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The Influence of Profitability, Solvability, Firm Size, and Macroeconomics on *Cost of Capital With Risk As a Moderating Variable on Multifinance Companies*

Giovani Huiser Mangalindung¹, Adler Haymans Manurung², Jhonni Sinaga³, Idel Eprianto⁴

¹University of Bhayangkara Jakarta Raya, Jakarta, Indonesia, ghuiserm@gmail.com

²University of Bhayangkara Jakarta Raya, Jakarta, Indonesia, adler.manurung@dsn.ubharajaya.ac.id

³University of Bhayangkara Jakarta Raya, Jakarta, Indonesia.

⁴University of Bhayangkara Jakarta Raya, Jakarta, Indonesia.

Corresponding Author: ghuiserm@gmail.com¹

Abstract: This research was conducted to examine the effect of gross profit margin, return on asset, leverage, firm size, oil price, and exchange rate on the cost of capital with risk as a moderating variable of multifinance companies that go public. This research population publishes multifinance companies that go public for the 2016-2023 period. The sampling technique uses purposive sampling technique. Based on predetermined criteria the number of samples obtained by 12 companies. The type of data used in this study is secondary data using panel data regression analysis methods. The results showed gross profit margin has a positive and not significant effect on the cost of capital, leverage variable has a positive and significant effect on the cost of capital, return on asset and firm size have negative significant effect on the cost of capital, oil price has a positive significant effect on the cost of capital, exchange rate has a positive and not significant effect. Risk is able to moderate gross profit and firm size have positive and not significant effect on the cost of capital, whereas risk is able to moderate return on asset and leverage have negative and not significant effect on the cost of capital.

Keywords: Cost of Capital, Gross Profit Margin, Return on Asset, Debt to Equity Ratio, Firm Size, Exchange Rate, Oil Price, Risk

INTRODUCTION

Multifinance companies are companies or forums assigned by the government to assist banks in distributing funds to help the community in boosting its economy. Financial Services Authority Regulation (POJK) No. 29/2014 states that a financing company means a business entity that carries out financing activities for the procurement of goods and/or services. The existence of financing institutions is stated in Article 1 paragraph 9 of Law No. 21 of 2011 concerning the Financial Services Authority. This company has made many contributions to the community's economy, both directly and indirectly. Even this financing institution is used by banks to assist it in distributing funds collected through deposits, accounts, and savings.

Multifinance companies are currently also maximizing the collection process by optimizing various online payment channels, making it easier for customers to pay their monthly installments..

OJK infographics dated November 4, 2020, conveyed that the amount of restructured financing as of October 27, 2020 had reached IDR 177.66 trillion from 4.79 million financing contracts. The situation conveyed when compared to the total financing in the third quarter of 2020, the restructured financing has been quite high, around 45%. The decline in financing, the increase in NPF (non-performing finance) and restructuring financing and the increase in the formation of loss reserves due to the increase in NPF (non-performing finance) finally had an impact on profitability performance. In the third quarter of 2020, multifinance net profit fell sharply with a growth of minus 63.15% (year on year) or a drop of IDR 8.82 trillion from IDR 13.96 trillion to IDR 5.15 trillion. This decline in multifinance profit was hit from two sides at once, namely income which fell by 7.90% and conversely expenses increased by 6.27%..

Research on the multifinance sector is very limited because this sector is a supporting sector for banking. Sukarno and Ferdiansyah (2009) discuss the valuation of multifinance companies. Rina et al., (2019) discuss financial performance against market reactions of multifinance companies. Istiqomah and Rohim (2020) discuss the distribution of credit by multifinance companies. Nasri et al. (2020) discuss the analysis of factors that influence consumers in choosing multifinance products. Ariani and Danasari (2021) discuss the determinants of efficiency in multifinance companies in Indonesia. Utami and Purnamasari (2023) discuss the influence of financial ratios and EVA on multifinance companies. The research conducted is not very diverse as seen from research conducted since 2009, due to the lack of attention to the multifinance financial sector. The limitations of research in this sector are a strong driving force for conducting this research.

