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The Influence of Earnings Volatility and Market Risk on Stock Prices

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Abstract: Banks function as places for investors to invest their money, as well as places for consumers to save and obtain loans. The value of a bank can be seen from the circulating stock price. Because stock prices have the ability to represent the value of a bank. However, the stock prices of the Indonesian banking industry have declined in 2020–2022. The effect of the COVID-19 pandemic is the cause. In this case, it can be said that the company has failed to achieve its goal of optimizing shareholder welfare in order to provide high returns for investors. This study aims to examine the impact of market risk and income volatility on the stock prices of the banking industry in 2020-2022. The research method used is a quantitative method utilizing secondary data taken from financial statements and historical data published on the Indonesia Stock Exchange and Yahoo Finance. The sample size used consists of 34 banking sector companies listed on the Indonesia Stock Exchange from 2020 to 2022. For the hypothesis in this study, it was tested using a multiple linear regression model. And for the analysis results in the research that has been conducted, it is stated that income volatility has a significant negative impact on stock prices, and likewise, market risk has a significant negative impact on stock prices.

Keywords: Earnings Volatility, Market Risk, Stock Price.

INTRODUCTION

Banking, besides being a place for the public to save and receive loans, is also a place for investors to invest their wealth. In making those investments, investors will first ensure the value of a bank. As the value of a bank is assessed based on its financial performance. The better the bank's financial performance, the higher the investor interest in investment and the more profits the investors can enjoy. In addition, this can also increase the likelihood of the stock price rising. The stock price will reflect the value of a banking institution. If the banking sector can achieve good performance, then the bank's shares will be highly sought after by investors. Thus, in measuring the value of banking, investors can do so by analyzing the financial statements.

According to Sukamulja (2019), financial statement analysis is a series of analytical procedures as part of the overall business analysis, with the aim of using financial statement analysis as quantitative financial information as the basis for decision-making when wanting to invest in stocks or bonds, assessing the company's ability to add short-term or long-term credit, helping to evaluate the company during an initial public offering, and during the evaluation of company restructuring such as mergers, acquisitions, and divestitures.

Stocks have become one of the most widely used investment alternatives in the capital market by investors because the profits obtained are greater and the funds required by investors to make investments are not as large compared to bonds. Based on its objectives, the company invests in stocks to maximize shareholder welfare by maximizing the value of the company's shares, which can provide good returns to investors. Investment in the form of stocks actually carries high risks according to the investment principle of low risk low return, high risk high return. In this case, investors must have a good understanding of stock prices and frequently conduct stock price analysis beforehand to avoid mistakes in investing because the movement of a stock's price cannot be predicted with certainty Massau et al (2021). Stock prices are the prices of a piece of paper traded in the capital market, with prices that can change at any time influenced by supply and demand, as well as macro and microeconomic performance (Kasmir, 2008).

According to the Capital Market Law No. 8 of 1995, which states that "The Capital Market is an activity related to the public offering and trading of securities, public companies related to the securities they issue, as well as institutions and professions related to securities." The capital market serves as an alternative link for fund providers or investors with companies. The capital market becomes a means for companies to obtain funds. Meanwhile, for fund providers or investors, the capital market becomes a means to gain profits from financial instruments. The financial instruments traded are of a long-term nature. Stocks are the most chosen financial instruments because they offer attractive profit levels (Otoritas Jasa Keuangan, 2010)

Based on the June 2020 Monetary Policy Review on the Bank Indonesia website on June 19, 2020, it was stated that "The Bank Indonesia Board of Governors' Meeting (RDG) on June 17-18, 2020, decided to lower the BI 7-Day Reverse Repo Rate (BI7DRR) by 25 bps to 4.25%, the Deposit Facility rate by 25 bps to 3.50%, and the Lending Facility rate by 25 bps to 5.00%. This decision is consistent with efforts to maintain economic stability and encourage economic recovery in the COVID-19 era".

On the other hand, sourced from the CNBC Indonesia website Tri Putra (2020), it was reported that the banking sector plummeted on trading September 10 2020, following the decision of the Governor of DKI Jakarta, Anies Baswedan, to reimpose Total PSBB. The financial sector index fell by 5.74%, and the Infobank15 banking index fell even more sharply by 5.93%. This was due to many banks being corrected to the Auto Reject Lower (ARL) level.

