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INTEREST RATE EXPLORATION AS A STOCK RETURN PREDICTOR: INDUSTRY TYPE AND MARKET CAP APPROACH

Junaidi[1*], Nyoman Ari Surya Dharmawan[2], Mohamed Omar Abdulrahim[3], Sultan Syah[4]
[1,4]Universtas Trunojoyo Madura
[2]Universtas Pendidikan Ganesha
[3]Misurata University, Libya
*Email: junaidi@trunojoyo.ac.id

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Abstract

This study aims to analyze the effect of interest rates on stock returns in the banking and real estate industries. This research using a quantitative approach with associative methods to explore relationships between variables. The data used are secondary data, including interest rates, stock returns, industry type, and market capitalization, with the research population consisting of banking companies listed on the Indonesia Stock Exchange and Bank Indonesia during the period from January 1, 2016, to December 31, 2022. The sample was selected using a purposive sampling method, resulting in 16,380 observations of monthly data, with 126 respondents used in the analysis. Hypothesis testing was conducted using multiple linear regression, which revealed that interest rates have a significant negative effect on stock returns, particularly in the banking industry compared to the real estate industry. The greater sensitivity in the banking industry is attributed to differences in business characteristics and financial structures between the two industries. The novelty of this study compared to previous research lies in the object studied, the indicators used for the interest rate variable, and the examination of stock return variables moderated by industry type and market capitalization.

Keywords : Stock Return, Interest Rate, Industry, and Capitalization

Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh suku bunga terhadap return saham pada industri perbankan dan properti. Penelitian ini menggunakan pendekatan kuantitatif dengan metode asosiatif untuk mengeksplorasi hubungan antar variabel. Data yang digunakan adalah data sekunder, meliputi suku bunga, return saham, jenis industri, dan kapitalisasi pasar, dengan populasi penelitian terdiri dari perusahaan perbankan yang terdaftar di Bursa Efek Indonesia dan Bank Indonesia selama periode 1 Januari 2016 sampai dengan 31 Desember 2022. Sampel dipilih dengan menggunakan metode purposive sampling, sehingga diperoleh 16.380 observasi data bulanan, dengan 126 responden yang digunakan dalam analisis. Pengujian hipotesis dilakukan dengan menggunakan regresi linier berganda, yang mengungkapkan bahwa suku bunga memiliki pengaruh negatif yang signifikan terhadap return saham, khususnya pada industri perbankan dibandingkan dengan industri properti. Sensitivitas yang lebih besar pada industri perbankan dikaitkan dengan perbedaan karakteristik bisnis dan struktur keuangan antara kedua industri. Kebaruan penelitian ini dibandingkan dengan penelitian sebelumnya terletak pada objek yang diteliti, indikator yang digunakan untuk variabel suku bunga, dan pengujian variabel return saham yang dimoderasi oleh jenis industri dan kapitalisasi pasar.

Kata Kunci : Return Saham, Suku Bunga, Industri, dan Kapitalisasi

INTRODUCTION

Many industries exhibit significant sensitivity to interest rate changes, but the degree of exposure varies considerably (Ferrando et al., 2017; Moya-Martínez et al., 2015). In making investment decisions, investors consider interest rate risk. According González, Jareño and Skinner (2016) dan de la González, Jareño and Skinner (2017) some industries exhibit a positive

relationship with interest rate changes. Different economic sectors and industries exhibit varying degrees of sensitivity to interest rate changes. Although interest rates are not the only factor that affects stock returns, they have a significant influence (Sausan, Korawijayanti and Ciptaningtias, 2020; Wei, 2020; Eko, Umaryadi and Saragih, 2021; Kpoti-mayor and Musimwa, 2022; Casta, 2023) and complex, especially in the real estate industry; Putra and Wasiaturrahma, 2021; Hesniati *et al.*, 2022) as well as the banking industry (Hesniati et al., 2022; Isa et al., 2021; Järvinen, 2022; Putra & Wasiaturrahma, 2021; Tejokusumo et al., 2015).

