

THE INFLUENCE OF GROWTH OPPORTUNITY TOWARDS HEDGING DECISIONS WITH EARNINGS QUALITY AS A MODERATOR

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ABSTRACT

This research is conducted to analyze the influence of Growth Opportunity towards Hedging Decisions with Earnings Quality as the moderating variable in financial sector companies listed in the Indonesia Stock Exchange from 2019 to 2023, as the trend in hedging activities in Indonesia showed a contrasting belief to the Prospect Theory, in which the Indonesian companies hedged more when they might not be doing well in general during times of crisis. The independent variable used in this study is Growth Opportunity alongside 4 control variables. The dependent variable is Hedging Decisions and the moderator variable is Earnings Quality. The research used secondary data from financial sector companies listed in the IDX from 2019 to 2023 and the data source are S&P Capital IQ and Pro. By using the purposive sampling, 90 companies were eligible. The method Logistic Regression analysis is used and processed through SPSS version 25. The outcomes of the research indicate that both Growth Opportunity and Earnings-Quality-moderated Growth Opportunity have insignificant effect towards Hedging Decisions, implying that neither Growth Opportunity nor Earnings-Quality-moderated Growth Opportunity is a consideration for the accounting and management team of the Indonesian financial companies in deciding to carry out hedging activities during 2019-2023.

Keywords: Hedging Decisions, Growth Opportunity, Earnings Quality, Financial Sector.

1. INTRODUCTION

Risks and uncertainties are inevitable for businesses because they operate in dynamic environments with ever-changing economic, technological, and competitive landscapes. Over the past hundred years, the global financial markets have faced a series of problems that led to both its fall and rise. External factors like market volatility, economic shifts, regulatory changes, and market competition, contribute to risks that are beyond a company's control. Therefore, to minimize the impact of the fluctuating economic condition, companies might decide to use derivative instruments as one of the alternatives in financial risk management, or known as hedging. Contrary to Kahneman and Tversky's Prospect Theory, in which poorly performing companies would tend to be risk-seeking, while well-performing companies would tend to be risk-averse, this is not the case observed in Indonesia, where the companies tend to hedge more (risk-averse behaviour) when they might not be doing well in general during times of crisis.

Figure 1. 1 Graph of Indonesia's Public Listed Company's Total Hedging Activity



Source: S&P Capital IQ Pro (processed by author in 2024)

The graph above displayed the trend of spikes in hedging activities conducted by all publicly listed companies in Indonesia Stock Exchange (IDX) and the financial sector as part of the total companies during the times of crisis, such as the 2008 global crisis caused by the US subprime mortgage, the uneven global recovery from the previous crisis and China’s economic slowdown in 2013, US-China trade war in 2018, the 2020 pandemic outbreak, and Russian invasion in Ukraine in 2022.

Despite the market instability, the trend maintains a constant growth, as more and more hedging activities are done by the year. This increase in interest of hedging activities is particularly true and most evidently done by the financial sector. Financial institutions, according to (Kieso et al., 2019), often use derivatives as they are influenced by fluctuations in interest rates when engaging in borrowing and lending activities. They are also the considered as the primary players for derivatives besides large companies. Thus, considering the amount of market fluctuations that had occurred, there seems to be no guarantee in telling where the direction of the market is months from now. With the market having such an ever-changing characteristic, the use of these derivatives are very much needed for the general profit seeking entities, to anticipate for disastrous losses, making hedging decisions a relevant research subject nonetheless.

Based on the research conducted by (Hetrina et al., 2020) titled “*Analisis Faktor-faktor yang Mempengaruhi Keputusan Hedging dengan Kualitas Laba sebagai Moderasi pada Industri Manufaktur di Indonesia Tahun 2014-2017*”, the same variables, growth opportunity as a determinant of hedging decision and earnings quality as a moderator to growth opportunity, are used in this research. The result of (Hetrina et al., 2020) research proved that the presence of Growth Opportunity and Earnings Quality motivated firms to apply Hedging Decisions. There was, however, a limited amount of research conducted in recent years discussing the moderation of Hedging Decisions with Earnings Quality. Thus, it is the initiative of the writer to apply a moderation on the concerned variable alongside (Hetrina et al., 2020).