All perfect multifinance companies need funds to meet the needs of their operational activities. The capital market is a medium for investing and as an intermediary to channel funds from parties with excess funds (surplus units) to parties in need of funds (deficit units). The information available in the capital market has an important role in suggesting trading transactions in the capital market. This is because the players in the capital market, especially investors will conduct further analysis of each publication or information that enters the stock exchange. Issues or publications published by issuers will hypnotize investors in making decisions..

The company's financial report is one form of important information because it can be used to assess the company's performance and financial condition. For investors, financial reports are useful for helping to make decisions to buy, hold, or sell securities (stocks). To meet the information needs of these investors, companies listed on the stock exchange are required to publish financial reports at least once a year (Ajie, 2003). In order to be used as a reliable and useful decision-making tool, a financial report must contain issues that are valuable to investors. Financial reports are said to have information content if the publication of the report results in a market reaction. This market reaction refers to the behavior of investors and other market players to make stock transactions in response to the issuer's crucial decisions that are conveyed to the market. Research by Husnan, et al (1996), and Hanafi (1997) provides evidence that financial reports have information content. With the publication of financial reports, trading activity is relatively higher during the period of publication of financial reports.

Capital is a fund used to finance the procurement of assets and operations of a company. Cost of Capital is a cost incurred to finance sources of expenditure (Modigliani & Miller, 1959; Dempsey, 1991). The cost of capital is defined as the rate of return according to the market value of a corporation that is observed from the shares in circulation. Factors that affect the capital portfolio (Brigham, 2014:427-428): (1) Factors that cannot be controlled by the company: interest rates, tax rates. (2) Factors that can be controlled by the company: Capital

structure policy, dividend policy, investment policy in investing capital costs are used as the required rate of return on shares and company bonds that are spread as the starting point..

The development or growth of the Cost of Capital position owned by the company can also be influenced by the company's profitability. According to Sartono, (2016) profitability is a ratio used by companies to determine the company's ability to generate profits. When a company is able to generate profits with a larger portion, the Cost of Capital issued by the company to develop itself is higher. From the profitability ratio, the indicators that will be used in this study are the Gross Profit Margin Ratio (GPM) and the Return on Asset Ratio (RoA). The results of research conducted by Kumaralita and Purwanto, (2019) found that profitability has a positive effect on the cost of capital owned by the company. The results in line were obtained by Solomon, (2017) who found that the higher the company's ability to generate profits, the more the cost of capital owned by the company would increase, then the results of research conducted by Mulyati, (2018) found that profitability has a positive and significant effect on the cost of capital owned by a company.

Furthermore, according to Ross, et al., (2015) debt to equity ratio (or commonly known as leverage ratio) is also one of the factors that affect the company's cost of capital, because it shows the company's ability as indicated by equity to pay its debts (Manurung, 2024). This ratio is a reference for banks in approving loans used by companies to increase capital expenditures and/or working capital. When the leverage position owned by the company is higher, it will affect the cost of capital issued by the company, in this case when the company's debt position is higher, the tendency for the cost of capital issued by the company will be relatively decreasing, the large debt position will encourage low capital expenditures (Mulyati, 2018; Aharon & Yagil, 2019; and Bhayani, 2009)..

Changes in a company's cost of capital can also be influenced by firm size. According to Higgins, (2007) company size indicates the amount of wealth owned by a company that can be observed from the number of employees, total assets, market capitalization, or sales. According to Brigham Houston (2010), company size is a measure of the size of a company that is indicated or assessed by total assets, total sales, amount of profit, tax burden, and others. The larger the company size will be in line with the cost of capital they spend to encourage increasing company value (Febrian, 2007; and Embong et al., 2012)..

In addition to fundamental factors, there are several macroeconomic factors that also have a significant impact on the company's cost of capital. The weakening rupiah will have an impact on the increasing amount of debt that must be repaid, this is because the domestic currency is lower in value compared to the US dollar. The weakening of the rupiah exchange rate against the US dollar caused Indonesia to experience a monetary crisis in 1997 and was part of the Asian Financial Crisis which was caused by a combination of financial market players who were out of line and weak government policies..

