions on transfer pricing always use tangible goods as their starting point.

The problem that often arises is how if transfer pricing aggressiveness that involves intangible transactions and the absence of data comparison. There are a total of 5 cases that have been resolved by the Indonesia Tax Court, where three cases were settled in 2010 to 2011 and two other cases settled in 2002 and 2007 (Navarro et al., 2012) in (Muhammadi, Ahmad, & Habib., 2016).

The risk of transfer pricing aggressiveness may increase as the variations in the interpretation of transfer pricing aggressiveness assessments occur when intangible asset transfers (Grubert, 2003). According to Richardson, Taylor, & Lanis (2013), the cost of research and development that does not have a physical form can allow companies to manipulate the magnitude of these expenses. In contrast to previous research on the impact of intangible assets on transfer pricing aggressiveness, in Indonesia mostly uses research and development spending in measuring intangible assets, referring to Richardson, Taylor, & Lanis (2013), research and development expenditures are deemed not to

represent the use of intangible assets by companies in Indonesia. This study uses a broader proxy of intangible assets by referring to (Taylor et al., 2015).

This study continues previous empirical research, including research by Santos (2016), Lee (2016), and Taylor, Richardson, & Lanis (2015). The study's purpose is to investigate the influence of financial derivatives, financial leverage, and intangible assets for transfer pricing aggressiveness of nonfinancial companies. Several studies in Indonesia have reviewed the topic of transfer pricing aggressiveness testing. For example, Susanti & Firmansyah (2018) examined tax expenses, tunneling, and bonuses on transfer pricing decisions, while Dinca & Fitriana (2019) examined R&D Expenditure, multi-nationality, and corporate governance on Transfer Pricing Aggressiveness.

Moreover, Ilmi & Prastiwi (2020) tested the influence of profitability, company innovation, and company size for Transfer Pricing Aggressiveness. Yulianti & Rachmawati (2019) tested tunneling and debt covenants for transfer pricing decisions. Meanwhile, Falbo & Firmansyah (2018) and Herianti & Marundha (2019) tested the transfer pricing aggressiveness on tax avoidance. However, In Indonesia, the study related to the effect of financial derivatives, financial leverage, and intangible assets on transfer pricing aggressiveness is still scanty.

In this study, the use of financial derivatives is divided into two purposes, namely for hedging purposes and non-hedging purposes (speculative purposes). The use of derivatives in developing countries tends to cause a decline in the value of the company due to weak institutions and governance in developing countries and derivative markets in less liquid developing countries (Kwong, 2016).

According to Huang, Kabir, & Zhang (2017), the use of derivatives by companies in developing countries is not the same as their use in developed countries that can reduce risk.

Meanwhile, Cao, Chen, Goetzmann, & Liang (2018) stated that derivative instruments used by companies even for hedging purposes, but in reality, companies that have derivatives with hedging purposes tend to have shares that are valued too low by investors. Therefore, in this study, financial derivatives for hedging and non-hedging purposes are considered to have the same pattern.

Furthermore, this study uses return on assets, company size, and cash flow from operating activities as a control variable, referring to Santos (2016). Multinational companies that have large profits tend to have aggressive transfer pricing behavior to avoid tax. Many companies have proven to practice transfer pricing by diverting profits to countries with low tax rates and shifting losses to countries with high tax rates that would reduce their pre-tax income. In contrast, company size is used by considering companies with increasingly large affiliates having more significant opportunities in tax planning through transfer pricing. Furthermore, cash flow from operating activities provides information about cash flow and company revenue.

The next following sections discuss prior studies on financial derivatives, financial leverage, intangible assets, and transfer pricing Aggressiveness. The research design and findings are presented in the third and fourth sections. Lastly, conclusions, including the study limitation and recommendation for future studies, can be found in the last section.