The banking sector shows a significant negative impact from both changes and volatility in interest rates (Ballester et al., 2009, 2010; Lee et al., 2018). The size of banking firms also influences their degree of sensitivity (Ballester et al., 2009, 2010). The sensitivity of stock returns to interest rates can differ based on the size of the firms. Larger firms tend to have a different degree of sensitivity compared to smaller firms (Ghosh et al., 2018). This type of banking company is often considered more sensitive to changes in interest rates (Du, 2020; Segev et al., 2024) Because of their dependence on interest income, credit activities, asset risk, and monetary policy influence, compared to real estate companies that have different business characteristics and more diverse sources of income. Meanwhile, Kamila, Modal, and Suku (2022); Mahendra and Ainunnisa (2022) explained that real estate companies tend to be less sensitive because real estate companies usually have more stable business models and are less affected by fluctuations in macroeconomic conditions.

Changes in interest rates significantly impact stock returns. Stock returns are influenced by a combination of macroeconomic variables, including interest rates, exchange rates, and industry-specific factors. The results of research conducted by Huang and Yang (2004); Reilly, Wright and Johnson (2007); Ballester, Ferrer and González (2009, 2010) show a negative relationship between changes in interest rates and stock returns in various sectors and industries. Firms in more concentrated industries tend to earn higher returns. This positive correlation persists even after controlling for size, book-to-market ratios, and momentum (Min et al., 2007). Larger firms generally earn lower returns compared to smaller firms. This phenomenon is consistent with the findings that larger firms have lower average returns and that firm size potential (economies of scale) is negatively related to average returns (Taussig, 2021).

From the results of the literature review related to the effect of interest rates on stock returns, there is a research gap that deserves further discussion. There are two research results that conclude that the interest rate negatively affects stock returns (Muktadir, 2013; Assefa, Esqueda and Mollick, 2017; Demiralp, Eisenschmidt and Vlassopoulos, 2021; Kholifah and Retnani, 2021; Bats, Giuliodori and Houben, 2023; Eggertsson *et al.*, 2023) and the interest rate has a positive effect on stock returns (Hastuti et al., 2023; Maulani & Riani, 2021; Mourine & Septina, 2023; Saputra, 2022; Sukesti et al., 2021; Sulastri & Suselo, 2022). These inconsistent results have led to the suspicion that there are other variables that may affect interest rates on stock returns. This motivates researchers to explore the effect of interest rates on stock returns in the banking and real estate industries.

Market capitalization has a significant role in the investment world (Handayani et al., 2022; Niawaradila et al., 2021; Tahmat et al., 2021, 2022). An investor should understand the concept of market capitalization so that it can help assess whether a company has potential or not. Exploring interest rates as a predictor for investors in stock return analysis is important (Aliyana et al., 2021; Arianti & Handayani, 2022; Inggraini, 2021; Irawan & Fajri, 2021; Prayoga & Manda, 2021; Ramadhafani & Rivai, 2023) Because interest rates can have a significant impact on stock prices and general market performance. The prevailing interest rate has a positive influence on the level of stock market capitalization, while the interest rate on government development stocks has a negative influence (Ologunde et al., 2006). A more holistic exploration of the various factors that affect stock performance requires an accurate approach. This motivates researchers to explore

further by adding variables of industry type and market capitalization as moderation.

This study aims to analyze the effect of interest rates on stock returns in the banking and real estate industries. In exploring interest rates on stock returns, researchers use quantitative methods with associative approaches as commonly adopted by previous researchers, including; Jaya and Kuswanto, (2021); Jie and Pradana (2021); Meilasari (2021); Mulyani, Jamaludin and Huda (2021); Palapa, Kumaat and Sumual (2021); and Marlina, Anggraini and Rachman (2022); Suliyani and Benarda (2023). Quantitative methods provide objective results, allow generalization, and strengthen the validity and reliability of research instruments (Priadana and Sunarsi, 2021; Ali, 2022; Balaka, 2022; Marlina, Anggraini and Rachman, 2022; Syahrizal and Jailani, 2023). Although less in-depth, limited to the variables measured, and less flexible, quantitative data analysis is considered to be in accordance with the purpose of testing hypotheses that have been set. Each method has unique characteristics that need to be considered in research (Azhari et al., 2023; Waruwu, 2023).