In addition, oil prices are also considered an important macroeconomic factor because of their role as production inputs. In Indonesia, rising world oil prices can affect national fuel prices and can affect other sectors related to finance, the banking sector, consumer goods, and even transportation that will feel the impact of rising and falling fuel prices. Poghosyan & Hesse (2009) and Kaffash (2014) identified significant implications of oil prices on banking performance for oil-exporting countries. Furthermore, Xu & Xie (2014), Lee & Lee (2019), and Osuma et al., (2019) stated that oil prices have a significant impact on banking sector performance. In addition, Wattanatornand & Kanchanapoom (2012) also found similar findings where oil prices affect company performance. Chaarani (2019) conducted a study on oil prices and banking performance in the Middle East. Meanwhile, South & Rumengan (2023) discussed oil prices on company performance in the energy sector.

The observation period of this study ranges from 2016 to 2023, where COVID-19 hit the global economy during the period of 2020, with ongoing events until 2022 (Ministry of Health,

2022). Therefore, this study also uses the COVID-19 pandemic as a dummy variable in the model by considering its impact from the policy of restricting social and economic activities during the pandemic era, which ultimately affects the overall performance of the company and the economy. Several academics have shown a significant impact of COVID-19 on company performance (Ciotti et al., 2020; Ngo, & Duong, 2024; Shen et al., 2020; Shaharuddin, 2021). In addition, Daryanto et al., (2023) also stated a significant impact of COVID-19 on company performance in the construction sector. Furthermore, Alsamhi et al., (2022) also found a significant impact of COVID-19 and company performance in India.

In examining the effect of profitability, solvency, firm size, and macroeconomics on the cost of capital, this study uses dummy variables as moderating factors between fundamental financial indicators and company performance (Sharma et al., 1981; Manurung, 2024b, 2024c; and Baron and Kenny, 1986). The use of risk as a moderating variable is considered a determinant of good or bad performance in a bank (Harimuftie, 2019), and risk is expected to strengthen the relationship between profitability, solvency, firm size, and macroeconomics on the cost of capital.

Therefore, this study aims to empirically identify the influence of profitability, solvency, firm size, and macroeconomics on the cost of capital with several performance indicators such as profitability measures including Return on Asset (ROA) and Gross Profit Margin (GPM) and solvency indicators Debt to Equity Ratio (D/E Ratio), and Firm Size as a fundamental factor as an independent variable, and macroeconomic factors as control variables in our empirical model.

Literature Review

The cost of capital is the real cost that must be incurred by the company to obtain funds from debt, preferred stock, common stock, or retained earnings to fund an investment or company operation (Modigliani and Miller, 1959). Meanwhile, Gitman (2003) defines the cost of capital as the rate of return that must be obtained by the company on the project it invests in to maintain market value. The concept of the cost of capital is closely related to the concept of understanding the required rate of return. The required rate of return can actually be seen from two parties, namely the investor and the company (Sartono, 1996).

In this study, the ratio used as an indicator of the profitability ratio is gross profit margin (GPM). According to Herry (2017), gross profit margin is a ratio used to measure the percentage of gross profit over net profit sales. Meanwhile, according to Fahmi (2015:136), gross profit margin is a comparison between gross profit and sales. If the cost of goods sold increases, the gross profit margin increases. Furthermore, according to Hantono (2018:11), gross profit margin shows the profit obtained from product sales. Under normal conditions, gross profit margin should be positive because it shows whether the company can sell goods above cost price, if negative it means the company is experiencing loss.

Return on Asset (RoA) measures how effectively a company uses assets to generate profit. According to Hanafi and Halim (2004:83) return on asset (RoA) is a ratio that measures a company's ability to generate profit by using total assets owned by the company after adjusting for costs to fund the assets. According to Home and Wachowiczz (2001:90), RoA measures the overall effectiveness in generating profit through available assets; the power to generate profit from invested capital. If the RoA in a company is negative, it is caused by the company's profit being in a negative or loss condition. This condition indicates that the invested capital is unable to generate profit for the company.

The solvency ratio or leverage is a ratio used to measure the extent to which a company's assets are financed by debt. In a broad sense, the solvency ratio is used to measure a company's ability to meet all of its obligations, both short-term and long-term (Herry, 2016:162). Weston and Copeland (2005) state that leverage can be used to measure the use of debt to finance

assets. High leverage illustrates that a company is highly dependent on its creditors. Companies with good financial conditions will tend to borrow less money even though they have the opportunity to borrow more and will then affect their cost of capital.