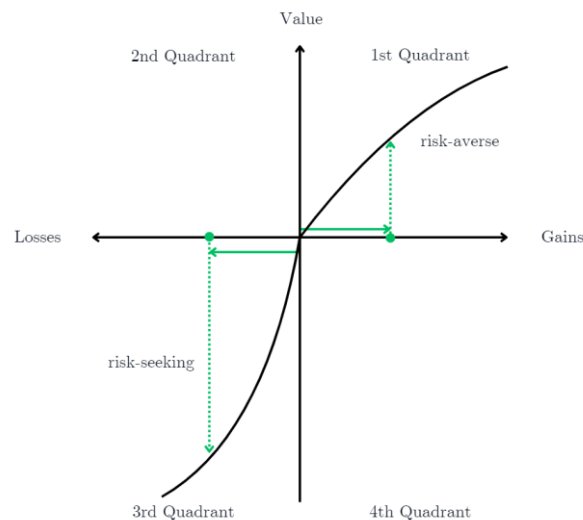
2. LITERATURE REVIEW

2.1 Theoretical Background

2.1.1 Prospect Theory

The Prospect Theory (PT) developed by Kahneman & Tversky (1979) provides illustrations through probabilities and the behaviours of an individual when he is presented choices with risks. PT is developed as an alternative to the expected utility theory (EUT), where the limitations in the EUT are addressed (Kahneman & Tversky, 1979). In comparison to EUT, PT captures the observed preferences better by representing the value as a function (the Value Function) and multiplying each outcome's value with decision weight (Decision Weighting). Decision weights are subjective probabilities inferred from observed choices between different risky prospects. Instead of perceived probabilities, decision weights measures how the events effect on the prospects' attractiveness. By analyzing how people choose among risky alternatives, researchers can deduce how they mentally "weight" the probabilities of those outcomes, and therefore found that people hate losses more than they love gains.

Figure 2. 1 Prospect Theory's Hypothetical Value Function



Source: Prepared by Writer (2024)

PT's hypothetical value function graph is described as an S-shaped with its head on the 1st quadrant and the tail on the 3rd quadrant. The 1st quadrant which contains the concave curve which diminishes over the x-axis represents the loss-averse or risk-avoiding nature. The 3rd quadrant contains the convex curve with a steeper gradient represents the risk-seeking nature. Relating to the decision of hedging, when a company is presented with the option A of half probability of facing loss and half probability of experiencing profit, and option B of receiving a sure amount of profit but deducted by the expense of using a derivative instrument to secure that amount of profit, the plotted points in the PT graph will show that option A is either in the 1st quadrant or in the 4th quadrant nearing the 1st quadrant, while option B is in the 1st quadrant with a higher utility value than option A. The results of the plotted points where option B's position is higher than that of option A conveys the idea that the situation calls for a loss-averse or risk-averse nature in decision making, in which the company would prefer the utilization of derivatives to minimize the risk rather than being in a risky position of option A.

2.1.2 Enlightened Value Maximization Theory

The enlightened value maximization theory was proposed by Michael C. Jensen in his journal article entitled “Value Maximization, Stakeholder Theory, and the Corporate Objective Function”, published in April 2002. Jensen (2002) argues that while the primary goal of a firm should be the long-term maximization of value, achieving this requires considering the interests of various stakeholders. The key lies in creating structures that guide managers to make trade-offs among competing stakeholder interests in a way that supports long-term firm value. He emphasizes the importance of considering all key constituencies—such as employees, customers, suppliers, communities, and regulators—when designing organizational policies. Achieving value maximization requires strategic planning, operational excellence, and effective team management. According to the writer, this theory supports the idea of incorporating risk management in the strategic planning to ensure that the management avoids making decisions that could harm both shareholder and stakeholder interests.

2.1.3 Modigliani-Miller Theorem

In Franco Modigliani and Merton H. Miller's seminal paper, "The Cost of Capital, Corporation Finance, and the Theory of Investment", published in the American Economic Review (1958), Modigliani & Miller (1958) implicitly suggests that companies may engage in hedging or financial strategies to ensure access to internal funds for future investments when there are market imperfections such as tax advantages, transaction costs, and financial distress costs. Throughout the paper, the theory assumes ideal conditions such as no taxes, no transaction costs, no bankruptcy costs, and symmetric information. This theory, referred as Modigliani-Miller (M&M) Theorem, is foundational in corporate finance and consists of two primary propositions:

- Proposition I (Irrelevance of Capital Structure): In perfect capital markets, the value of a firm is independent of its capital structure. This means whether a firm is financed through equity, debt, or a combination of both, its overall value remains unchanged.
- Proposition II (Cost of Equity and Leverage): The cost of equity for a leveraged firm increases in proportion to its debt-to-equity ratio because of the higher risk borne by equity holders. However, the firm's weighted average cost of capital (WACC) remains constant. Proposition II in this theory conveyed that with higher debt-to-equity ratio (DER), equity holders will demand higher return as they hold residual claim that becomes more volatile when bankruptcy happens, while debt holders have a higher priority claim. This in turn, causes the cost of equity to increase.

