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Family Ownership, Cost of Debt, and The Moderation of Corporate Opacity

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Abstract

This study examines the moderating role of corporate opacity in the relationship between family ownership and the cost of debt in Indonesian manufacturing firms. Using a sample of 117 firms listed on the Indonesia Stock Exchange (IDX) from 2018–2020, the study employs multiple linear and moderated regression analysis. Results indicate that family ownership reduces the cost of debt, and this effect is significantly moderated by corporate opacity. The findings contribute to understanding the impact of transparency on debt financing in family owned firms, offering insights for lenders, regulators, and family businesses in managing financial strategies.

Keywords: *Family Ownership; Cost of Debt; Corporate Opacity*.

Introduction

Access to debt financing is critical for corporate growth, and the cost of this debt is a key determinant of a firm's financial strategy. In emerging markets like Indonesia, where businesses are predominantly familycontrolled, the influence of family ownership on the cost of debt is a particularly important, yet unresolved, issue. The existing literature presents conflicting findings : some studies suggest that family firms, with their longterm horizons and reputational concerns, enjoy lower borrowing costs , while others argue that the risk of wealth expropriation by controlling families leads to higher financing costs for creditors. This academic inconsistency highlights a significant research gap and suggests that the relationship is not straightforward.

This study aims to reconcile these divergent findings by proposing that corporate opacity a lack of transparency in a firm's information environment acts as a critical moderating variable. We argue that the potential benefits of family ownership, such as prudent debt management, are only credible to lenders when the firm is transparent. Conversely, when a firm is opaque, the risks of family entrenchment and opportunistic behavior become more pronounced, likely increasing the cost of debt. The relevance of this issue in Indonesia is underscored by realworld cases, such as the widely reported bankruptcy of Jamu Njonja Meneer, a prominent familyowned company that

collapsed in 2017 under the burden of unpaid debts . This event highlights the severe consequences of debt mismanagement in family firms and motivates this study's focus on the Indonesian context.

Therefore, this research has two main objectives: first, to examine the direct effect of family ownership on the cost of debt, and second, to investigate whether corporate opacity moderates this relationship. By addressing these questions, this study is expected to provide significant insights for managers of family firms in making strategic financing decisions, for creditors in refining their risk assessments, and for academics seeking a more nuanced understanding of agency theory in the context of familycontrolled enterprises.

Agency Theory

This study is grounded in agency theory, which is particularly relevant as it involves the interactions between shareholders and creditors, potentially leading to conflicts of interest. This concept, introcuded by Michael C. Jensen and William H. Meclking in 1976, highlights the tensions that may arise within a company. Whereas the agency cost of equity relates to disagreements between shareholders also managers, the agency cost of debt refers to disputes that occur between creditors and shareholders. The principalagent connection is the main emphasis of agency theory, where one party (the principal) assigns responsibilities to another party (the agent) to ensure the company's operations run effectively (Jensen & Meckling, 1976).

According to Alchian & Demsetz (1972), companies operate based on contractual agreements, either fixed or indefinite, between two key stakeholders: the principal also the agent. The principal refers to the business owner, whereas the agent is in charge of overseeing the business's activities on the principal's behalf. Since their objectives and interests often diverge, conflicts arise, leading to what is known as the agency problem. Over time, these conflicts have extended beyond just principals and agents, involving other parties such as creditors, as well as majority and minority shareholders (Panda & Leepsa, 2017).

Economic researchers categorize agency problems within agency theory into three distinct types (Panda & Leepsa, 2017). The first, as outlined by Jensen & Meckling (1976) and Ross (1973), arises from conflicts between principals and agents due to misaligned interests and inadequate oversight. The second type, described by Gilson & Godon (2003) and Shleifer & Vishny (1997), stems from tensions between majority and minority shareholders. Fama & Jensen (1983) argue that majority shareholders possess greater voting power, enabling them to make decisions that serve their own interests while disadvantaging minority shareholders. According to Demsetz & Lehn (1985), this type of agency issue is particularly prevalent in familyowned firms. The third form of agency conflict, as noted by Gilson & Godon (2003) and Shleifer & Vishny (1997), occurs between shareholders and creditors. Damodaran (1997) attributes this issue to shareholderdriven investment in highrisk projects, which escalates financial costs, diminishes debt value, and negatively impacts creditors. Disagreements arise from differing risk perceptions, making it challenging to reach consensus.

Additionally, if a company defaults on its debts, creditors' claims take precedence, followed by the distribution of remaining assets to shareholders.