According to Brigham and Houston (2012:4), the meaning of firm size is the size of the company as assessed from the total assets, total sales, amount of profit and tax burden. Meanwhile, according to Riyanto (2013), a large company whose shares are widely distributed, each expansion of share capital will only have a small effect on the possibility of loss or shifting of control from the dominant party over the company concerned. According to Furaida (2010:33), firm size can be measured using the total assets, sales, or capital of the company. A large company certainly has the ability to manage the company well.

Oil prices are a macro indicator in a country's economy. The rise and fall of oil prices affect all aspects of the economy. Hesse and Paghoysan (2016) stated that oil prices have an impact on the economy through direct and indirect channels. The world oil price that is often used as a reference in oil trading is West Texas Intermediate. The WTI oil price is the highest oil price among Brent Blend and OPEC. This is because WTI is the highest quality oil because it has a low sulfur content so it is very good for use as gasoline (Witjaksono, A.A, 2010). Oil prices are one of the factors considered in bank performance (Manurung et al., 2020).

The exchange rate is the price in the exchange of two different currencies, there will be a comparison of the value or price between the two particular currencies, this comparison of values is called the Exchange Rate (Nopirin, 2012). According to Sadino Sukino (2012) that the exchange rate (Exchange Rate) or often called the exchange rate is the price of a currency against another currency. According to Kuncoro (1996) and Arifin (2003) explain that what is meant by the Rupiah exchange rate against the US Dollar is the exchange rate of a number of Rupiah needed to buy one US Dollar..

Risk, according to the definition of financial science, is measured based on the deviation of actual returns on investment from expected returns (Damodaran, 2012). There are two types of risk according to Damodaran (2012). First, equity risk, arises in investments, where there is no promised cash flow. Second, default risk, arises in investments with promised cash flow.

METHOD

3.1 Data of Source

Data were obtained from financial reports of public companies listed during the observation period 2016 - 2023, so this study uses secondary data from annual reports and the Indonesia Stock Exchange. In addition, macroeconomic indicator data were obtained from Bank Indonesia covering the period 2016 - 2023. The data is to support the empirical model built using theoretical foundations and previous empirical studies.

3.2 Panel Data Model

This study uses a Panel Data Model to estimate the relationship between several independent variables, namely Return on Asset, Gross Profit Margin, Leverage (DER), Firm Size, Exchange Rate, and Oil Price to determine the Cost of Capital as a dependent variable. Risk is used as a moderating variable. The Panel Data Model is suitable for small data which is a short time series and small companies as samples. In addition, the panel data model also shows time and cross-section as samples. Gujarati (2003), Wooldridge (2002), Greene (2008), Bjorn (2017), Sul (2019) and Manurung (2024b) state that the panel data model is as follows:

a. Pooled Data Model

Pooled Data Model is model that data combine all together and the model is as follow:

$$Y_{i,t} = \beta_1 + \beta_2 X_{2i,t} + \beta_3 X_{3i,t} + \mu_{i,t} \quad (1)$$

$$i = 1, 2, \dots, k; \quad t = 1, 2, \dots, n$$

X's are non-stochastic and $E(\mu_{it}) \sim N(0, \sigma^2)$

b. Fixed Effect Model

FEM is a model that μ_i and X's are assumed correlated.

$$Y_{i,t} = \beta_{1i} + \beta_2 X_{1i,t} + \beta_3 X_{2i,t} + \mu_{i,t} \tag{2}$$

$$i = 1, 2, \dots, k; \quad t = 1, 2, \dots, n$$

c. Random Effect Model (REM)

REM is a model that ε_i and X's are assumed uncorrelated.

$$Y_{i,t} = \beta_{1i} + \beta_2 X_{1i,t} + \beta_3 X_{2i,t} + \mu_{i,t} \tag{3}$$

$$\beta_{1i} = \beta_1 + \varepsilon_i$$

$$i = 1, 2, \dots, k; \quad t = 1, 2, \dots, n$$

μ_i is a random error with a mean value of zero and variance of $\sigma\varepsilon^2$. Judge (1982), Wooldridge (2002), Biorn (2017), Sul (2019) and Manurung (2024b) stated that how we choose FEM or REM as follows:

1. When T (number of time series data) is large and N (the number of cross-sectional units) is small, Fixed Effect Model (FEM) may be preferable.
2. When N is large and T is small, if we strongly believe that the individual, or cross-sectional, units in our sample are not random drawings from a larger sample, Fixed Effect Model (FEM) is appropriate. If the cross-sectional units in the sample are regarded as random drawings, the Random Effect Model (REM) is appropriate.
3. When individual error component ε_i and one or more regressors are correlated, Fixed Effect Model (FEM) is an unbiased estimator
4. Random Effect Model (REM) estimators are more efficient than Fixed Effect Model (FEM) Estimators, when N is large, and T is small and if the assumptions underlying Random Effect Model (REM) hold.

RESULT AND DISCUSSION

This discussion is divided into two main categories, starting with descriptive statistical analysis, correlation analysis between variables, and continuing with hypothesis testing analysis.

Descriptive Statistics

In this section, descriptive statistics are provided to describe the data profile of each variable being observed through our empirical model. The descriptive statistics are provided in the following table.

Table 1. Descriptive Statistics

| Variabel | Min | Max | Mean | Stdev | Skewnes | Kurtosis | Jarque B |
|----------------------|----------|---------|---------|---------|----------|----------|----------|
| Cost of Capital | -0,07433 | 0,24102 | 0,07646 | 0,04206 | 1,08744 | 5,10089 | 36,5757 |
| Margin Bunga | -0,00799 | 0,43378 | 0,13741 | 0,09421 | 1,21542 | 1,07019 | 38,5327 |
| Return on Asset | -0,21867 | 0,14495 | 0,02778 | 0,05212 | -1,77231 | 6,19185 | 91,0092 |
| Debt to Equity Ratio | 0,00703 | 0,89730 | 0,53301 | 0,26583 | -0,75778 | 3 | 60,8563 |
| | 2 | 1 | 2 | 1 | -0,59404 | | 2 |

| | | | | | | | |
|---------------|----------|---------|----------|---------|----------|----------|---------|
| | | 28,2464 | 20,5548 | 4,34067 | 0,24757 | | 73,6938 |
| Firm Size | 14,9834 | 3 | 2 | 4 | 3 | -1,2636 | 9 |
| | | 1,54371 | 0,51127 | 0,29385 | 1,07092 | 1,15994 | 31,8933 |
| Risk | 0 | 7 | 4 | 5 | 7 | 6 | 7 |
| | | 4,38838 | 4,11965 | 0,22035 | | | 84,5245 |
| Oil Price | 3,80999 | 1 | 2 | 4 | -0,08428 | -1,59377 | 6 |
| | | 0,01818 | | 0,04378 | | 1,01474 | 36,7676 |
| Exchange Rate | -0,11303 | 8 | -0,02681 | 8 | -1,14572 | 9 | 2 |

Source: Author's Calculations (2025)

The Cost of Capital (COC) variable has a minimum value of -0.07433, a maximum value of 0.24%, an average value of 0.076463, and a standard deviation of 0.04206. These data indicate that the COC data points are close to each other, especially towards the middle value, which is indicated by a relatively small standard deviation. In addition, if we observe the minimum data with the median or average value and the maximum value, it can be seen that the average value is closer to the maximum value. In addition, COC is normally distributed as indicated by the Jarque Bera value which is greater than the table value. This normal distribution allows the variable to be analyzed using the least squares model.

In addition, the Gross Profit Margin variable has a minimum value of -0.00799, a maximum value of 0.433784 and an average of 0.13741 and a standard of deviation of 0.094218 and a Jarque Bera value of 38.53271. The data disclosed tells that the interest margin obtained by multifinance companies varies greatly and the Interest Margin follows a normal distribution..

Return on Asset (RoA) is also included as an independent variable as described previously. Return on Asset has a minimum value of loss 0.21867, a maximum value of 0.144947 and an average of 0.027787 and a standard deviation of 0.05212 and a Jarque Bera value of 91.00924. The data disclosed tells that the return on assets obtained by multifinance companies varies greatly and the return on assets follows a normal distribution..