Relating to the motivation behind hedging activities, when the DER increases and the equity holders (shareholders) demand higher return, this could cause the management to be in the risk-averse nature to protect the stakeholders' interests. Moreover, this theory also implicitly suggests that the practice of hedging in an imperfect market helps reduce the risk of underinvestment caused by external financing constraints for a new project with a positive net present value (such as using cash flow hedge to reduce the volatility of the cash flow), and thereby potentially increasing firm value.

2.1.4 Hedging

Hedging refers to the use of derivatives as a strategy to reduce the adverse effects of fluctuations in interest rates, foreign exchange rates or market price (Kieso et al., 2019).

Based on the book “Derivative Media” written by deWaard (2024), financial derivatives are a kind of benefit or power that the company can achieve through the wagering of a particular amount of asset. The most common forms of derivatives are futures (the purchase or sale of an asset at a particular point of time in the future), options (the choice to either buy or sell an asset at some point of time later) and swaps (the exchange of an asset for another). Though these contracts are typically involved altogether in practice, the main function of a derivative is ultimately all the same – to hedge against the possible decline in prices of assets that may cause loss to the benefactor of the derivative.

The use of derivatives, however, are not solely for hedging purposes, it can also be used for speculation or arbitraging purposes. To address hedging, the FASB established specific criteria for recognizing derivative transactions as hedges, ensuring consistent accounting practices and allowing for the application of special hedge accounting (Kieso et al., 2019), which are:

- The hedging relationship needs to be formally documented, the objective and the strategy of the company’s risk management, and designation of how it helped to hedge the change in cash flow and/or fair value.
- The effectiveness must be $\pm 10\%$.
- The derivative transaction affected the reported earnings of changes in cash flow or fair value.

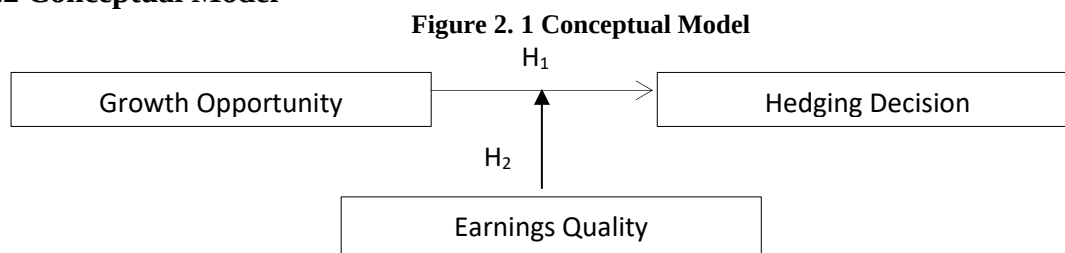
2.1.5 Growth Opportunity

Pilotte (1992) characterized firms with little growth opportunities as mature firms, which often operate in stable industries where significant expansion or innovation is no longer a primary focus. This description aligns with the model of efficient signaling equilibrium proposed by Ambarish et al. (1987). According to this framework, mature firms are typically past their rapid growth phase and focus on sustaining their current operations and maximizing shareholder returns through efficiency and stability.

In contrast, firms with high growth opportunities are described as growing firms. These companies are dynamic, actively pursuing innovation, market expansion, and the development of new products or services. Growing firms often reinvest their profits to capitalize on emerging opportunities and maintain a competitive edge in their industries. Their proactive approach to innovation reflects their strategic emphasis on long-term development and value creation. One of the ways to assess whether a firm has growth potential is to use a Market-to-Book (M/B) ratio.

A high M/B ratio (market value of equity divided by book value of equity) is associated with investor-attracting high growth and low-risk (Brigham & Houston, 2019). The M/B ratio measures the market value of a company relative to its accounting book value.

2.2 Conceptual Model



Source: Prepared by Writer (2024)

2.3 Hypothesis Development

2.3.1 The Influence of Growth Opportunity towards Hedging Decisions

Hetrina et al. (2020) hypothesized that firms which experiences development are more likely to opt for hedging decisions to protect their assets. According to Marhaenis & Artini (2020), companies that have the opportunity to achieve high growth will certainly encourage the company to continue to expand its business, in which the funds needed will certainly not be small and the possibility of internal funds being limited, affecting the capital structure or funding decisions of a company. Dharmiyanti & Darmayanti (2020) constructed the idea that when a business lacks the investment capital to support new initiatives and innovations with a positive net present value, an underinvestment issue arises. Companies with a high probability of underinvestment require a large number of funding sources that can be used to cover investment costs (Larasati & Wijaya, 2022). Debt, which is effective for getting a quick injection of funds, exposes the company to the additional risks of its use (Pangestuti et al., 2020; Wahyudi et al. 2019). Hartono et al. (2020) elaborated that the risk management used to balance the increasing risks due to high growth opportunity may be counteracted with the use of derivatives. Fajri et al. (2023) states that companies need to be ready to face the risks by using derivatives as a preventive measure. According to Pangestuti et al. (2020), companies which experience rapid growth tend to choose debt as a source of funding compared to companies that have a slow growth rate. In summary, more aggressive hedging actions are hypothesized to be encouraged by the increase of risk exposure as a consequence to the use of debt financing, which is stimulated by the company's growth opportunities that allows the idea of innovations and business expansion to be developed.