Table 1
Banking Index

Emiten	Change (%)
BNGA	-6,93%
BMRI	-6,93%
BBNI	-6,87%
BBRI	-6,74%
BBTN	-6,74%
BBCA	-4,40%

Based on the table above, it is observed that 5 out of 6 major and liquid banking issuers listed on the IDX have plummeted close to the ARB level at 7%. Only one issuer has survived the ARB, namely the stock with the largest market capitalization on the IDX, PT Bank Central

Asia Tbk (BBCA), which, although it survived the ARB, still had to endure a severe correction of 4.40% to a price level of Rp 29,850/share.

As mentioned in the daily news above regarding the decline in banking sector stock prices in 2020 in Indonesia and the monetary policy review on the interest rate cuts, this has shown the impact of the COVID-19 pandemic. The aspect affected in the banking sector based on the daily news and monetary policy review above is the market value of banking, which experienced differences before and during the COVID-19 pandemic. Nevertheless, the banking sector is one of the sectors with high potential for investment because it has been recognized by capital market analysts for its stability and security (Putri, 2022).

Based on the explanation above, it can be concluded that in making investments, an analysis of financial statements is necessary. In this study, the researcher conducted an analysis of earnings volatility, which will show the fluctuations in banking profits over a certain period to provide signals to investors Josua Sirait et al (2021). And market risk that will indicate the risk of macroeconomic factors referring to unexpected investment changes caused by interest rate changes, inflation rates, and price changes (Gregurek & Čižmešija, 2020).

According to Badruzaman (2020), earnings volatility is a statistical concept that determines the associated risk and helps predict the market price of certain financial stock terms. Based on the research conducted by Wilano (2021) reveals that partially the earnings volatility variable obtained a value of -1.97490 and a significant value of 0.001 < 0.050, thus earnings volatility has a significant negative impact on stock prices.

According to Gitman (2003) Market Risk is a type of risk faced by investors due to market price fluctuations that can affect the value of their investments. Market risk is also the magnitude of the deviation between the expected return and the actual return Zuliyana & Arista (2021). Based on the research conducted by Astiti (2022) which states that partially has a negative and significant effect on stock prices. This is indicated by the coefficient value of the banking market risk variable being negative -0.115 with a significant value of 0.044 < 0.050.

The theory that serves as the foundation for this research is the signaling theory. According to Patriadji in the study Safrani & Kusumawati (2022), signaling theory explains what companies should do in providing signals to financial statement users. In this case, it serves as a guideline that can be used by investors in assessing the prospects of a company.

METHOD

As stated by Sugiyono (2019) which states that this method is a scientific method that has met scientific principles, namely concrete/empirical, objective, measurable, rational, and systematic. This method is called the quantitative method because the research data consists of numbers and the analysis uses statistics. The quantitative method is used to study a specific population or sample. Research instruments are adjusted when collecting data, and the data is analyzed quantitatively or statistically to test the hypotheses that have been formulated. This research uses a quantitative method and utilizes secondary data from financial statements and historical data published by the Indonesia Stock Exchange and Yahoo Finance. In this study, the objects used are Earnings Volatility and Market Risk as independent variables and Stock Price as the dependent variable. Then, the subjects of the research are companies included in the banking sector on the Indonesia Stock Exchange from 2020 to 2022. The population in this study consists of 47 banking sector companies, and the sample obtained through purposive sampling and non-probability sampling techniques includes 34 banking sector companies. Here is the operational explanation and indicators for each variable used:

Table 2
Indicator

Variable	Measurement Indicator
Earnings Volatility (X1)	EV = Operating Profit / Total Asset (Susanto et al., 2021)
Market Risk (X2)	Capital Asset Pricing Model Ri = Rf + Bi (Rm – Rf) (Gregurek & Čižmešija, 2020)
Harga Saham (Y)	Price Earnings Ratio PER = Price Per Share / Earning Per Share (Fahmi, 2016)

RESULT AND DISCUSSION

Based on the results of purposive sampling from the population of the banking sector on the Indonesia Stock Exchange for the years 2020-2022, the number of data samples from 2020-2022 is 102 data. Here are the results of the tests that have been conducted:

1. Descriptive statistics of variables

Table 3
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Earnings Volatility	102	-0,1572	0,1959	0,010378	0,03587225
Market Risk	102	-0,2120	0,0656	-0,021290	0,0547587
Harga Saham	102	-230,5600	3234,7800	156,5987	507,30784