LITERATURE REVIEW

Spillover volatility is often used as a short-term indicator where volatility in one market affects volatility in another. Spillover is an information relationship between markets, where new information that appears in one market can affect other markets. A good understanding of the origins and intensity of spillovers is essential for financial decision-making, such as optimal asset allocation, development of global hedging strategies for securities prices, and development of various regulatory requirements (Verma & Jackson, 2008). In this context, bank regulators need to understand the nature of spillovers to be able to properly assess capital adequacy and the impact of proposed policy changes. Spillover in this paper refers to the transmission of the impact of interest rates on bank portfolios, systemic risk, and market stability. Previous studies have revealed different relationships in the effect of interest rates on bank stock returns.

Some studies state that changes in interest rates have a significant influence on stochastic changes and stock returns of financial institutions. However, other studies have found strong support for the negative influence of interest rates on stock returns. The difference in the results of this study can be caused by different treatments of changes in interest rates. Some studies also state that the effect of changes in interest rates on bank stock returns varies over time. Previous studies investigated the periodization of relatively stable and volatile interest rates, and found that interest rate sensitivity can vary over time. Market risk and credit risk models have also been used to analyze interest rate and exchange rate sensitivity, as well as the variability of risk coefficients to bank stock returns.

The research states that the effect of changes in interest rates on bank stock returns can vary over time and is influenced by other factors such as exchange rates and market risk. Furthermore, several studies distinguish between long-term interest rates and short-term interest rates and find that long-term interest rates have a greater impact on bank stock returns than short-term interest rates. Therefore, it is important to consider these factors in understanding the effect of interest rates on the performance of bank stocks.

Market Efficiency Theory

Market efficiency theory is a theory proposed by Fama (1965) in 1965. This theory divides the market into three forms, namely weak, half-strong, and strong. Each form of market has different characteristics in terms of information absorption. EMH theory relates the absorption of existing information to the price of a stock. In weak markets, information absorption is very low, and stock prices are said to reflect only past information. In semi-strong markets, stock prices reflect only all public information. The most efficient form is a powerful market, which quickly absorbs market information.

In strong markets, stock prices already reflect all available information, both public and

private. In an efficient market, there is no abnormal return phenomenon. The study of speculation and irrational purchasing decisions is an old theory. The random walk theory discussed by Kolmogorov, Levy, and Samuelson is one of the earliest studies related to this theory. The random walk theory became the basis for studying anomalies and became the basis of the theory of the Efficient Market Hypothesis (Kiky, 2018).

Capital Structure Theory

Capital structure refers to the combination of types of securities and proportions that make up a company's capitalization. This includes a mix of various sources of long-term financing such as equity shares, preference shares, debentures, long-term loans, and retained earnings. Capital structure is long-term financing that is permanent for a company and involves mainly long-term debt and Capital structure refers to a combination of types of securities and proportions that make up a company's capitalization. This includes a mix of various sources of long-term financing such as equity shares, preference shares, debentures, long-term loans, and retained earnings. Capital structure is long-term financing that is permanent for the company and involves mainly long-term debt and equity (Sartono & Ratnawati, 2020).

Agency theory

Agency theory refers to a concept that explains the relationship between two parties in a business context, namely the owner of capital (principal) and the manager (agent). This theory describes the separation of roles between capital owners and managers, as well as the impact they cause. Here's the description:

1. Capital Owner (*principal*): Capital owner is an individual or group that owns shares or ownership in a company. They have the right and interest to ensure the company operates with efficiency and makes a profit.
2. Manager (agent): On the other hand, a manager is an individual or team that is responsible for the day-to-day management of the company. Their duties include making operational, financial, and strategic decisions to achieve company goals.