Eisenhardt (1989) states that there are three assumptions underlying the existence of agency theory. The first is assumptions about human nature, the second is about organizations, and the third is about information. Assumptions about human nature are that humans are always selfish, have limited thinking abilities, and do not like taking risks. Assumptions about organizations include internal conflict between members, efficiency for productivity criteria, between principals and agents, and information asymmetry. The speculation about information is that information is used as something that can be bought and sold (Eisenhardt, 1989).

Family Ownership

In business terminology, family companies are generally categorized into two types. A familyowned business that is run by a professional executive from outside the family is referred to as a FamilyOwned Enterprise (FOE). Under this arrangement, the family serves as the proprietor but is not actively engaged in daily administration. Typically, FOEs continue the business legacy established by the founding family. The members of the founding family are in charge of the creation, ownership, also active management of the second kind, known as a Family Business Enterprise (FBE). A key characteristic of FBEs is that crucial leadership roles are occupied by family members. This model is commonly found in Indonesia, where family founders not only establish but also manage the business directly (Susanto, 2005).

Family ownership refers to a company in which the founders or their relatives, either through blood relations or marriage, hold key positions such as officers, directors, or blockholders, either individually or collectively (Anderson et al., 2003). A business can be classified as a family company if at least two family members are responsible for overseeing its financial operations (Aronoff & Ward, 1995). Additionally, a company is considered a family business if the founding family has been spans at least two generations in its management and operations (Donnelley, 1988).

If a business meets at least one of two requirements, it is categorized as a family business. First, the founding family or the founder must own more than 25% of the voting rights, if less than 25% of the voting rights are owned by the original family, the second requirement is met but remains actively involved in the company's organizational structure (Andres, 2008 in Setianto & Sari, 2017). Family businesses typically share three key characteristics. First, they are primarily owned by the founding family, with more than 50% of shares under their control. Second, they are widely recognized as family enterprises. Third, they are directly managed by the family members who hold majority ownership (Westhead, 1997). Unlike other companies, familyowned firms have greater oversight from family members in managerial roles. Additionally, family business owners prioritize longterm investments, viewing their companies as valuable assets for future generations. Their focus on maintaining a strong reputation helps them build lasting relationships with external stakeholders (Chi et al., 2015 in Savitri, 2021).

Cost of Debt

Myers (1984) states that companies have additional external funding for the

continuity of a company's operations, namely through debt, when all internal funding (retained earnings) has run out. If a company has decided to use debt as an additional source of external financing, then the company must consider how muchfixed costs are involved in using this debt. This will increase the company's financial leverage also impact ordinary shareholders with uncertain returns. The costs obtained from this debt in the form of interest are termed debt costs. The use of debt in a company certainly has a return as a debt cost for borrowing the debt, which is highly expected by the lenders (creditors). This statement is in line with the definition of the cost of debt put forward by Fabozzi (2007), namely the rate of return (yield rate) expected by lenders when providing loan funds to a company (Firmansyah et al., 2020; Swissia & Purba, 2018).

Bodie et al. (2008) state that if a company has decided on additional external funding, one of which is using debt, it must grow and develop to fulfil one of its obligations, namely paying debts to creditors, both principal and interest of the debt. The company will be declared insolvent or bankrupt if it cannot fulfil its obligations (Septian & Panggabean, 2017).

By splitting the annual interest expense paid with the average amount of shortterm also longterm interestbearing debt for the same time period, one can determine the cost of debt, according to Pittman and Fortin (2004). Similarly, Bhoraj and Sengupta (2003) emphasized that a company's debt cost can be assessed based on specific characteristics, particularly through bond issuance. This process influences factors such as bankruptcy risk, agency costs, and issues related to information asymmetry (Masri & Martani, 2014).

Corporate Opacity

Anderson et al. (2009) explained that a lack of transparency in company information, known as corporate opacity, can give the impression that dominating shareholders are more likely to exert influence or buy back shares from outsiders. Similarly, La Porta et al. (2000) noted that insufficient disclosure discourages potential investors from investing in the company. According to Anderson et al. (2009), corporate opacity is an economic concept linked to rentseeking behaviors that may go unnoticed and are difficult for external shareholders to regulate. Minority shareholders' access to important firm information is restricted when corporate opacity rises, creating opportunities for majority shareholders to obscure their personal gains. Conversely, Ma et al. (2017) stated that reduced corporate opacity allows minority shareholders to obtain clearer insights into the company’s condition and restrict the ability of majority shareholders to exploit profits. Corporate opacity is typically assessed using an index that incorporates three key components: volatility of stock returns, trading volume, and the percentage of trading days with no returns (Lee & Bose, 2021; Ma et al., 2017).

Firm Size

Company size reflects the scale of a business and is typically measured based on its total assets. A larger company tends to have greater access to both internal and external funding, making firm size a significant factor in determining company value. Additionally, firm size influences investor confidence, as larger companies generally provide more accessible and transparent information. To quantify firm

size, researchers commonly use the natural logarithm of total assets (Awaloedin & Nugroho, 2019).