Based on the test on table 3, earnings volatility shows a data distribution with a minimum of -0.1572, a maximum of 0.1959, an average value of 0.010378, and a standard deviation of 0.03587225. It can be concluded that earnings volatility in the banking sector listed on the Indonesia Stock Exchange from 2020-2022 is relatively smaller when looking at the average value compared to the minimum value. However, when viewed from the standard deviation and average value, the earnings volatility in the banking sector listed on the Indonesia Stock Exchange from 2020-2022 is relatively high. Then, for market risk, the data distribution shows a minimum of -0.2120, a maximum of 0.0656, an average of -0.021290, and a standard deviation of 0.0547587. This means that market risk in the banking sector listed on the Indonesia Stock Exchange from 2020-2022 is relatively smaller when looking at the average and minimum values. However, market risk in the banking sector listed on the Indonesia Stock Exchange from 2020-2022 is relatively high when looking at the standard deviation and average value obtained. Meanwhile, the stock prices show a data distribution with a minimum value of -230.5600, a maximum of 3234.7800, an average value of 156.5987, and a standard deviation of 507.30784. It can be concluded that the stock prices in the banking sector for the years 2020-2022 are relatively low when considering the minimum, average, and standard deviation values.

2. Classical assumption test

Table 4
Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		102
Normal Parameters[a,b]	Mean	0,0000000
	Std. Deviation	9,83808106
Most Extreme Differences	Absolute	0,070
	Positive	0,030
	Negative	-0,070
Test Statistic		0,070
Asymp. Sig. (2-tailed)		0,200[c,d]

In the examination, the researcher used the Kolmogorov-Smirnov normal method with the condition that the distributed significant values obtained were greater than 0.05.

Table 5
Multicollinearity test

Model		Collinearity Statistics	
		Tolerance	VIF
1	Earning Volatility	0,997	1,003
	Market Risk	0,997	1,003

To conduct a multicollinearity test, the Tolerance and Variance Inflation Factors (VIF) approach is used. The condition for no correlation is if the VIF value <10 and Tolerance >0.1.

Table 6
Heteroscedasticity Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,545	0,280		12,679	0,000
	Earning Volatility	-21,858	18,386	-0,120	-1,189	0,237
	Market Risk	-4,968	4,928	-0,101	-1,008	0,316

In this test, the testing method is used with the condition of being free from heteroskedasticity if the obtained significance value is greater than 0.05.

Table 7
Autocorrelation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,385[a]	0,148	0,117	88,62669	1,680

This autocorrelation test uses the Durbin Watson test method. If the obtained value falls between the DL and DU values, it is considered free from autocorrelation. The DL value for N102 is 1.6376 and the DU value for N102 is 1.7175.

3. **Multiple linear regression test**

Table 8
Multiple Linear Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	76,827	28,339		2,711	0,009
	Earning Volatility	-4023,030	1853,724	-0,273	-2,170	0,034
	Market Risk	-746,442	364,133	-0,258	-2,050	0,045

The constant of 76.827 indicates that when earnings volatility and market risk are valued at 0 (zero), the stock price will be 76.827. The regression coefficient for the earnings volatility variable of -4023.030 indicates that when earnings volatility decreases, the stock price will increase. Meanwhile, the regression coefficient for the market risk variable of -746.442 indicates that when market risk decreases, the stock price will increase.

4. Simultaneous test

Table 9
Simultaneous Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	73905,771	2	36952,885	4,705	0,013[b]
	Residual	424153,234	54	7854,690		
	Total	498059,005	56			

With the significance level α = 0.05, the null hypothesis Ho is accepted and the alternative hypothesis Ha is rejected if the probability value is sig>α. Conversely, Ho is rejected and Ha is accepted if the probability value is sig<α. It can be concluded that the obtained probability value of 0.013 is less than the α value of 0.05. Therefore, Ho is rejected and Ha is accepted, which means that earnings volatility and market risk together have an influence on stock prices.

5. Partial test

Table 10
Partial Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	76,827	28,339		2,711	0,009
	Earning Volatility	-4023,030	1853,724	-0,273	-2,170	0,034
	Market Risk	-746,442	364,133	-0,258	-2,050	0,045

With the significance level α = 0.05, the null hypothesis Ho is accepted and the alternative hypothesis Ha is rejected if the probability value sig > α. Conversely, Ho is rejected and Ha is accepted if the probability value sig < α. It can be concluded that the probability value of the earnings volatility variable, 0.034, is less than the α value of 0.05. Therefore, Ho is rejected and Ha is accepted, meaning that earnings volatility partially affects stock prices. Meanwhile, for the probability value of the Market Risk variable, 0.045, which is less than the α value of 0.05, Ho is rejected and Ha is accepted, indicating that Market Risk partially affects stock prices.