To achieve the company's goal of maximizing the company's value, it is inseparable from the conflict of how much the company can meet its funding needs (Sari, 2023). Struktur Agency theory explains the existence of separation and conflicts of interest between capital owners and managers. As an agent, managers must represent the interests of the owners of capital, but due to differences in interests and incentives between the two, conflicts often arise. Companies that are predicted to be included in the category of distress finance have the potential to commit financial statement fraud as a result of pressure or encouragement to beautify their financial statements. Management will be encouraged to commit financial statement fraud when they know that the company they manage is experiencing distress (Alfian, 2024). If agency conflicts can be minimized, agency costs will also decrease (Sudarma et al., 2023)

Agency Theory helps us understand how incentives, oversight, and transparency affect the relationship between capital owners and managers. the relationship between interest rates and stock returns is influenced by industry type and market capitalization, with different industries exhibiting varying levels of interest rate sensitivity. Additionally, the predictive power of interest rates on stock returns differs based on market capitalization, with time-varying effects on the interest rate sensitivity of stock returns. By understanding this concept, we can design systems that are more efficient and reduce agency conflicts in a business context.

Hypothesis Development

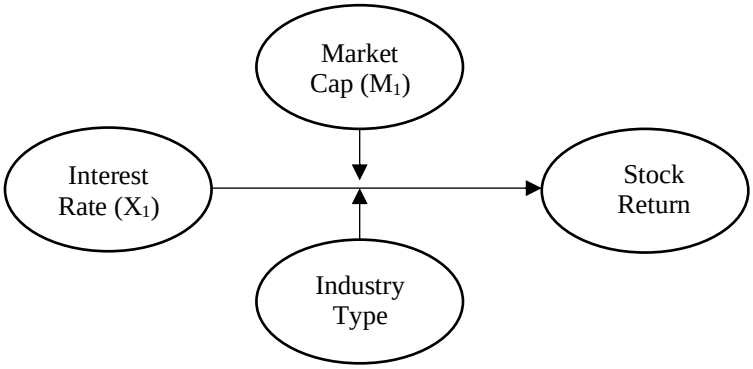

Figure 1. Research Model

The Effect of Interest Rate on Stock Return

Interest rates are an external factor that has a significant influence on stock prices. When interest rates rise, Investors tend to move their funds to banking institutions. Investors expect to benefit from higher interest as investors. As a result, the demand for stocks decreases, and the stock price falls. The interest rate sensitivity of bank stock returns is influenced by innovations in inflation, maturity risk, and default risk, with short-term interest rates containing valuable information regarding inflation premium and long-term interest rates containing valuable information regarding maturity premium (Srivastava & Hung, 2015). If many investors prefer to keep funds in banks rather than invest in stocks, then stock prices will decrease. The hypothesis of this study is as follows:

H1: There is an effect of interest rates on stock returns

The influence of industry type and market capitalization (size) on the relationship of interest rates to stock returns

The influence of industry type on the relationship between interest rates and stock returns is very important in investment analysis. Each industry has different characteristics that can affect how the companies within it react to changes in interest rates. For example, the banking industry may be more sensitive to interest rates, while the real estate and manufacturing industries may experience different impacts. In the banking industry, higher interest rates can increase interest margins which has the potential to increase stock returns. The short-term interest rate has predictive power over the relative performance of stock index returns, especially during periods when one of the index returns is negative (Thomakos et al., 2007). Meanwhile, higher interest rates in the real estate industry due to more expensive financing, which can reduce demand for property and suppress real estate company stock returns.