Debt Ratio

The debt ratio displays the percentage of properties that are debtfinanced for a company. This metric allows businesses to illustrate to creditors the potential returns they might receive from extending loans. A lower debt ratio is typically associated with increased profitability, enhancing the likelihood that creditors will recover their funds. Conversely, a higher debt ratio may signal greater financial risk. By dividing a company's total debt by its total assets, the debt ratio is determine (Damayanti & Valianti, 2016).

Return on Asset (ROA)

Return on Assets (ROA) measures a company's capacity to earn profits through the utilization of its owned assets. Investors' confidence will increase with the higher the company's ROA, thus attracting investors to invest in the company. ROA can indicate whether a company uses its assets to generate profits efficiently (Damayanti & Valianti, 2016; Pranata et al., 2019).

Previous Research

The relationship between family ownership and the cost of debt has been the subject of numerous studies. One such study by Ma et al. (2017), titled *Corporate Opacity and Cost of Debt for Family Firms,* analyzes the function of corporate secrecy when shaping this relationship. The research focuses on privately owned firms in China, listed on the Shanghai and Shenzhen Stock Exchanges, over the 2004–2010 period. The findings imply that, in China, familyowned businesses often pay less for borrowing than nonfamily businesses. According to the study, family ownership has a greater detrimental effect on debt costs when corporate opacity is low. However, as corporate opacity rises to a moderate level, this effect diminishes. The study concludes that there is a substantial inverse association between family ownership and loan costs.

Gao et al. (2020), in their study *Family Control and Cost of Debt: Evidence from China,* investigate how loan costs are impacted by family ownership, utilizing bond rates as a key indicator. The research examines publicly listed firms in China from 2009 to 2017. The results reveal that bond spreads tend to be significantly wider for familyowned businesses compared to nonfamily firms. A similar pattern emerged when the study expanded its scope to include all publicly listed nonfinancial companies, using interest rates as an alternative metric for debt costs. The findings suggest a strong positive correlation between family ownership with the cost of debt.

Swanpitak et al. (2020) examine the factors influencing financial decisions in familycontrolled businesses and their role in ensuring longterm sustainability. The study focuses on familyowned firms in Thailand between 2009 and 2015. The cost of debt is evaluated by determining the ratio of interest expenses to entire debt. The findings suggest that companies with greater family ownership generally experience lower borrowing costs than nonfamily firms. Furthermore, the study emphasizes that the strong profitability and longterm stability of family businesses contribute to reduced debt costs. The findings show that the cost of debt also family ownership are significantly correlated negatively.

Anderson et al. (2003) look into how founding family ownership arrangements affect debtrelated agency costs. Data from the S&P 500 industrial index and the Lehman Brothers Bond Database (LBBD) are used in the study, with financial information from the Compustat Industry File added for businesses not listed in the LBBD. Covering the period from 1993 to 1998, the research constructs a sample representative of publicly traded debt. The results reveal that firms with family ownership experience debt financing costs contrasted to nonfamily businesses, which are 32 basis points lower. The study ultimately identifies a significant negative correlation between family ownership and agency costs of debt.

Godlewski & Le (2021) assess the effect of familyowned businesses when borrowing costs across East Asia. The study analyzes data from 1,386 of the largest publicly traded companies, ranked by market capitalization, across 9 East Asian nations—South Korea, Taiwan, Hong Kong, Singapore, Malaysia, Indonesia, the Philippines, Thailand, also Japan—spanning the years 2000 to 2017. However, Japanese firms were excluded from the analysis to avoid outlier effects due to their structural differences from other companies in the region. The findings suggest that the cost of debt is far greater high for familycontrolled businesses than for nonfamily businesses, establishing a strong positive relationship between family ownership and the cost of debt.

Hypothesis Development

The theoretical and empirical literature presents conflicting views on the relationship between family ownership and the cost of debt, creating a clear academic debate. This divergence stems from the dual effects of family control, as explained by agency theory.

One perspective argues for a negative relationship, suggesting family firms enjoy a lower cost of debt. This view is rooted in the idea that the longterm investment horizon and the direct link between family reputation and the firm's performance align the interests of owners and creditors. Families are motivated to avoid default to protect their multigenerational wealth and social standing, making them appear as more reliable and less risky borrowers. This perspective is supported by studies such as Anderson et al. (2003), Ma et al. (2017), and Swanpitak et al. (2020), who found that family firms often pay less for debt financing. Based on this line of reasoning, which emphasizes the reputational benefits of family control, the first hypothesis is proposed:

H1: Family ownership has a negative influence on the cost of debt.