Then the Leverage (DER) of multifinance companies as an independent variable has a minimum value of 0.007032, a maximum value of 0.897301, and an average of 0.533012 and a standard deviation of 0.265831 and a Jarque Bera value of 60.85632. The data disclosed tells that the leverage obtained by multifinance companies varies greatly and leverage follows a normal distribution..

The Firm Size of multifinance companies as an independent variable has a minimum value of 14.9834, a maximum value of 28.24643, and an average of 20.55482 and a standard deviation of 4.340674 and a Jarque Bera value of 73.69389. The data disclosed tells that the firm size obtained by multifinance companies varies greatly and the firm size follows a normal distribution..

In addition, the Exchange Rate (ER) variable is measured by the annual exchange rate change considering its main purpose is to measure the impact of changes, where the Exchange Rate (ER) variable has a minimum value of -0.11303, a maximum value of 0.018188, a mean value of -0.02681, and a standard deviation of 0.04378. This shows that the data points of the Exchange Rate (ER) variable are close to each other as indicated by the relatively small standard deviation. The mean value of the Exchange Rate (ER) variable is closer to the maximum value. This shows that the exchange rate changes are very small and the central bank has succeeded in stabilizing the exchange rate well.

Furthermore, the Oil Price (OP) variable has a minimum value of 3.80999, a maximum value of 4.388381, an average value of 4.119652, and a standard deviation of 0.220354. These data indicate that the Oil Price (OP) data points are close to each other. In addition, the center

value is also getting closer to the maximum value. In addition, this also explains that changes in oil prices are relatively small during the observation period.

The risk variable of multifinance companies as independent and moderating variables included in this study has a minimum value of 0.000, a maximum value of 1.543717, and an average of 0.511274 and a standard deviation of 0.293855 and a Jarque Bera value of 31.89337. The data disclosed tells us that the risk variables obtained by multifinance companies vary greatly and these risk variables follow a normal distribution.

Based on the description above, it can be concluded that the data has a central value that is close to the maximum value. This means that the data shows a very high value because of its maximum value. In addition, the results also show that the standard deviation is also small, which indicates that the variation is also small.

Correlation Analysis

Further analysis discusses the correlation between variables used in this study which is shown in table 2 below. The results show a significant correlation between several variables. Return on Asset (RoA) has a negative correlation with COC. In other words, it shows that every 1% increase in RoA will cause a decrease in COC by a coefficient value of -0.2434. The RoA variable has a positive correlation with the GPM (MB) variable. In other words, every 1% increase in RoA will cause an increase in the received GPM of 0.5553. Furthermore, the Firm Size (FS) variable has a negative correlation with the GPM variable. In other words, it shows that every 1% increase in FS will cause a decrease in GPM by a coefficient of -0.5067. The FS variable has a positive correlation with the RoA variable. In other words, every 1% increase in FS will cause a decrease in RoA by a coefficient of -0.59548. Furthermore, the FS variable has a negative correlation with the DER variable. In other words, every 1% increase in FS will cause a decrease in DER by a coefficient of -0.5955. Furthermore, the moderation variable RISK has a negative correlation with the GPM variable. In other words, every 1% increase in RISK will cause a decrease in GPM by a coefficient of -0.3660.

Table 2. Correlation Analysis

| Variable | COC | MB | ROA | DER | FS | Risk | Oil | Kurs |
|----------|-----|---------|-----------|----------|------------|----------|----------|----------|
| | | | - | | | | | |
| COC | 1 | 0,01988 | -0,2434** | 0,128245 | 0,001054 | 0,127159 | 0,10388 | 0,123874 |
| MB | | 1 | 0,5553** | -0,02177 | 0,5067*** | 0,3660** | 0,038575 | 0,023617 |
| ROA | | | 1 | 0,10809 | -0,59548** | 0,133396 | 0,09615 | 0,028432 |
| DER | | | | 1 | -0,5955*** | 0,133396 | 0,09615 | 0,028432 |
| FS | | | | | 1 | 0,133396 | 0,09615 | 0,028432 |
| Risk | | | | | | 1 | 0,09615 | 0,028432 |
| Oil | | | | | | | 1 | 0,028432 |
| Kurs | | | | | | | | 1 |