2. Literature review

Financial derivatives and transfer pricing aggressiveness

The political costs hypothesis in positive accounting theory explains that the higher the cost of corporate politics, the more likely it is for corporate managers to choose accounting policies that shift profits/expenses to countries with lower/higher tax rates or delay earnings recognition. Tax is one form of political costs

that can reduce corporate profits. Therefore, managers tend to take opportunistic actions to reduce the payment of tax payable, one of them through the practice of transfer pricing aggressiveness. Companies can take advantage of different tax rules between countries to be able to maximize profits in countries with low tax rates and transfer losses to countries with high tax rates. Thus, affiliated Santos (2016) found empirical evidence that the use of derivative instruments positively affects transfer pricing aggressiveness. Lee (2016) shared the derivative instruments into derivatives for hedging purposes and derivatives, not for hedging purposes. The hedging instrument allows tax reductions through profit reductions and increased debt capacity (Lee, 2016). Transfer pricing aggressiveness conducted by companies through hedging transactions can lead to an increase in debt, thereby reducing taxable income through interest charges (Graham & Rogers, 2003).

Also, the aggressive side allows the company to realize a loss or delay the realization of earnings, thereby reducing the taxable income of the current year (Lee, 2016). These derivative transactions are conducted by intragroup companies in the form of multinational corporations across national borders, enabling the transfer of expenses or profits from and to countries with high or low tax rates. Therefore, the first hypothesis of this study is:

H₁: Financial derivatives for hedging purposes has a positive effect on transfer pricing aggressiveness.

The tax laws in Indonesia do not provide clear rules regarding the taxation of derivative transactions. Thus, derivative losses for speculative purposes would result in substantial losses due to the absence of offsetting, and profit on the hedged item is also recognized to reduce taxes. The mode of transfer pricing aggressiveness through derivative transactions for speculative purposes may represent a more aggressive tax avoidance strategy, moreover,

when the company intentionally entered into derivative transactions with its subsidiaries in a country with different tax jurisdictions.

For example, in forwarding contracts, value transfers are made by setting a lower contract price (higher purchase contract price) than the estimated price that would occur at maturity. In this way, the company would always suffer losses because, at maturity must sell at a lower price or buy at a price higher than the price in the market. Similar to transfer pricing (selling at a low price to an affiliated company), these actions can lead to lower corporate tax profits and payments.

In line with hypothesis 1, to reduce its tax payments, the company delayed the realization of derivative profits. It accelerated the realization of derivative loss, not designated as a hedge for accounting purposes (Lee, 2016). Therefore, the second hypothesis of this study is:

H₂: Financial derivatives for speculative purposes has a positive effect on transfer pricing aggressiveness

Financial leverage and transfer pricing aggressiveness

Positive accounting theory assumes that managers are rational. Therefore managers would choose the most accounting policies that can meet their interests. Richardson, Taylor, & Lanis (2013) stated that financial leverage is one of the variables that positively affect the activity of transfer pricing aggressiveness. The companies with higher debt to equity ratios result in more tax-aggressive than those with low debt to equity ratio (Bernard et al., 2006).

In the practice of transfer pricing, a robust alleged debt transaction between the company and its affiliates are used to generate interest charges or loan charges that would be deducted from the company's gross income to reduce the company's profit. Therefore, the hypothesis of this research is:

H₃: Financial leverage has a positive effect on transfer pricing aggressiveness

Intangible assets and transfer pricing aggressiveness

Positive accounting theory explains why accounting policy becomes a problem for companies and parties concerned with financial statements, and for predicting accounting policies to be chosen by the company under certain conditions. One of the evidence of the importance of intangible assets in transfer pricing aggressiveness is by considering the intangible assets in various stages of examination of transfer pricing by Indonesia Tax Authority, both in the planning stage (risk analysis) and in the implementation stage (function, asset, and risk analysis). The risk of transfer pricing aggressiveness would increase as the variations in the interpretation of transfer pricing aggressiveness assessments occur when intangible asset transfers (Grubert, 2003).

It is similar to that of Taylor, Richardson, & Lanis (2015) stated that intangible assets have a positive effect on transfer pricing aggressiveness. Although the research in Indonesia conducted by Waworuntu & Hadisaputra (2016) resulted in the finding that intangible assets variable negatively affect the transfer pricing aggressiveness hence that there are differences in the effect, it may be due to the full replication of (Richardson, Taylor, & Lanis, 2013), including within the scope of research that eliminates companies that do not have subsidiaries abroad, regardless of whether the company has other related parties abroad or not.