Conversely, a second perspective argues for a positive relationship, positing that family ownership can increase the cost of debt. This argument focuses on the risk of owner entrenchment and wealth expropriation, a manifestation of the Type 2 agency conflict between majority and minority shareholders. Concentrated family control can create opportunities for opaque dealings or relatedparty transactions that benefit the family at the expense of the firm and its creditors. Aware of this risk, lenders may demand a higher risk premium to compensate for the potential for wealth extraction, leading to a higher cost of debt. This view is supported by empirical work from Gao et al. (2020) and Godlewski & Le (2021).

This study proposes that these mixed findings can be reconciled by introducing corporate opacity as a critical moderating variable. The true effect of family ownership may depend on the firm's level of transparency. The positive reputational effects of family ownership are only credible to creditors if the firm's operations and financial health are transparent. When a firm is opaque, creditors cannot easily monitor the family's actions, and the risk of entrenchment becomes a primary concern. In such an environment of high information asymmetry, lenders are likely to price in the potential for opportunistic behavior, thereby weakening or even reversing the negative relationship between family ownership and debt costs . This logic leads to the second hypothesis:

H2: Corporate opacity's moderating role weakens family ownership's negative influence on the cost of debt.

Research Method

Sample and Variable

This study analyzes manufacturing firms listed on the Indonesia Stock Exchange (IDX) using a purposive sampling method. The manufacturing sector was chosen for several reasons: its significant contribution to the Indonesian economy, its characteristically high capital intensity which makes debt financing a critical operational issue, and the substantial presence of prominent familycontrolled businesses within the sector. The observation period is set from 2018 to 2020. This timeframe was selected to provide a contemporary analysis of firm behavior during a period of relative economic stability leading into the initial market uncertainty of the COVID19 pandemic, thus offering a relevant context without the extreme financial distortions that characterized later years. The initial population of all manufacturing firms was filtered based on several specific criteria to ensure data quality and comparability. To be included in the sample, a firm was required to be continuously listed on the IDX for the entire 2018–2020 period, to have published complete audited annual reports for each year, and to provide all necessary data for the calculation of every variable used in this study. Furthermore, all financial reports had to be presented in Indonesian Rupiah (IDR), and financial institutions and stateowned enterprises (BUMN) were excluded due to their distinct regulatory environments and capital structures. After applying these criteria, a final sample of 117 firms was obtained, yielding 351 firmyear observations. The study utilizes secondary data sourced from the official IDX website and the respective companies' published reports. To ensure accuracy and reliability, the collected data was subjected to a validation process, which included crossreferencing information between annual reports and financial statements and screening for significant outliers and data entry errors.

The study's variables and their measurement methods are detailed in Table 1. The moderating variable, Corporate Opacity (CO), is measured using the Corporate Opacity Index developed by Ma et al. (2017). This specific methodology was deemed most appropriate for the Indonesian context for several reasons. First, the index is a wellestablished and validated measure used in highimpact international accounting research, lending credibility to its application. Second, it is constructed from publicly available market data stock

trading volume, zeroreturn days, and return volatility which is highly suitable for emerging markets like Indonesia where access to granular internal corporate data can be inconsistent. Finally, by integrating three distinct dimensions of information asymmetry, the index provides a more comprehensive and robust measurement of opacity compared to approaches that rely on a single proxy.

Table 1
Research Instrument

Variable	Measurement
Dependent Variable: Cost of Debt (COD)	The cost of debt is calculated by the interest expense paid by a company during one year divided by the average amount of longterm debt and shortterm debt subject to interest during that year (interestbearing debt) (Ma et al., 2017).
Independent Variable: Family Ownership (FO)	Family ownership can be found by calculating the founder and members of the company's founding family (either by blood or through marriage) shares in the company (Anderson et al., 2003).
Moderating Variable: Corporate Opacity (CO)	The moderating variable is measured through the Corporate Opacity Index, which is obtained by calculating three components in the form of trading volume, proportion of zero return daily trades, and stock return volatility (Ma et al., 2017).
Control Variable: Firm Size (SIZE)	Firm size is measured using the natural logarithm of total assets (Ma et al., 2017).
Debt Ratio (DR)	The debt ratio is calculated by dividing the company's total debt by the company's total assets (Ma et al., 2017).
Return on Assets (ROA)	ROA is measured by dividing the company's net profit by the company's total assets (Pranata et al., 2019).

Source: Authors' Work 2022

The percentage of trading days that have no returns split by the sum number of days on a year yields the second proxy, the percentage of zeroreturn trades per day. A higher proportion of zeroreturn days indicates that investors are not realizing profits, while a lower proportion suggests more frequent returns.