In respect to the Prospect Theory (PT) and the previous researchers' arguments, growing companies are hypothesized to be more likely to hedge because they are loss-averse (or risk-averse). They would feel the potential pain of losses more strongly than the pleasure of equivalent gains. Proposition II from Modigliani-Miller (MM) Theorem helps to facilitate PT in which when the debt-to-equity increased by the use of debt financing, causing debt holders have higher priority in case of bankruptcy and allowing equity holders demanding higher rate of return (higher cost of equity) from the companies due to the volatility of their return. To support PT and MM, the act of hedging which is basically taking measures to protect against risks, is in respect to Enlightened Value Maximization (EVM) Theory, in which with high growth opportunity indicating that the investors value the company and that the management performs proactive approach to innovation and long-term growth, the management therefore has the responsibility to avoid harming stakeholders' interests and prevent underinvestment issue.

In hopes that the arguments and empirical evidences brought by previous researchers applies to the financial sector, the writer developed the following hypothesis for this study:

H₁: Growth opportunity has a positive significant influence towards hedging decisions in financial sector companies listed on the Indonesia Stock Exchange.

2.3.2 The Role of Earnings Quality in Moderating the Influence of Growth Opportunity towards Hedging Decisions

Menicucci (2020) book entitled “Earnings Quality: Definitions, Measures, and Financial Reporting”, she comprehensively showed the different views regarding earnings quality (EQ) that are influenced by the objective of the decision-maker. Creditors perceive easily converted earnings to cash flows as high EQ, researchers perceive the accuracy of the reported earnings represent a company's actual performance and their reliability in forecasting future earnings, and to investors, high EQ reflects how well the accounting represent the

company's underlying economic fundamentals and their alignment with realized operating cash flows.

Hetrina et al. (2020) suggests that with increasing growth opportunity, the company may inject funds through debt, but good quality of earnings could reduce the loan cycle and strengthen the influence of growth opportunity towards hedging decision. Good earnings quality can be reflected by transparent financial reporting and prediction, that may reflect decrease in agency conflict between the management and the shareholders (in relation with EVM), easing the decision making for hedging activities when there is an increase in debt financing (growth opportunity rises). Hetrina et al. (2020) results of 0,309 as the value of the coefficient and 0,001 as the significance value of the growth opportunity moderated variable, provided empirical evidence that earnings quality strengthens the positive significant influence that growth opportunity has towards hedging decisions. In hopes that the arguments and empirical evidence brought by Hetrina et al. (2020) also applies to the financial sector, the writer developed the following hypothesis for this study:

H₂: Earnings quality strengthen the positive significant influence of growth opportunity has towards hedging decision in financial sector companies listed on the Indonesia Stock Exchange.

3. RESEARCH METHODOLOGY

3.1 Research Sample

Table 3.1 Population and Sample Criteria

No.	Criteria	No. of Financial Companies Each Year	Total Firm-Years
1.	Companies that are listed on the Indonesia Stock Exchange from 2019 to 2023.	104	520
2.	Companies that were listed in the Indonesia Stock Exchange after the year 2019.	(7)	(35)
3.	Companies with incomplete financial statements in S&P Capital IQ	(5)	(25)
4.	Outliers	(2)	(10)
Total Sample Observation		90	450

Source: Prepared by Writer (2024)

3.2 Data Collection Method

The main data collected by the writer is financial statements of the financial companies during the years 2019-2023, that is accessible via the S&P Capital IQ official website, in other words, the data collection method is secondary. All the data except hedging activities are taken from S&P Capital IQ, while the data for hedging activities are taken from S&P Global Capital IQ Pro as it differentiated derivatives that are for hedging purposes.