This study employs different proxies following Taylor, Richardson, & Lanis (2015), i.e., total assets intangible divided by total assets. Therefore, the last hypothesis in this research is:
H4: Intangible assets have a positive effect on transfer pricing aggressiveness.

3. Research method

This study employs a quantitative method. The sample is taken from the Indonesia Stock Exchange (IDX) from 2012 to 2016. Sampling is

conducted by purposive sampling based on several criteria, the selection of samples that are conducted not randomly based on specific criteria. First, the company is engaged in the non-financial sector (excluding companies engaged in the financial and insurance sector). Companies engaged in the financial sector are excluded because of differences in capital structure characteristics. It is related to the use of leverage as one of the independent variables in this study. Second, the company is listed on IDX before January 1, 2012.

This study uses 2012 as the first year because, in that year, the financial statements of public companies in Indonesia had used IFRS-based financial accounting standards. The standard also stipulates that the disclosure of derivative instruments uses the fair value. Third, the company has complete data related to the variables studied, from 2012 to 2016. Fourth, the company did not suffer losses during the study period. After all, it could affect the measurement of one of the author's research variables where the use of derivatives seem lower because it is going to happen financial loss company.

Accurately, for the sample of derivative transactions, it would first distinguish between derivative transactions for common hedging purposes (economic goals) and hedging for accounting purposes. Derivatives to be used are derivative value transactions for accounting purposes (assets and liabilities) measured using the fair value of derivatives, by the provisions of the disclosure of PSAK 60 (IAI, 2018). Furthermore, the derivative value would be differentiated into hedging or non-hedging purposes (speculative purposes) by looking at the company's financial statements.

The dependent variable in this study is the Transfer Pricing Aggressiveness (TP). It is measured using an index as has been conducted by Richardson, Taylor, & Lanis (2013) and Taylor, Richardson, & Lanis (2015). The index uses a sum-score approach that sums up to eight items

taken from the company's financial statements and annual reports.

The index is an IRS's audit transfer audit check consisting of eight parts determining whether a related party's transactions are commercially reasonable on a commercial basis, which provides score one if appropriate and 0 otherwise. However, there is one criterion of transfer pricing aggressiveness, which is not taken in this research because it can be applied in Indonesia, which is the 8th index criterion regarding the existence of loss transfer between related parties without commercial justification.

The elimination of the criterion must be conducted because there is no regulation regarding Group Taxation in Indonesia. The sum-score approach for calculating transfer pricing aggressiveness is conducting according to how to add the following indicators; then, the results are divided into seven criteria namely (1) the existence of debt/interest-bearing receivables to related parties, (2) exemption of debt / receivable

from/to related parties, (3) any impairment of debts/receivables or uncollectible receivables from/to related parties, (4) the existence of non-monetary liabilities (service/utilization of non-current assets/leases) among related parties, (5) the absence of a formal document that can support the use of transfer pricing method used in transactions between related parties, (6) the existence of long-term disposal of assets to/from related parties without commercial justification, and (7) the absence of any justification may indicate that transactions between related parties have been reasonably exercised.

The independent variables in this study consist of financial derivatives, financial leverage, and intangible assets. Financial derivatives are divided into non-hedging and hedging purposes. Financial derivatives variables are measured following Lee (2016) as the fair value of non-hedging and hedging derivative assets (liabilities) for accounting purposes is described as follows:

$$FVHD_{it} = \frac{\text{Fair value of the hedging derivative}}{\text{Total assets}_{it-1}}$$

$$FVNHD_{i,t} = \frac{\text{Fair value of non-hedging derivative}}{\text{Total assets}_{it-1}}$$

Where:

$FVHD_{it}$	= Fair value of hedging derivatives assets (liabilities), the fair value of derivative assets (liability) designated for hedging purposes for the accounting purposes of the company i year t
$FVNHD_{it}$	= Fair value of non-hedging derivatives assets (Liabilities), the fair value of a derivative (liability) asset not designated as a hedge for the accounting purposes of the company i year t
The fair value of the hedging derivative	= The fair value of absolute assets (liabilities) derivatives designated hedges for accounting purposes
The fair value of non-hedging derivative	= The absolute fair value of a derivative asset (liability) not designated as a hedge for accounting purposes
$\text{Total assets}_{i,t-1}$	= Total assets of company in year t-1

Financial leverage in study follows Richardson, Taylor, & Lanis (2013), who defines financial

leverage is total debt divided by total company's assets, namely as follows:

$$LEV_{it} = \frac{\text{Total debt}_{it}}{\text{Total assets}_{it}}$$

Where:

LEV_{it} = Financial leverage of company i in year t
 Total debt_{it} = Total debts of the company i in year t
 Total assets_{it} = Total assets of the company i in year t

The intangible assets utilization variable describes how firms utilize transactions related to intangible assets, both intellectual property and research and development expenditures

(Richardson, Taylor, & Lanis, 2013). It is measured by the number of intangible assets divided by total assets following Taylor, Richardson, & Lanis (2015) as follows:

$$INTANG_{it} = \frac{\text{Intangible assets}_{it}}{\text{Total assets}_{it}}$$

Where:

INTANG_{it} = Intangible assets of the company i in year t
 Intangible assets_{it} = Total intangible assets of the company i in year t
 Total assets_{it} = Total assets of the company i in year t

This study employs three control variables, namely return on assets (ROA), company size (SIZE), and cash flow from operating activities (CFOA). Profitability is a measure to assess the efficiency of capital use in a company by comparing the capital used with the operating profit achieved.

This study uses the measurement of firm characteristics, according to Richardson, Taylor, & Lanis (2013), using ROA, calculated from profit before tax divided by total assets. While based on research Nurjanah, Isnawati, & Sondakh (2016), firm size affects the transfer pricing decision. The larger the size of a company, the

higher the incentive for management to do earnings management by using the transfer pricing mechanism.

The measurement of this variable uses the proxy in the form of the natural logarithm of total assets. Furthermore, cash flow from operating activities (CFOA) variable follows Hanlon & Heitzman (2010), who stated that some of the tax rules favored by corporations, such as tax shelters, often provide information about a consistent cashflow flow by multinational corporations. Therefore, the CFOA variable is measured based on the cash flow value of the operating activity compared to the total assets.

The research model as follows:

$$TP_{it} = \beta_{0it} + \beta_1 FVHD_{it} + \beta_2 FVNHD_{it} + \beta_3 LEV_{it} + \beta_4 INTANG_{it} + \beta_5 ROA_{it} + \beta_6 SIZE_{it} + \beta_7 CFOA_{it} + \varepsilon_{it}$$

where:

TP_{it} = Transfer pricing aggressiveness of company i year t
 FVHD_{it} = Fair value of hedging derivatives assets (liabilities), the fair value of derivative assets (liability) designated for hedging purposes for the

		accounting purposes of the company i year t
FVNHD _{it}	=	Fair value of non-hedging derivatives assets (liabilities), the fair value of a derivative (liability) asset not designated as a hedge for the accounting purposes of the company i year t
LEV _{it}	=	Financial leverage of company i year t
INTANG _{it}	=	Intangible assets of the company i year t
ROA _{it}	=	Return on asset ratio of the company i year t
SIZE _{it}	=	Firm size of the company i year t
CFOA _{it}	=	Cash flow from operations of the company i year t

4. Results and discussion

The purposive sampling steps can be summarized as in Table 1 below.