***p<0,01, **p<0,05,
*p<0,1

Source: Author’s Calculations (2025)

Uji R2 (Goodness Of Fit)

Based on the test results, the Adjusted R2 value was obtained as 0.632311, which means that the variation of the independent variables (Return on Asset, Gross Profit Margin (MB), Leverage (DER), Firm Size, Oil Price, Exchange Rate, and Risk) is able to explain the variation of the dependent variable, namely Cost of Capital, by 63.23%, while the remaining 36.77% is explained by other variables not included in this study.

Table 3. Uji R2 (Goodness of Fit)

| Variable | R-squared | Adjusted R-squared |
|-----------|-----------|--------------------|
| Model COC | 0,72133 | 0,632311 |

Source: Author’s Calculations (2025)

Uji F/Simultaneous Test

From the test results, the F-statistic value was obtained as 8.103063 and the significance value was 0.0000 < 0.05 so that the independent variables (Return on Asset, Gross Profit Margin (MB), Leverage (DER), Firm Size, Oil Price, Exchange Rate, and Risk) had an effect on the dependent variable, namely Cost Of Capital.

Table 4. Uji F (Simultan Test)

| MODEL | F-Statistic | Probabilitas | Keputusan |
|-----------|-------------|--------------|------------|
| Model COC | 8,103063 | 0,000000 | H0 ditolak |

Source : Author’s Calculation (2025)

Causality Analysis

Berikut ini model penelitian untuk variabel biaya modal yang di moderasi oleh risiko :

$$\begin{aligned}
 COC_{it} = & 0.4126 + 0,236946 MB_{it} - 0,36934 ROA_{it} + 0,21429 DER_{it} & (4) \\
 & (1,7656878) & (-2,44462) & (4,686472) \\
 & - 0,02717 FS_{it} - 0,05574 Risk_{it} + 0,085523 ER_{it} + \\
 & (-1,94005) & (-0,53358) & (1,55516) \\
 & 0,023651 Op_{it} + 0,244043 (MB_{it} * Risk_{it}) \\
 & (1,92083) & (1,045253) \\
 & - 0,16016 (ROA_{it} * Risk_{it}) - 0,04749 (DER_{it} * Risk_{it}) \\
 & (-0,71615) & (-1,18892) \\
 & + 0,002125 (Size_{it} * Risk_{it}) - 0,00868 PDM_{it} \\
 & (0,592759) & (-1,61939)
 \end{aligned}$$

Based on the R2 (Coefficient of Determination) figure of 72.13%, all independent variables can explain the fluctuation of the COC variable by 72.13% and the rest by other factors. All variables together significantly affect the COC variable at a significant level of 10%..

Uji T/Partial Test

Output perbedaan statistik (uji-t) ditujukan untuk mengidentifikasi apakah ada potensi perbedaan signifikan variabel independen terhadap variabel dependen. Berikut hasil uji t dalam tabel 5:

1. ROA has a probability of $0.0169 < \alpha = 0.05$, with a coefficient of -0.369343, then H0 is rejected. This shows that ROA has a negative and significant effect on COC.
 2. MB has a probability of $0.1019 > \alpha = 0.05$, with a coefficient of 0.236946, then H0 is accepted. This shows that MB has a positive and insignificant effect on COC.
 3. DER has a probability of $0.0000 < \alpha = 0.05$, with a coefficient of 0.214290, then H0 is rejected. This shows that DER has a positive and significant effect on COC.
 4. FS has a probability of $0.05630 > \alpha = 0.10$, with a coefficient of -0.027170, then H0 is accepted. This shows that FS has a negative and significant effect on COC.
 5. OP has a prob. of $0.05870 > \alpha = 0.10$, with a coefficient of 0.023651, then H0 is accepted. This shows that OP has a positive and significant effect on COC.
 6. ER has a prob. of $0.12430 > \alpha = 0.05$, with a coefficient of 0.085523, then H0 is accepted. This shows that ER has a positive and insignificant effect on COC.
 7. PDM has a prob. of $0.10970 > \alpha = 0.05$, with a coefficient of -0.008684, then H0 is accepted. This shows that PDM has a negative and insignificant effect on COC.
 8. RISK has a prob. of $0.59530 > \alpha = 0.05$, with a coefficient of -0.055740, then H0 is accepted. This shows that RISK has a negative and insignificant effect on COC.
 9. MB moderated by RISK has a prob. of $0.29940 > \alpha = 0.05$, with a coefficient of 0.244043, then H0 is accepted. This shows that MB moderated by RISK has a positive and insignificant effect on COC.
 10. ROA moderated by RISK has a prob. of $0.4762 > \alpha = 0.05$, with a coefficient of -0.160161, then H0 is accepted. This shows that ROA moderated by RISK has a negative and insignificant effect on COC.
 11. DER moderated by RISK has a prob. of $0.23840 > \alpha = 0.05$, with a coefficient of -0.047494, then H0 is accepted. This shows that DER moderated by RISK has a negative and insignificant effect on COC.
 12. FS moderated by RISK has a prob. of $0.55520 > \alpha = 0.05$, with a coefficient of 0.002125, then H0 is accepted. This shows that FS moderated by RISK has a positive and insignificant effect on COC.
- Berdasarkan hasil uraian 1 sampai 12 maka risiko awalnya akan diuji sebagai variabel moderasi, maka kesimpulan bahwa variabel risiko tersebut berpotensi menjadi variabel moderasi (Sharma, et al; 1981 dan Manurung, 2024).

Tabel 5. Uji t (Partial test)

| Variabel Independen | Variabel Dependen : COC | | | |
|---------------------|-------------------------|---------|------------------------|-------------|
| | Koefisien | Prob. | Keterangan | Kesimpulan |
| Konstanta | 0,412622 | 0,0000 | | |
| ROA | -0,369343 | 0,0169 | 5% Negatif Signifikan | H0 Ditolak |
| MB | 0,236946 | 0,1019 | Tidak Signifikan | H0 Diterima |
| DER | 0,214290 | 0,00000 | 1% Positip Signifikan | H0 Ditolak |
| FS | -0,027170 | 0,05630 | 10% Negatif Signifikan | H0 Ditolak |
| OP | 0,023651 | 0,05870 | 10% Positip Signifikan | H0 Ditolak |
| ER | 0,085523 | 0,12430 | 10% Tidak Signifikan | H0 Diterima |
| PDM | -0,008684 | 0,10970 | 10% Tidak Signifikan | H0 Diterima |
| Risk | -0,055740 | 0,59530 | 10% Tidak Signifikan | H0 Diterima |
| MB?*RISK? | 0,244043 | 0,29940 | 10% Tidak Signifikan | H0 Diterima |
| ROA?*RISK? | -0,160161 | 0,47620 | 10% Tidak Signifikan | H0 Diterima |
| DER?*RISK? | -0,047494 | 0,23840 | 10% Tidak Signifikan | H0 Diterima |
| FS?*RISK? | 0,002125 | 0,55520 | 10% Tidak Signifikan | H0 Diterima |

CONCLUSION

Based on the empirical findings above, it can be concluded that the RoA and FS variables are proven to have a significant negative effect on COC, the DER and OP variables are proven to have a significant positive effect on COC, while the GPM and ER variables have an insignificant positive effect on COC. The moderating effect of the Risk variable is proven to strengthen the effect of the GPM(MB) and FS variables on COC, while the moderating variable Risk weakens the effect of the RoA and DER variables.

Suggestions

Based on the research results and limitations that have been described, there are several suggestions that could possibly be used as recommendations for the development of similar research in the future.

1. Explore more deeply the relationship between each variable, both external and internal factors of the company, because there are still inconsistencies between research results.
2. In further research, it is necessary to add other variables that could affect the cost of capital (COC). Other variables that can be added in future research are corporate governance, sales growth, inflation, and others.
3. Further researchers need to consider other moderating variables, such as the Audit Committee, and others.
4. Suggestions for further research that wants to conduct similar research are better in different sectors and with a more diverse number of samples so that they can strengthen the results of previous studies.

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