3.3 Empirical Research Model

Below are the binary logistic regression analysis equations that are developed for this study to test Hypothesis 1 and 2 respectively:

Unmoderated Model:

$$\text{Ln} = \frac{HDi}{1-HDi} = \alpha + \beta_1 \text{GO}_{it} + \beta_2 \text{LIQ}_{it} + \beta_3 \text{DIV}_{it} + \beta_4 \text{LEV}_{it} + \beta_5 \text{SIZE}_{it} + u_{it}$$

Moderated Model:

$$\text{Ln} = \frac{HDi}{1-HDi} = \alpha + \beta_1 \text{GO}_{it} + \beta_2 \text{GO} * \text{EQ}_{it} + \beta_3 \text{LIQ}_{it} + \beta_4 \text{DIV}_{it} + \beta_5 \text{LEV}_{it} + \beta_6 \text{SIZE}_{it} + u_{it}$$

Description:

HD = Hedging decision; α = Constant = log-odds of the outcome; β = Coefficient for each of the variables;
 GO= Growth Opportunity; LIQ= Liquidity; DIV= Dividend Policy; LEV= Leverage; SIZE = Firm Size; EQ
 = Earnings Quality; u = Error term

3.4 Operational Variable

Table 3.2 Operational Variable Indicator

Variable	Indicator
Hedging Decision (HD)	Dummy code 0 = Decided not do hedging Dummy code 1 = Decided to do hedging
Growth Opportunity (GO)	$\frac{\text{Market Value of Equity}}{\text{Book Value of Equity}}$
Liquidity (LIQ)	Current Ratio = $\frac{\text{Current Asset}}{\text{Current Liabilities}}$
Dividend Policy (DIV)	Dividend Payout Ratio= $\frac{\text{Dividend distributed}}{\text{Earnings after tax}}$
Leverage (LEV)	Debt to Equity = $\frac{\text{Total Liabilites}}{\text{Total Equity}}$
Firm Size (SIZE)	Ln (Total Assets)
Earnings Quality (EQ)	$\frac{\text{Net Cash from Operating Activities}}{\text{Net Income}}$

Source: Prepared by Writer (2024)

4. RESULTS AND DISCUSSION

4.1 Research Results

4.1.1 Descriptive Statistics

4.1.2

Table 4.1 Descriptive Statistics for 460 Observations

	N	Minimum	Maximum	Mean	Std. Deviation
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HD	460	0	1	0,26	0,441
GO	460	0,0629	29907,9011	67,1260	1394,3708
LIQ	460	0,0185	8174,6733	60,3934	485,4303
DIV	460	-2,3407	10,2227	0,2129	0,6780
SIZE	460	11,5093	21,4999	16,1566	2,2693
LEV	460	0,0001	17,0714	3,2440	2,9600
EQ	460	-12807,7426	513,1326	-34,8865	601,2276
Valid N (listwise)	460				

Source: Data Processing using SPSS version 25 (2024)

4.1.3 Correlation Test

Table 4.2 Spearman Correlation Test

Correlations			GO	LIQ	DIV	SIZE	LEV	EQ	GOxEQ
Spearman's rho	GO	Correlation Coefficient	1,000	,047	-,085	-,143	-,055	,005	-,040
		Sig. (1-tailed)	.	,162	,036	,001	,124	,460	,202
		N	450	450	450	450	450	450	450
	LIQ	Correlation Coefficient	,047	1,000	-,132	-,621	-,774	,240	,223
		Sig. (1-tailed)	,162	.	,002	,000	,000	,000	,000
		N	450	450	450	450	450	450	450
	DIV	Correlation Coefficient	-,085	-,132	1,000	,235	,137	,019	,006
		Sig. (1-tailed)	,036	,002	.	,000	,002	,347	,446
		N	450	450	450	450	450	450	450
	SIZE	Correlation Coefficient	-,143	-,621	,235	1,000	,723	-,135	-,140
		Sig. (1-tailed)	,001	,000	,000	.	,000	,002	,001
		N	450	450	450	450	450	450	450
	LEV	Correlation Coefficient	-,055	-,774	,137	,723	1,000	-,219	-,209
		Sig. (1-tailed)	,124	,000	,002	,000	.	,000	,000
		N	450	450	450	450	450	450	450
	EQ	Correlation Coefficient	,005	,240	,019	-,135	-,219	1,000	,971
		Sig. (1-tailed)	,460	,000	,347	,002	,000	.	,000
		N	450	450	450	450	450	450	450
	GOxEQ	Correlation Coefficient	-,040	,223	,006	-,140	-,209	,971	1,000

		Sig. (1-tailed)	,202	,000	,446	,001	,000	,000	.
		N	450	450	450	450	450	450	450

Source: Data Processing using SPSS version 25 (2024)