Table 1 Criteria of sample selection

No.	Criteria	Total	Size
1	Non-financial sector companies listed on the IDX 2016	362	Firms
2	Companies listed on the IDX listing after 2012	(97)	Firms
3	Companies that are not indicated to carry out derivative transactions and incur losses	(314)	Firms
4	Companies with incomplete data	(4)	Firms
Total samples		44	Firm
Observation period (2012 – 2016)		5	Year
Total observations		220	Firm-year

Furthermore, a descriptive statistical summary is shown in Table 2 below:

Table 2 Descriptive statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.
TP	0.305844	0.285714	0.714286	0	0.204468
FVHD	0.001297	0	0.068211	-0.005492	0.008415
FVNHD	0.000081	0	0.057098	-0.090735	0.014243
LEV	0.516729	0.493786	1.846517	0.157710	0.186909
INTANG	0.014979	0.000635	0.152740	0	0.030784
ROA	0.129887	0.083607	0.884856	0.006465	0.132910
SIZE	29.04689	29.20199	32.82181	20.16447	2.37850
CFOA	0.111696	0.089488	0.662711	-0.193068	0.122920

The panel data study has three regression models, namely Ordinary Least Square (OLS), Fixed Effect Model (FEM), and Random Effect Model (REM). To strengthen the result of model selection, the selection of a panel data regression method consists of three data test, Chow test,

Hausman test, and Lagrange Multiplier Test. Based on the test result, the most suitable panel data regression model for this research is the Fixed Effect Model (FEM). The hypothesis test results can be seen in Table 3.

Table 3 Regression test result

Variable	Sign	Coeff.	t-Stat	Prob.	
FVHD	+	2.919	1.815	0.035	**
FVNHD	+	1.655	3.959	0.000	***
LEV	+	0.101	2.570	0.005	***
INTANG	+	0.931	2.227	0.013	**
ROA		-0.089	-0.865	0.194	
SIZE		0.045	2.893	0.002	***
CFOA		-0.020	-0.513	0.304	
C		-1.067	-2.295	0.000	***
R ²	0.981				
Adj. R ²	0.976				
F-stat.	181.965				
Prob(F-stat.)	0.000				

The effect of financial derivatives on hedging purposes on transfer pricing aggressiveness

The result of this study suggests that the transaction of the company's derivative instruments for hedging purposes has a positive effect on transfer pricing aggressiveness. Research conducted by Santos (2016) and Lee (2016) showed similar results, which proved that derivative instruments for hedging purposes positively affect transfer pricing aggressiveness. Transfer pricing aggressiveness used in this study is closely related to the tax aggressiveness of the company. This result could also be interpreted as an increase in the condition of the transaction derivative instruments of the company may cause aggressive transfer pricing increases.

According to Lee (2016), related to hedging activities, it is found that companies tend to opt to delay the realization of derivative profit compared to realizing a loss in the current year to reduce taxes. Regarding transfer pricing, derivative transactions for hedging purposes are performed with financial institutions and counterparts with related parties. The company gains benefits from both the accounting and tax aspects by delaying the realization of derivative profit. Regarding taxes, the company does not pay taxes until derivatives earnings are realized.

In contrast, regarding accounting, the company gains profit in the form of an increase in assets and income in the financial statements. The company is indicated to utilize tax regulation with the principle of realization in the derivative profit tax. About hedging transactions, unrealized derivative profits directly affect the company's net income so that the company benefits from an increase in net income in the financial statements.

In contrast to non-hedging transactions, hedging accounting requires the deletion of gain/loss on hedging instruments on a hedged item's profit/loss. Also, the recognition of gain and loss on changes in the fair value of hedging instruments and hedged items in the same period so that accounting for these changes directly affect the company's income before tax.

The high derivative assets can increase the company's tax expense. Derivative assets represent accumulated gain on changes in fair value of derivatives. However, the company tends to postpone the realization of the derivative profit of the hedge until the settlement date, as it may be profitable regarding both accounting and taxes.

Differences in accounting standards and tax laws result in the emergence of deferred tax liabilities on the recognition of fair value changes based on accounting, while earnings change in

fair value is not recognized under the tax rules as it is based on the principle of realization. The temporary difference in the gain on the change in fair value of the derivative results in a high tax burden on the financial statements.