On research conducted by (Verma & Jackson, 2008) indicates an asymmetry of response to large corporate portfolios and suggests that large companies are more sensitive to negative short- and long-term interest rate changes than positive ones. Where shares of large companies have crucial performance compared to small companies such as significant transaction value and large profit losses. This hypothesis was developed with the assumption that rising interest rates could have an effect on stock returns. Muktadir (2013); Assefa, Esqueda and Mollick (2017); Wei (2020); Demiralp, Eisenschmidt and Vlassopoulos (2021); Kholifah and Retnani (2021); Bats, Giuliodori and Houben (2023); Eggertsson *et al.* (2023) found a significant relationship between

interest rate and stock return. However, the results of the study Maulani and Riani (2021); Sukesti *et al.*, (2021); Saputra (2022); Sulastri and Suselo (2022); Hastuti, Irawan and Hukom (2023); Mourine and Septina (2023) who deny the relationship.

H2: Banking industry reinforces negative influence of interest rates on stock returns

The relationship between movements in interest rates and industry equity returns is stronger at longer time horizons, indicating that investors with long-term horizons are more likely to follow macroeconomic fundamentals, such as interest rates, in their investment decisions (Moya-Martínez et al., 2015). The interest rate sensitivity of German corporations' stock returns is mostly positive, regardless of the industry considered, with returns of interest rate risk benchmarks of financial institutions exceeding those of non-financial corporations (Czaja et al., 2010). Companies that belong to small companies have less access to resources, including capital, technology, and labor (Pusposari & Dewi, 2024). Several studies confirm that interest rates negatively affect stock returns. For instance, research on the Indonesia Stock Exchange shows that interest rates have a negative effect on stock returns in the energy sector (Rheynaldi et al., 2023). Similarly, another study on digital-based mass media companies also found a significant negative impact of interest rates on stock returns (Wahyu Umaryadi et al., 2021)

This suggests a discrepancy in findings between the previous study and this study. Such differences can be caused by variations in the data used, different analysis methods, or other factors that affect the results of the study. Because the results of the study still have gaps, this study tries to observe based on the type of banking and real estate industry and based on large and small market capitalization. Thus, this study makes an important contribution in strengthening empirical evidence regarding the effect of interest rates on stock returns. These findings can provide valuable insights for investors and stakeholders in understanding how interest rates can affect stock performance in financial markets. However, it should be noted that this study has certain limitations and further research is needed to deepen understanding of this relationship and overcome differences in the results of previous studies.

H3: Large company size reinforces the negative influence of interest rates on stock returns

METHODS

This research uses quantitative methods that focus on collecting and analyzing data based on numbers and statistics. Its main purpose is to measure certain variables and identify relationships between them. The type of research used is an associative approach that focuses on analyzing cause-and-effect relationships and other variables that have the potential to affect these relationships. The associative approach aims to find out the relationship between two or more variables. In associative research, we can build theories that explain, predict, and control a symptom. In quantitative methods with an associative approach is used as a way to explore relationships between certain variables.

The type of data used is skunder data, namely interest rate, stock return, type of industry and market capitalization (size). The population in this study is banking companies listed on the Indonesia Stock Exchange and Bank Indonesia for the period January 1, 2016 to December 31, 2022. The sample selection method used is *purposive sampling.* The sample data amounted to 16,380 observations which were monthly data (*short term*). The sample of the banking industry consists of 100 types of banking companies, both small and large banking companies traded on the Stock Exchange companies. The real estate industry sample includes companies from small to large scale located in Indonesia sourced from the publication of the Indonesia Stock Exchange.

Rate of return

Stock return is one of the factors that can affect investor interest in investing. *Capital gain* or *Capital loss* is calculated using the following formula (Abdullah et al., 2016):

$$Rit = [(Pit - Pt\text{-}1) / Pt\text{-}1]$$

Description:
Rit=Annual realized return for the period t
Pit = Annual share price of period t
Pt-1 = Stock price of period t-1