4.1.4 Assumption Tests

4.1.3.1 Linearity

Table 4.3 Linearity Test

Variables in the Equation						
		B	S.E.	Wald	df	Sig.
Step 1 ^a	GO	,067	,333	,041	1	,840
	LIQ	-,011	,013	,708	1	,400
	DIV	10,432	10,567	,975	1	,324
	SIZE	-8,256	5,132	2,588	1	,108
	LEV	1,095	,340	10,342	1	,001
	GOxEQ	,001	,002	,426	1	,514
	LNTTrf_GO	,939	,873	1,158	1	,282
	LNTTrf_LIQ	,001	,001	,752	1	,386
	LNTTrf_DIV	-4,430	4,413	1,008	1	,315
	LNTTrf_SIZE	2,342	1,342	3,047	1	,081
	LNTTrf_LEV	-,396	,121	10,656	1	,001
	LNTTrf_GO*EQ	,000	,000	1,156	1	,282
	Constant	42,507	27,942	2,314	1	,128

Source: Data Processing using SPSS version 25 (2024)

4.1.3.2 Independence of Errors

Table 4.4 Autocorrelation Test

Runs Test

	Difference between observed and predicted probabilities
Test Value ^a	-,03526
Cases < Test Value	225
Cases >= Test Value	225
Total Cases	450
Number of Runs	212
Z	-1,321
Asymp. Sig. (2-tailed)	,186

Source: Data Processing using SPSS version 25 (2024)

4.1.3.3 Multicollinearity Test

Table 4.5 Correlations
Correlations

			GO	LIQ	DIV	SIZE	LEV	EQ	GOxEQ
Spearman's rho	GO	Correlation Coefficient	1,000	,047	-,085	-,143	-,055	,005	-,040
		Sig. (1-tailed)	.	,162	,036	,001	,124	,460	,202
		N	450	450	450	450	450	450	450
	LIQ	Correlation Coefficient	,047	1,000	-,132	-,621	-,774	,240	,223
		Sig. (1-tailed)	,162	.	,002	,000	,000	,000	,000
		N	450	450	450	450	450	450	450
	DIV	Correlation Coefficient	-,085	-,132	1,000	,235	,137	,019	,006
		Sig. (1-tailed)	,036	,002	.	,000	,002	,347	,446
		N	450	450	450	450	450	450	450
	SIZE	Correlation Coefficient	-,143	-,621	,235	1,000	,723	-,135	-,140
		Sig. (1-tailed)	,001	,000	,000	.	,000	,002	,001
		N	450	450	450	450	450	450	450
	LEV	Correlation Coefficient	-,055	-,774	,137	,723	1,000	-,219	-,209
		Sig. (1-tailed)	,124	,000	,002	,000	.	,000	,000
		N	450	450	450	450	450	450	450
	EQ	Correlation Coefficient	,005	,240	,019	-,135	-,219	1,000	,971
		Sig. (1-tailed)	,460	,000	,347	,002	,000	.	,000
		N	450	450	450	450	450	450	450
	GOxEQ	Correlation Coefficient	-,040	,223	,006	-,140	-,209	,971	1,000
		Sig. (1-tailed)	,202	,000	,446	,001	,000	,000	.
		N	450	450	450	450	450	450	450

Source: Data Processing using SPSS version 25 (2024)

Table 4.6 Collinearity Statistics

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	GO	,866	1,155
	LIQ	,971	1,030
	DIV	,990	1,010
	SIZE	,571	1,750
	LEV	,557	1,795

	EQ	,467	2,141
	GOxEQ	,443	2,258

Source: Data Processing using SPSS version 25 (2024)

4.1.3.4 Outlier Effect

To test the impact of the presence of outliers, the writer ran 2 separate tests of logistic regression with 2 different datasets. 1 dataset excludes 2 outliers identified in the box-plot, and the other dataset which includes the outliers. A significant difference are noticed between the significance of the T-Test where the dataset with outlier has the significance value of 0.669, and the dataset which exclude outlier has the significance value of 0.235. This 0.434 decrease in significance value increases the significance of growth opportunity (GO) towards hedging decision (HD), prompting the writer to use the dataset which excluded the 2 outliers in order to decrease the outlier effect.

Table 4.7 Variables in the Equation (Outliers Included)

Variables in the Equation									
		95% C.I. for EXP(B)							
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1 ^a	GO	-,001	,004	,183	1	,669	,999	,992	1,005
	LIQ	,000	,000	,066	1	,797	1,000	1,000	1,000
	DIV	-,244	,346	,500	1	,480	,783	,398	1,542
	SIZE	,838	,099	70,903	1	,000	2,311	1,901	2,808
	LEV	,031	,052	,373	1	,542	1,032	,933	1,142
	GO*EQ	,000	,000	,167	1	,682	1,000	,999	1,001
	Constant	-15,258	1,628	87,831	1	,000	,000		

Source: Data Processing using SPSS version 25 (2024)

Table 4.8 Variables in the Equation (Outliers Excluded)