Nevertheless, the company does not pay tax on the profit increase in the year due to unrealized profit. Related to the aggressiveness of transfer pricing, the use of the principle of realization more reflects a more aggressive behavior in tax avoidance because the company can delay or accelerate the realization of derivative profits or losses by transferring derivative profits or losses to related parties in the country of destination.

The effect of financial derivatives for speculative purposes on transfer pricing aggressiveness

The result of this study indicates that the transaction of financial derivatives for speculative purposes has a positive effect on transfer pricing aggressiveness. Research conducted by Santos (2016) and Lee (2016) suggested similar results. Transfer pricing aggressiveness used in this study is closely related to the tax aggressiveness of the company. This result is in line with the initial hypothesis so that the results shown have a coefficient marked positive this can also be interpreted as an increase in the condition of the transaction derivative instruments of the company that may cause aggressive transfer pricing increases.

This study is in line with Lee (2016), which divided the use of derivatives by separating derivatives into derivative assets and derivative liabilities and value-added designs. The research led to the conclusion that firms that have non-hedging derivative transactions for accounting purposes are indicated to be more aggressive in tax avoidance through transfer pricing than firms that have no or fewer derivative transactions for hedging or non-hedging purposes for accounting purposes. However, transfer pricing activities are

closely related to the disclosure of transactions with related parties by PSAK No.7 (IAI, 2018).

For financial derivatives for speculative purposes, it is assumed that the company tends to delay the realization of profit while accelerating the realization of derivative losses in the current year. It indicates companies are aggressively reducing tax payments through derivative transactions that are not designated for hedging, through a transfer of price transactions with their respective parties. Financial derivatives for speculative purposes can cause relatively significant losses due to the absence of offsetting with hedged items. Based on Article 6 paragraph 1 of the Indonesia Income Tax Act, to become a deduction of income, a loss must be a loss caused by the activities of obtaining, collecting, and maintaining an income. In this regard, derivative transactions should not be designated for hedging purposes in accounting are transactions not related to those activities or the main activities of the company. However, the absence of special tax rules on derivative transactions makes hedging constraints unclear, which can be used by companies to reduce tax payments through the realization of loss on derivative transactions rather than hedging objectives. It also indicates that the company engages in complex derivative transactions with its affiliates so that it can impose non-hedging derivative losses to reduce tax payments.

The effect of financial leverage on transfer pricing aggressiveness

The result of this study suggests that financial leverage has a positive effect on transfer pricing aggressiveness. Research conducted by Richardson, Taylor, & Lanis (2013) suggested the same result, which proves that financial leverage has a positive effect on transfer pricing aggressiveness. This result is in line with the initial hypothesis so that the results shown have a coefficient marked positive this can also be interpreted as an increase in corporate debt

transactions that may cause transfer pricing aggressiveness increases.

This result is relevant to previous studies such as research Harrington & Smith (2012), which explained that financial leverage affects the level of tax aggressiveness made by the company. Proven companies indicated willing to bear the risk of solvency to increase the book-tax difference.

Regarding financial leverage, one of the issues of taxation of multinational corporations considered through the strategy of transfer pricing. This issue is triggered by transactions of multinational companies in Indonesia to affiliates abroad because the taxpayer from multinational companies recorded themselves always suffered losses in recent years. By using an unreasonable transaction, the taxpayer is required to "buy" goods or services from the Low Tax Rate Country company at a price above the fair, thus continuing to lose money.

However, despite the loss, the company tends to operate throughout the year with continuous debt so that it would affect the profitability of the company. A portion of the company's profit may be used to pay interest on the loan. With increasing interest costs, then earnings before tax would be reduced. Therefore, indicated when the debt increases, management would adjust the accounting figures to agree on restrictions on the debt agreement.

According to article 6 paragraph 1 letter 3 of Indonesia Act number 36 of 2008 concerning Income Taxes, interest on loans represents deductible expenses on taxable income. The deductible interest expense may decrease the company's taxable profit. A reduced taxable profit would ultimately reduce the amount of tax payable by the company. Therefore, reducing the tax expense through financial leverage is possible. Moreover, by engaging in debt-and-loan-related transactions, as well as charging the debt and interest on the loan to a qualifying party,

it can be used by the company to reduce the tax amount through the deductible interest expense.