A year's worth of daily stock returns' standard deviation is used to calculate the third proxy, stock return volatility. Greater volatility reflects significant price fluctuations, either upward or downward, which may increase investment risks and potential losses. Conversely, lower volatility indicates more stable stock price movements.

Once all three proxies have been computed, each is ranked into deciles (10 categories), with a value of 9 representing the highest level of opacity and 0 indicating the lowest level of opacity. Then, add up the three components also split the outcome by the maximum score of corporate opacity, which is 27. The corporate opacity index results are in the range of 00.9, where the higher the corporate opacity index, the greater high the information opacity of a company and vice versa. **Table 2** shows the brief example of calculating the Corporate Opacity Index.

Analysis Techniques

The effect of family ownership on debt expenses is evaluated use multiple linear regression analysis. The multiple linear regression analysis equation is represented in formula form using model 1 as follows :

(Model 1)

$$COD = \alpha + \beta 1FO + \beta 2Size + \beta 3DR + \beta 4ROA + \mathcal{E}$$

Table 2

Example of Corporate Opacity Index Results

Firm	Volume (*from low to high*)	*Zeroreturn* (*from high to low*)	Volatility *(from high to low)*	Firm Score	Maximum Score (b)	*Corporate Opacity Index* (a/b)
A	9	7	6	22	27	0,8

Source: Authors' Work 2022

This study applies moderated regression analysis to assess the extent to which corporate opacity (moderating variable) influences the relationship between family ownership (independent variable) and the cost of debt (dependent variable). The moderating effect is determined by examining the regression coefficient in the equation table moderation is confirmed if the coefficient for the interaction between family ownership and corporate opacity is positive. Conversely, if the coefficient is negative, the moderating effect is considered absent. The moderated regression analysis is represented mathematically as follows:

(Model 2)

$$COD = \alpha + \beta 1FO + \beta 2CO + \beta 3FO*CO + \beta 4Size + \beta 5DR + \beta 6ROA + \mathcal{E}$$

The coefficient of determination, which ranges from 0 to 1, evaluates how well the model takes into account changes in the dependant variable. A low R^2 is a measure of how well the independent variables explain just a small portion of the variation, whereas a high R^2 suggests they capture most of it. However, a key limitation of this measure is the potential bias that may are brought about by the number of independent factors incorporated into the model.

The tstatistical test is conducted to determine the effect of family ownership (independent variable) on the cost of debt (dependent variable). A probability value below 0.05 signifies a statistically substantial relationship between the variables, whereas a value above this threshold suggests no significant effect.

Result and Discussion

Descriptive Statistics

This research utilizes descriptive statistical analysis to summarize the key attributes of each variable, include minimum also maximum values, mean, and standard deviation. The study includes independent, dependent, moderating, and control variables. A comprehensive overview of the descriptive statistics is presented on Table 3.

Table 3
Descriptive Statistics Analysis

Variable	N	Minimum	Maximum	Mean	Std. Deviation
COD	117	0,0639	0,7698	0,249278	0,0966717
FO	117	0,0000	0,7392	0,119734	0,2039083
CO	117	0,0370	0,8519	0,536879	0,1972274
SIZE	117	26,1550	32,3166	28,668812	1,4354249
DR	117	0,0925	1,1887	0,485537	0,1878556
ROA	117	0,2068	0,2262	0,036452	0,0681761
Valid N (listwise)	117				

Source: Processed Data

The family ownership variable has a minimum value of 0.00, indicating that some companies in the sample do not have a familybased ownership structure. The maximum value recorded is 0.73, meaning that in certain firms, members of the founding family hold 73% of the company's shares. The average family ownership is 0.11, with a standard deviation of 0.2. A higher value for this variable signifies a greater proportion of shares owned by the founding family, whereas a lower value indicates minimal or no family ownership.

The minimum value of the cost of debt is 0.06, also the maximum value obtained from this variable is 0.76. The average value obtained from this variable is 0.24, and the standard deviation obtained from this variable is 0.09. The greater the cost of debt indicates the larger the return on debt paid by the company to creditors and vice versa.

Corporate opacity as a moderating variable is obtained from the cumulative three measurement proxies: trading volume, proportion of zeroreturn trading days, also stock volatility. Each of the three proxies is ranked in deciles (10 parts), with a value of 9 representing the most opaque company and 0 representing the least opaque company. These components are then added together, and the results are divided by the maximum corporate opacity score, namely 27. The corporate opacity index results are in the range of 00.9, where the higher the corporate opacity index, as a company's information opacity increases, and vice versa. This variable produced a range of values from a minimum of 0.03 to a maximum of 0.85. A standard deviation of 0.19 also an average value of 0.53 were obtained for this variable.