Interest Rate

The interest rate is one of the factors that can affect the return of a stock. There is an inverse relationship between interest rates and stock returns. When interest rates rise, usually stock returns will tend to be lower. This is because investors tend to prefer to invest their funds in securities in the money market rather than investing in stocks. As a result, the demand for stocks decreases and can lead to a decrease in stock prices. The interest rate that is generally used as a reference is the Bank Indonesia Certificate (Defawanti & Paramita, 2018). According to (Nasir & Mirza, 2015) SBI can be calculated with the following formula :

$$SBI = \frac{SBIt - SBIt-1}{SBIt-1}$$

Information:
SBIt : SBI interest rate year t
SBIt-1 : SBI Interest Rate before year t

RESULT

This research uses data banking companies listed on the Indonesia Stock Exchange and Bank Indonesia from January 1, 2016 to December 31, 2022. The sample data amounted to 16,380 observations, which were monthly data (short-term), was used in the sample selection process. One hundred twenty-six respondents served as the sample used in the analysis. Hasil pengelahan data dengan menggunakan metode kuantitatif dan pendekatan asosiatif untuk mengeksplorasi hubungan antara variabel tertentu dalam penelitian ini adalah sebagai berikut:

Descriptive Statistics

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Ri	15698	5593.793	2878.133	152	9363
BIRate	16464	.049	.004	.043	.055
Dummy	16464	.026	.025	0	.06

Source : Data Processed (2024)

The variable rate of return (Ri) had 15,698 observations with an average of 5593.793 and a standard deviation of 2878.133. The minimum value is 152, and the maximum value is 9363. From these statistics, we can conclude that "Ri" likely represents a continuous variable, perhaps representing some form of numerical measurement. The variable interest rate (BIRate) has 16,464 observations, this variable has a mean of 0.049 and a standard deviation of 0.004. The minimum and maximum values are 0.043 and 0.055, respectively. This low variable has 15,698 observations with a mean of 5593.793 and a standard deviation of 2878.133. The minimum value is 152, and the

maximum value is 9363. From these statistics, we can conclude that the rate of return is likely to represent a continuous variable, perhaps representing some form of numerical measurement. Standard deviation showed relatively small variability in birth rates across observations.

The interaction of BIRate and industry type is a dummy variable. Symbol 1 for the banking industry and vice versa 0 for the real estate industry. The dummy variable also had 16,464 observations, with an average of 0.026 and a standard deviation of 0.025. It takes a binary value between 0 and 0.06.

Correlation analysis

Here is table 2 of the results of pearson correlation analysis

Table 2. Pairwise Correlations

Variables	Ri	BIRate
Ri	1.000	
BIRate	-0.004	1.000

*** *p<0.01*, ** *p<0.05*, * *p<0.1*

Source : Data Processed (2024)

The correlation between "Ri" and "BIRate" is -0.004, indicating a very weak negative correlation between the two variables. This correlation is statistically insignificant ($p > 0.1$), which means there is no evidence to suggest a meaningful linear relationship between these variables.

Regression Results

Here is table 3 of regression results. Model 1 tests hypotheses 1 and 2. Model 2 tests hypothesis 3

Table 3. Main Results of regression

	Model1	Model2
BIRate	14476.431**	0.678
	(2.63)	(0.74)
DInd	-34054.359***	
	(-38.30)	
Dsize		-0.254***
		(-32.06)
Intercept	5731.837***	0.584***
	(21.11)	(12.79)
N	15698	16380

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source : Data Processed (2024)

The value of N (16380) indicates a large dataset, which improves the reliability of the regression results. Regression analysis includes "BIRate" and "Dummy" as independent variables predicting "Ri" as the dependent variable. Both independent variables had a statistically significant effect on the "Ri". The interest rate has a coefficient of 14476.431 with a t-statistic of 2.63, indicating a significant positive relationship with the "Ri" at a significance level of 0.01. This suggests that a higher birth rate is associated with a higher rate of return value. Dummy" has a coefficient of -34054.359 with a very high t-statistic (-38.30), showing a very significant negative relationship with "Ri" at a significance level of 0.001. This suggests that the presence of a condition represented by the variable "Dummy" is associated with a much lower rate of return value. The term intercept is also statistically significant, indicating that even when both independent variables are zero, there is a significant expected value of "Ri."