The effect of intangible assets on transfer pricing aggressiveness

The result of this study suggests that the intangible transaction assets have a positive effect on transfer pricing aggressiveness. Research conducted by Taylor et al. (2015) suggested the same result that proves that intangible assets have a positive effect on transfer pricing aggressiveness. This result could be interpreted as an increase in the intangible transaction assets of the company that may cause transfer pricing aggressiveness increases. The measurement of these intangible assets is by comparing total intangible assets with total assets owned by the company.

It is different from Waworuntu & Hadisaputra (2016), who stated that intangible assets do not affect transfer pricing aggressiveness. The unfavorable transfer pricing aggressiveness by intangible assets is caused by the difference in the use of ways of measuring intangible assets, using Research and Development. Less attractive government incentives related to research and development, which can be deductible expenses by taxpayers; this causes in Indonesia, research and development investment is not compelling. Multinational corporations are more interested in conducting research and development outside Indonesia, while Indonesia acts only as a user of the intangible assets. Therefore, the issue of more prudent transfer pricing in Indonesia is the utilization of intangible assets in the form of royalty fees.

Some cases of transfer pricing through intangible assets transactions creatively utilize variations of trademarks, trade names, trade secrets, brands, service marks, and intellectual property. The parent company registered the intangible assets made to transfer pricing to a country with a low tax rate or even a tax heaven

country. It licensed it to a subsidiary where instead, the subsidiary had to pay an annual royalty whose imposition could be reduced to the company's profit before tax. Furthermore, many large companies move intangible assets such as intellectual property, brands, and know-how that can make up their value to countries with low tax rates. Therefore, the alleged increase in intangible corporate transactions indicates an increase in the aggressiveness of transfer pricing.

Intangible assets transfers are usually conducted by centralizing the ownership of intangible assets of local companies to foreign-affiliated companies. This transfer creates problems not only about the identification of intangible property but also how to assess the intangible property.

Intangible identification would be difficult because not all intangible assets are protected by law, registered and recorded in the books. In the context of transfer pricing, each party should receive reasonable compensation from the contribution they provide. This issue applies to all categories of intangible assets, without exception. Therefore, the disclosure of the existence of intangible assets transactions is required in the financial statements concerning PSAK No. 19 IAI (2018) concerning Intangible Assets. Some companies present their intangible assets higher than firms operating in other sectors.

5. Conclusions

Financial derivatives for both hedging and speculative purposes are positively associated with transfer pricing aggressiveness. It indicates that both activities in Indonesia have the same nature and are closely related to the aggressiveness of transfer pricing activities carried out by the company.

Furthermore, financial leverage is positively associated with transfer pricing aggressiveness. The companies that use their capital structure use more long-term debt closely related to profit

shifting activities carried out by the company. Also, the intangible asset is positively associated with transfer pricing aggressiveness. The intangible transactions that occur individually that generate data with the loss of data today is an intangible transaction with an affiliated party as a transaction, which is indicated intentionally created to cause the load post.

This research has several limitations. The data in this study use non-financial companies. The results of this study may be different when using research data from companies in sectors other than non-financial sectors and different research periods. Therefore, the results of this study cannot describe the overall condition of companies in Indonesia. The sample used in this study is relatively small because it only uses companies that have derivative transactions and do not experience losses during the study period. Also, the dependent variable in the form of transfer pricing aggressiveness index with the sum score method is close to the subjectivity of the researcher. Data processing is performed by reading the information in the Notes to the Financial Statements, where possible information related to related parties is not entirely disclosed.

For future research, it can use samples other than non-financial companies to be able to obtain and complete the picture of tax avoidance in various industries both in Indonesia or other countries. Future research can also add or include other variables that can also influence transfer pricing aggressiveness, such as directors' risk appetite, the use of tax consultants, chief executive officer (CEO) or board of director (BoD) characteristics with the presence of BoD members or female CEOs, background expertise, and family relations.

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