The minimum value obtained from the firm size as control variable is 26.15, and the maximum value obtained from this variable is 32.31. The average value obtained from this variable is 28.66, and the standard deviation value obtained from this variable is 1.43. The larger the firm size, the bigger the company, which can be

seen from the company's total assets and vice versa.

The minimum value obtained from the debt ratio is 0.09, and the maximum value obtained from this variable is 1.18. The average value obtained from this variable is 0.48, and the standard deviation value obtained from this variable is 0.18. The greater the debt ratio indicates that the company financing the company's assets from debt has a small proportion of funds and vice versa. The minimum value obtained from Return on Assets is 0.2, and the maximum value obtained from this variable is 0.22. The average value obtained from this variable is 0.03 and the standard deviation value obtained from this variable is 0.06. The higher the ROA shows, the higher the company's ability to generating.

Tabel 4
Normality Test Result

	Unstandardized Residual Model 1	**Unstandardized Residual Model 2**
N	117	117
KolmogorovSmirnov Z	0,881	1,010
Asymp. Sig. (2tailed)	0,419	0,259

Source: SPSS

Tabel 5
Multicolinearity Test Result

Model		**Collinearity Statistics**	
		Tolerance	**VIF**
1	FO	0,990	1,010
	SIZE	0,917	1,091
	DR	0,717	1,394
	ROA	0,671	1,489
2	FO	0,940	1,064
	CO	0,509	1,963
	FOxCO	0,739	1,352
	SIZE	0,713	1,402
	DR	0,713	1,402
	ROA	0,580	1,725

Source: SPSS

profits using all the assets owned by the company and vice versa.

Classical Assumption

The normality test, multicollinearity test, autocorrelation test, also heteroscedasticity test are the four tests that are performed on both regression models in order to assess this traditional assumption.

The findings of this study's normalcy test are displayed in Table 4. Model 1 has a value of 0.881, and model 2 has a value of 1.010. Both models have a significance level of ≥ 0.05, so it can be concluded that the two models in this study meet the normality assumption.

One way to identify multicollinearity is to examine the tolerance value also its inverse, the Variance Inflation Factor (VIF). A tolerance value of less than 0.10 or one that is at least 10 the VIF value shows

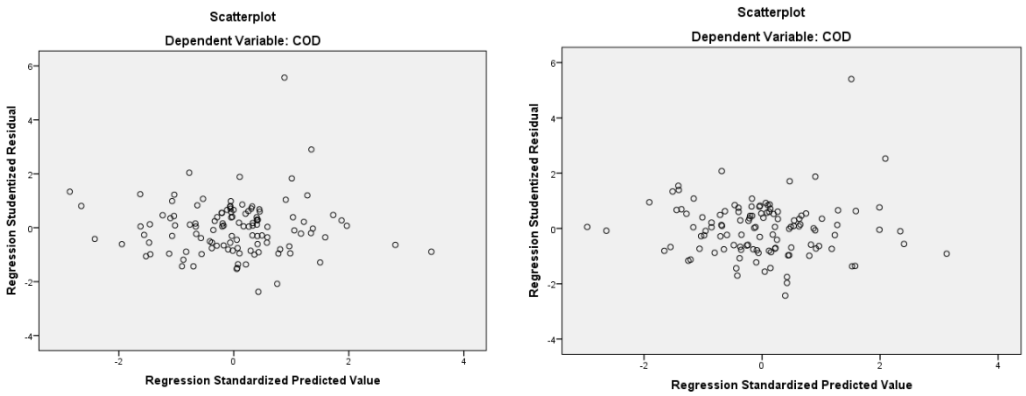
multicollinearity symptoms, and vice versa. In the event where the tolerance value equals the VIF value ≤ 10 or exceeds 0.10, multicollinearity symptoms are absent.

Table 5 displays the tolerance values also VIF listed in the two models in this research. Based on the two models, all tolerance values are > 0.1 or equal to a VIF value ≤ 10 in both models. It could be concluded there were no symptoms of multicollinearity. It means the independent variables could be used in the regression equation model. Table 6 shows the results of the autocorrelation test using DurbinWatson in the two regression models in this study. Model 1, based on Table 4.5, has a d value of 1.966 also a 4 – dU value of 2.2304. The d value in model 1 is between dU and 4 – dU. Model 2, based on Table 6, has a d value of 1.936 and a 4 – dU value of 2.1927. The d value in model 2 is between dU also 4 – dU. Based on this information, it could be

Table 6
Autocorrelation Test Results

Model	DurbinWatson
1	1,966
2	1,936

Figure 1
Heteroscedasticity Test Results



Source : SPSS

concluded that there was no autocorrelation in this study.