Variables in the Equation									
		95% C.I. for EXP(B)							
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1 ^a	GO	-,097	,081	1,413	1	,235	,908	,774	1,065
	LIQ	,000	,000	,022	1	,883	1,000	1,000	1,000
	DIV	-,267	,350	,581	1	,446	,766	,386	1,521
	SIZE	,835	,100	69,034	1	,000	2,304	1,892	2,806
	LEV	,021	,053	,160	1	,689	1,022	,920	1,134
	GO*EQ	,000	,001	,167	1	,682	1,000	,998	1,001
	Constant	-15,010	1,649	82,815	1	,000	,000		

Source: Data Processing using SPSS version 25 (2024)

4.1.5 Model Specification Tests

4.1.6

Table 4.9 Hosmer-Lemeshow Test
Hosmer and Lemeshow Test

	Chi-square	df	Sig.
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Unmoderated	14,555	8	,068
Moderated	14,636	8	,067

Source: Data Processing using SPSS version 25 (2024)

Table 4.10 Omnibus Tests of Model Coefficients Table

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Unmoderated	Step	182,269	5	,000
	Block	182,269	5	,000
	Model	182,269	5	,000
Moderated	Step	182,437	6	,000
	Block	182,437	6	,000
	Model	182,437	6	,000

Source: Data Processing using SPSS version 25 (2024)

Table 4.11 -2LogLikelihood

-2 Log likelihood		
	Unmoderated	Moderated
Block 0	519,889	519,889
Block 1	337,620	337,452

Source: Data Processing using SPSS version 25 (2024)

Table 4.12 Model Summary

	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
Unmoderated	337,620 ^a	,333	,486
Moderated	337,452 ^a	,333	,487

Source: Data Processing using SPSS version 25 (2024)

4.1.7 Classification Table

Table 4.13 Classification Table of Unmoderated Model

		Predicted		Percentage Correct
		Hedging Decisions		
Observed		0	1	
Hedging Decisions	0	306	25	92,4
	1	46	73	61,3
Overall Percentage				84,2

Source: Data Processing using SPSS version 25 (2024)

Table 4.14 Classification Table of Moderated Model

		Predicted		Percentage Correct
		Hedging Decisions		
Observed		0	1	
	0	306	25	92,4

Hedging Decisions	1	47	72	60,5
Overall Percentage				84,0

Source: Data Processing using SPSS version 25 (2024)

The overall percentage decreased from 84,2% to 84,0%. The decrease in the percentage indicates that the Moderated Model possesses a lower predictive power in determining the case of HD than the Unmoderated Model.

4.1.8 Results of Hypothesis Testing

Table 4.15 Variables in the Equation of Unmoderated Model

Variables in the Equation									
Step 1 ^a		95% C.I.for EXP(B)							
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1 ^a	GO	-,091	,081	1,254	1	,263	,913	,778	1,071
	LIQ	,000	,000	,022	1	,881	1,000	1,000	1,000
	DIV	-,269	,350	,592	1	,442	,764	,385	1,517
	SIZE	,833	,100	68,976	1	,000	2,301	1,890	2,801
	LEV	,022	,053	,175	1	,676	1,023	,921	1,135
	Constant	-14,994	1,648	82,761	1	,000	,000		

Source: Data Processing using SPSS version 25 (2024)

From the Table 4.16, the constant which represents the log-odds has the value of -14,994, which negative value indicates that the odds of the outcome occurring when all the other predictors has the value of zero, is less than 50% probability. Negative values -0,091 and -0,097 of β_1 showed a negative correlation, yet insignificant (sig. 0,263 and 0,235) for Unmoderated Model and Moderated Model respectively. With the stated results, it can be concluded that the market-to-book ratio of equity as a proxy to GO has no influence towards HD and this leads to the rejection of the first hypothesis, H₁.

Table 4.16 Variables in the Equation of Moderated Model

Variables in the Equation									
		95% C.I.for EXP(B)							
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1 ^a	GO	-,097	,081	1,413	1	,235	,908	,774	1,065
	LIQ	,000	,000	,022	1	,883	1,000	1,000	1,000
	DIV	-,267	,350	,581	1	,446	,766	,386	1,521
	SIZE	,835	,100	69,034	1	,000	2,304	1,892	2,806
	LEV	,021	,053	,160	1	,689	1,022	,920	1,134
	GO*EQ	,000	,001	,167	1	,682	1,000	,998	1,001
	Constant	-15,010	1,649	82,815	1	,000	,000		

Source: Data Processing using SPSS version 25 (2024)

From the Table 4.17, it can be seen that β_2 yielded a value of 0,000, which is insignificant (sig. 0,682). With the stated results, it can be concluded that EQ has no moderating effect on GO’s influence towards HD and this leads to the rejection of the second hypothesis, H_2 .