According to model 2 the coefficient for BIRate is positive (0.678), indicating a direct

relationship with the dependent variable. However, the associated t-statistic (0.74) is low, suggesting that this relationship is not statistically significant. This can mean that although BIRate has a positive impact, it is not strong enough to be statistically reliable. The coefficient for Dsize is negative (-0.254), indicating an inverse relationship with the dependent variable. The high T-statistic (-32.06) and significance level (***, or $p < 0.001$) suggest that these are strong and statistically significant findings. This strong relationship may indicate that larger size is associated with lower performance in the context of the dependent variable. The intercept was 0.584 with a high t-statistic (12.79), indicating it was statistically significant at $p < 0.001$ level. This gives the base value for the regression equation when all other variables are zero.

A positive but insignificant coefficient for BIRate might indicate that while rate has a positive effect, it is not the primary determinant of outcome. This could imply that other factors are more influential, or that there is significant variability in how these levels affect outcomes. A negative and significant coefficient for Dsize may indicate that as the size increases, there is a corresponding decrease in the size of the yield. These findings may indicate problems such as scale diseconomy, inefficiencies, or management challenges as organizations grow larger.

Discussion

The results showed that there is a significant negative influence of interest rates on stock returns, especially in the banking industry compared to the real estate industry. This evidence was obtained from the analysis of model 1 which resulted in a dind regression coefficient (*dummy industry*) of -34.054. This coefficient indicates that there is a tendency for lower returns on banking industry stocks compared to the real estate industry when interest rates are higher. These results show that the banking industry is more sensitive to changes in interest rates when compared to the real estate industry. This difference can be explained by the different business characteristics and financial structures between the two industries. The banking industry in general is more dependent on interest income and has a higher borrowing load, so changes in interest rates can have a significant impact on stock returns. Meanwhile, the real estate industry may have other factors that also affect its stock returns, such as property demand and real estate market cycles. Although interest rates can also affect the real estate industry, the impact may not be as great as it is on the banking industry.

Based on the results of model 2 in this study, it was found that in companies with large sizes, there is a greater negative influence of interest rates on stock returns when compared to companies with smaller market capitalizations. These findings indicate that companies with large market capitalizations are more vulnerable to changes in interest rates and can experience a more significant impact on their stock returns. These results support the study Muktadir (2013); Assefa, Esqueda and Mollick (2017); Wei (2020); Demiralp, Eisenschmidt and Vlassopoulos (2021); Kholifah and Retnani (2021); Bats, Giuliodori and Houben (2023) and reject the results of the study Maulani and Riani (2021); Sukesti *et al.*, (2021); Saputra (2022); Sulastri and Suselo (2022); Hastuti, Irawan and Hukom (2023); Mourine and Septina (2023). These differences can be due to variations in the data used, different analysis methods, or other factors that affect the results of the study

CONCLUSION

Interest rates are a crucial predictor of stock returns, with their impact varying significantly across different industries and market capitalizations. Regulated and highly indebted industries, as well as large firms, show higher sensitivity to interest rate changes. Understanding these dynamics can help investors make more informed decisions and potentially identify safe haven industries during periods of interest rate volatility. This research succeeded in proving that an increase in interest rates resulted in an increase in stock returns on short-term observations. Conversely, in the

banking industry, this influence does not apply because an increase in interest rates actually results in a decrease in stock returns. The same thing happens to companies with high asset capitalization, an increase in interest rates results in a decrease in stock returns. The results of this study have implications for investor decision making that if interest rates rise, then as soon as possible sell stocks, especially the banking industry and companies with high capitalization. The limitation of this study is that this study did not conduct annual observations (long term) and there are limited costs in processing data. Advice for future researchers is to conduct a testing period by including monthly observations (short term) and annual observations (long term), and find sources of funding from sponsors.

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