Heteroscedasticity can be found by examining the distribution of points on the scatterplot. Points on a scatterplot that do not spread out and form a specific pattern clearly or regularly indicate heteroscedasticity and vice versa. Facts on the scatterplot that are spread out and do not create a distinct or regular pattern suggest no heteroscedasticity.

Figure 1 shows the results of the heteroscedasticity test for model 1 and model 2. Based on these two images, both in model 1 and model 2, as can be observed, the scatterplot's points are dispersed above and below 0 on the Yaxis and do not clearly or consistently create a pattern. Based on the scatterplot images in the two models, the conclusion is that there is no heteroscedasticity.

Regression Analysis Results for Hypothesis Testing

This research uses 2 model analyses, namely multiple linear regression model analysis and moderated regression

analysis. Table 7 shows the analysis results for the two models tested. Based on Table 7, the coefficients for each variable can be entered into the regression equation formula in Model 1 as follows:

(Model 1)

COD = 0,752 – 0,098FO – 0,014Size – 0,142DR – 0,477ROA

Based on Table 7, the coefficients for each variable can be entered into the regression equation formula in model 2 as follows:

Table 7
Regression Model Analysis Results

Variabel	Model 1		Model 2	
	B	Sig.	B	Sig.
Konstanta	0,752	0,000	0,019	0,822
FO	0,098	0,015	0,179	0,036
CO			0,040	0,731
FO.CO			0,294	0,037
Size	0,014	0,018	0,210	0,032
DR	0,142	0,006	0,258	0,009
ROA	0,477	0,001	0,277	0,011
R	0,466		0,512	
R^2	0,217		0,262	
Adjusted R Square	0,189		0,222	
F	7,762		6,504	
Sig.	0,000		0,000	

Source : SPSS

(Model 2)

COD = 0,019 – 0,179FO – 0,040CO + 0,294FO*CO – 0,210SIZE – 0,258DR – 0,277ROA

The regression coefficient value (B) is positive and negative, which means that if the coefficient is positive, it indicates that the influence between variable x also variable y has a relationship in the same direction. A coefficient with a negative sign indicates that the impact between variable x and variable y has a relationship in the opposite direction.

Family ownership is negatively related to the cost of debt in both models 1 and 2. This shows that family ownership has a relationship in the opposite direction to the cost of debt. The higher the family ownership, the lower the price of debt returned by the company to creditors.

When interacting with corporate opacity, family ownership has a positive relationship to the cost of debt. This shows that family ownership and corporate opacity directly relate to the cost of debt.

The higher family ownership and corporate opacity, the higher the cost of debt returned by the company to creditors.

Multiple linear regression analysis was used to test H1, which looks at how family ownership affects loan costs. The coefficient value for family ownership is 0.098, according to Table 4.6. Given that the significance value is less than 0.05 and the value of 0.015, it can be said that family ownership and the cost of debt are significantly correlated negatively.

Testing H2, namely the existence of corporate opacity, which moderates the influence of family ownership on the cost of debt, was carried out using moderation regression analysis. Corporate opacity in interaction with family ownership has a positive relationship to the cost of debt with a coefficient value of 0.294 also a significance value of 0.037, which has a significance value of <0.05. The conclusion is that corporate opacity weakens the negative influence of family ownership on the cost of debt.

The coefficient of determination measures the extent to which the model explains variations in the dependent variable, with values ranging from 0 to 1. A lower R^2 value suggests that the independent variables provide minimal explanatory power, whereas a higher R^2 indicates a stronger ability to account for changes in the dependent variable. The R value is reflected in the Adjusted R Square column from the regression model analysis. As indicated in Table 4.6, Model 1's Adjusted R Square value of 0.189 indicates that the independent variables of return on assets (ROA), debt ratio (DR), firm size (SIZE), and family ownership (FO) account for 18.9% of the variation in the cost of debt (COD). The remaining 81.1% is attributed to factors outside the model. Meanwhile, Model 2, as outlined in Table 4.6, has an Adjusted R Square value of 0.222, indicating that 22.2% of the variation in COD is accounted for by the independent variables, including FO, corporate opacity (CO), the interaction term FO.CO, SIZE, DR, and ROA, with the remaining 77.8% influenced by other factors not included in the study.

Hypotheses Analysis

Family Ownership and Cost of Debt

The first hypothesis (H1), which posited a negative relationship between family ownership and the cost of debt, is supported by the findings. The analysis shows that family ownership has a statistically significant negative effect on the cost of debt. This result aligns with previous studies by Anderson et al. (2003), Ma et al. (2017), and Swanpitak et al. (2020), which similarly found that companies with greater family ownership tend to have lower borrowing costs.