6. **Coefficient of determination test**

Table 11
Coefficient Of Determination Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,385[a]	0,148	0,117	88,62669

Based on the test results, it can be concluded that the adjusted R square value is 0.117, indicating that earnings volatility and market risk affect the variance in stock price changes by

11.7%. Meanwhile, the remaining 88.3% is influenced by other variables not included in this study.

The results of the analysis of the impact of earnings volatility on stock prices indicate that earnings volatility has a significant negative impact, with a regression coefficient of -4023.030 and a probability value of 0.034, which shows that the probability value is lower than the significant value $\alpha = 0.05$. Thus, it can be concluded that the hypothesis is accepted, namely that earnings volatility partially has a significant negative impact on the stock prices of the banking sector on the Indonesia Stock Exchange in the years 2020–2022. The analysis results show a significant negative impact. It can be concluded that if a bank's earnings volatility is high, its stock price will decrease, and conversely, when a bank's earnings volatility decreases, its stock price will increase. The results of this study are consistent with the findings of previous research by Wilano (2021), Cahyawati & Miftah (2022), and Artati & Laeli Wahyuni (2023). As happened in Indonesia in 2020–2022, when the COVID-19 pandemic struck, the government implemented policies to lower interest rates and enforced large-scale social restrictions. This caused the income of companies in the banking sector to be unstable. If there is income instability, earnings volatility will increase. In other words, when there is high income instability, the stock prices of a banking sector will decline, prompting investors to choose companies with income stability so that the dividends they receive are also stable. As a concrete example, Bank Mandiri Tbk in 2021 recorded an earnings volatility value of 0.0223, while in 2022 it recorded an earnings volatility value of 0.0282. Meanwhile, the stock price of Bank Mandiri Tbk in 2021 was 23.3800, while in 2022 it was 22.4900. As seen in the real example, from 2021 to 2022, the earnings volatility of Bank Mandiri Tbk increased, while the stock price of Bank Mandiri Tbk decreased from 2021 to 2022. This occurred because Bank Mandiri Tbk experienced income instability from 2021 to 2022. As that concrete example has demonstrated, earnings volatility has a significantly negative impact on stock prices.

The results of the analysis of the impact of market risk on stock prices indicate that market risk has a significant negative impact, with a regression coefficient of -746.442 and a probability value of 0.045, which shows that the probability value is lower than the significant value $\alpha = 0.05$. Thus, it can be concluded that the hypothesis is accepted, namely that market risk will have a partial negative impact on the stock prices of the banking sector on the Indonesia Stock Exchange in 2020 and 2022. The analysis results show a significant negative impact, which means that when the market risk value of a bank is high, its stock price will decrease, and when the market risk of a bank decreases, its stock price will increase. The results of this study are consistent with the findings of previous research by Astiti (2022) and Palisungan (2021). As happened in Indonesia in 2020–2022, when the COVID-19 pandemic struck, the government implemented interest rate reduction policies and enforced a full PSBB (Large-Scale Social Restrictions). The market risk of a company in the banking sector increases as a result of the decrease in interest rates. This is due to the fact that the value of CAPM is influenced by interest rates, which means that when the value of CAPM increases, market risk will increase, and when market risk increases, the stock prices of companies in the banking sector will decrease, making investors prefer companies that have stability in facing market risk so that the dividends they receive are also stable. For example, Bank Central Asia Tbk in 2020 had a market risk value of 0.0086, while in 2021 it had a market risk value of 0.0107. Meanwhile, the stock price of Bank Central Asia Tbk in 2020 was 153.4300, while in 2021 it was 28.6300. As seen in this real example, from 2020 to 2021, the market risk value of Bank Central Asia Tbk increased, while the stock price of Bank Central Asia Tbk decreased from 2020 to 2021. This happened because Bank Central Asia Tbk experienced market risk instability from 2020 to 2021. As this real example has proven, market risk has a significantly negative impact on stock prices.

CONCLUSION

This study proves that earnings volatility and market risk on the stock prices of the banking sector listed on the Indonesia Stock Exchange have a significant negative impact both partially and simultaneously. The higher the earnings volatility and market risk, the more detrimental the effect or the decline in stock prices. As the results of the coefficient of determination test show, this study has limitations on variables outside of this research. Therefore, it is suggested that future researchers do not focus solely on the variables present in this study, but also add other variables such as financial ratios that can provide insights into financial performance, financial risk, and in measuring the level of funding.

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