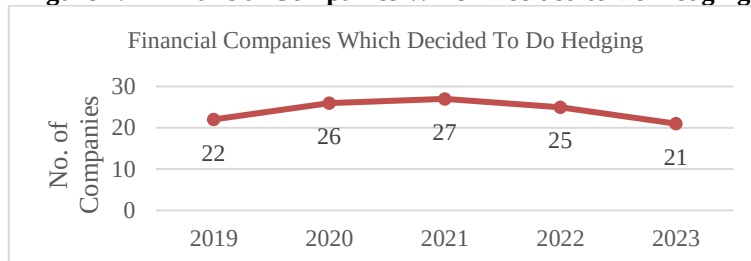
4.2 Discussion

4.3.1 The Influence of Growth Opportunity towards Hedging Decisions

According to the results gained in this study, the coefficient value of β_1 of the unmoderated model is -0,091 indicates that this study predicts that the coefficients of will be negative, which means that GO has a negative influence on the probability of hedging decisions. However, the significance of the variable GO is 0,263, which is more than 0,05, and thus, the influence is deemed insignificant (rejection of the first hypothesis, H_1). The unmoderated model showed negative value of the constant which indicate that the odds of the outcome occurring when all the other predictors has the value of zero, is less than 50% probability.

Referring back to Figure 1.1 in Chapter I, the graph showed drastic changes in the hedging activities amount in the Indonesian financial sector during 2018-2023. Figure 4.17 below further showed that the number of financial companies out of 104 listed financial companies, which decided to do hedging during these years has not changed much despite the drastic changes in the amount of hedging activities. When investigated further, most of the companies which decided to do hedging tended to do so twice or more during 2019-2023, only 3 companies used hedging once during the 5 year period, while the rest of the companies did not do hedging activities at all during this period. In conclusion, this phenomenon led the writer to believe that the reason for the insignificant results GO towards HD might stem from the almost constant number of companies which did hedging during 2019-2023, despite the drastic changes in the amount of derivatives utilized, which relates back to the use of dummy variables in the logistic regression.

Figure 4.17 Financial Companies Which Decided to Do Hedging



Source: Prepared by Writer (2024)

4.3.2 The Role of Earnings Quality in Moderating the Influence of Growth Opportunity towards Hedging Decisions

This study predicts that the coefficient of β_2 in the Moderated Model will be significant, indicating that the presence of EQ as a moderator strengthens GO’s negative influence on the probability of hedging decisions. However, as shown in Table 4.13, β_2 yielded a value of 0.000, which is insignificant (sig. 0.682). This is further supported by the increase in negative values by 0.006 and the decrease in significant values by 0.028 from the Unmoderated Model to the Moderated Model. Therefore, the second hypothesis, H_2 , is also unfortunately rejected.

The results shattered the writer’s notion that is derived from Menicucci (2020) book and Hetrina et al. (2020) findings, that high EQ enhances the positive relationship between growth

opportunities and hedging decisions by reducing agency conflict and facilitating transparent financial reporting, which supports effective decision-making in debt-financed growth scenarios. In summary, this research result is in total opposite to the research results of Hettrina et al. (2020), in which EQ could significantly moderate the influence of GO towards HD.

5. Conclusion

This study examines the influence of growth opportunity and on the possibility of a company deciding to do hedging activities. Based on prospect theory, this study seeks to investigate whether the use of hedging in growing companies as the loss-aversion behaviour is observed instead of risk-seeking behaviour. In addition, the study tested whether the company's earnings quality can moderate the influence of growth opportunity on the likelihood of hedging decision. The test results in this study indicated that the likelihood of hedging decision is not influenced by growth opportunity (Hypothesis 1 is rejected), in other words, GO does not influence HD. Moreover, the study fails to provide empirical evidence regarding the moderating effect of earnings quality on the influence of growth opportunity on hedging decisions (Hypothesis 2 is rejected), simply put, EQ does not moderate the influence of GO towards HD.

Due to the rejection of both hypotheses developed, the writer concludes that neither growth opportunity nor earnings-quality-moderated growth opportunity is a consideration for companies in carrying out hedging activities among the financial companies in Indonesia during 2019-2023. The writer deduces that although companies might make use of derivative instruments amidst the uncertainties of the financial market, it is very unlikely for the encouragement of hedging activities to occur due to its own potential performance development; thus, meaning that its hedging decision might possibly be due to an external stimuli or other particular variables that affects the decision. The rejection of the first hypothesis leads to the implication that in respect to Prospect Theory, risk-seeking behaviour is observed rather than the initially hypothesized loss-aversion behaviour, leading to the deduction that the companies might be experiencing financial strain due to the bold move of choosing to take the risk of loss rather than using derivatives.

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