This phenomenon can be interpreted through the lens of agency theory, specifically the conflict between shareholders and creditors (Type 3 agency conflict). In the specific context of Indonesia, this theoretical link is strengthened by distinct cultural and governance characteristics. Indonesian family businesses often operate with a multigenerational horizon, where the family's name and reputational capital are deeply intertwined with the company's legacy. A failure to meet debt obligations would result not only in financial loss but also in significant social dishonor, creating a powerful nonfinancial incentive to maintain a prudent financial policy. Creditors likely perceive this deepseated commitment to the firm's survival as an implicit guarantee, which lowers the perceived default risk and, consequently,

the cost of debt. Furthermore, the concentrated control structure in family firms allows them to resist pressures for shortterm profits and enforce conservative debt policies that prioritize longterm stability, a feature that is highly valued by lenders. This riskaverse behavior, driven by the desire to protect family wealth for future generations, makes these firms less likely to take on excessive debt, thus resulting in lower financing costs.

Corporate Opacity to Family Ownership and Cost of Debt

The second hypothesis (H2), which predicted that corporate opacity weakens the negative influence of family ownership on the cost of debt, is also supported by the analysis. The results show a significant positive coefficient for the interaction term between family ownership and corporate opacity ($B=0.294, p<0.05$). This confirms that the benefit of family ownership in reducing borrowing costs diminishes as a company's information environment becomes less transparent. This finding is consistent with the research of Ma et al. (2017), who identified opacity as a critical factor that increases the cost of debt.

This finding can be explained through the lens of agency theory, where corporate opacity heightens information asymmetry between the firm and its creditors. Increased opacity raises the monitoring costs for lenders and makes it difficult to verify that the controlling family is acting in the firm's best interests. In the Indonesian business context, where legal protections for creditors might be perceived as less stringent than in more developed markets, a lack of transparency in a family firm is a significant red flag. It can conceal potential entrenchment risks, such as valuedestroying relatedparty transactions or the expropriation of company resources for the family's private gain.

Creditors logically respond to this heightened uncertainty and potential for wealth extraction by demanding a higher risk premium, which translates into a higher cost of debt. Essentially, the reputational capital and perceived longterm commitment associated with family ownership are contingent upon transparency. When corporate opacity is high, creditors can no longer rely on the family's reputation as a signal of low risk. Instead, the lack of clear and verifiable information compels them to price in the potential for opportunistic behavior by the controlling shareholders, effectively neutralizing the positive effect of family ownership on borrowing costs.

Conclusion

This study investigates the relationship between family ownership and the cost of debt in Indonesian manufacturing firms, with a specific focus on the moderating role of corporate opacity. The research confirms two main findings. First, consistent with agency theory arguments regarding incentives for reputation and longterm preservation, family ownership is found to have a significant negative influence on the cost of debt. This suggests that in the Indonesian context, creditors perceive familycontrolled firms as lowerrisk borrowers, likely due to their aversion to excessive debt that could jeopardize family wealth and reputation. Second, and more importantly, this study provides empirical evidence that corporate opacity significantly weakens this negative relationship. As a firm's information transparency decreases, the benefit of family ownership in reducing debt costs

diminishes. This finding highlights that information asymmetry is a critical risk factor that can override the positive reputation of family control, ultimately leading creditors to demand higher risk premiums.

The findings of this research offer several important implications. Theoretically, this study contributes to Agency Theory by presenting evidence of the interplay between Type 2 (majority vs. minority shareholders) and Type 3 (shareholders vs. creditors) agency conflicts in an emerging market. It demonstrates that while concentrated family ownership can mitigate some agency problems, it can also exacerbate others through a lack of transparency, which directly impacts external financing costs. The managerial implication for family firms is that the advantage of a lower cost of debt is not absolute but is contingent upon maintaining a high level of transparency. Therefore, managers should prioritize improving information disclosure as a strategic tool to secure better financing terms. For creditors and investors, this research provides a basis for refining their risk assessment models, wherein family ownership should be evaluated in conjunction with the firm's level of transparency. For regulators, such as the Financial Services Authority (OJK), these findings underscore the importance of enforcing and enhancing disclosure requirements to protect creditors and reduce information asymmetry in the market.

The author acknowledges several limitations in this study, which also open avenues for future research. The primary limitation is the relatively low Adjusted R^2 value of the model, which indicates that a large portion of the variation in the cost of debt is influenced by other factors not included in this study. Furthermore, the use of a short data period from 2018 to 2020 and the restriction of the sample to the manufacturing sector may limit the generalizability of the findings. The measurement of the corporate opacity variable was also limited as it did not include the financial analyst forecast component. Based on these limitations, future research is recommended to build a more comprehensive model by incorporating additional variables such as corporate governance quality or political connections. Future researchers are also encouraged to extend the research period and use more robust panel data analysis, as well as to expand the sample scope to various sectors to test the validity of these findings in the broader market.

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