



Risk And Return Characteristics Of Indonesian Banking Stocks During The COVID-19 And Post-Pandemic Period: A Descriptive Quantitative Analysis

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Abstract: This study examines the risk and return characteristics of selected banking stocks listed on the Indonesia Stock Exchange during the period 2020–2025, covering the COVID-19 crisis, recovery phase, and post-pandemic adjustment period. A descriptive quantitative approach was employed using secondary data obtained from Investing.com. The sample consists of ten banking stocks, namely BBCA, BBRI, BMRI, BBNI, BRIS, BBTN, BNGA, BNLI, NISP, and MEGA. Descriptive statistics were selected because the study aims to provide an empirical mapping of stock return characteristics without testing causal relationships. The analysis includes mean return, minimum return, maximum return, and standard deviation. The findings indicate that all sampled banking stocks generated positive average monthly returns, although substantial differences exist in risk and volatility profiles. BRIS recorded the highest average return and volatility, while BNLI exhibited the highest maximum return. NISP and BBCA showed relatively stable performance with lower volatility. These results suggest that Indonesian banking stocks possess heterogeneous risk-return characteristics despite operating within the same sector. The study provides practical implications for investors in constructing banking stock portfolios based on risk preferences and return expectations. However, the findings are limited to descriptive analysis and do not investigate the determinants of stock returns. Future studies may incorporate risk-adjusted performance measures and causal modeling approaches.

Keywords: Banking Stocks, Descriptive Statistics, Indonesia Stock Exchange, Stock Return, Volatility

INTRODUCTION

The banking sector plays a strategic role in the economy because it performs the function of financial intermediation by collecting funds from the public and channeling them back into the economy through loans or financing. In the capital market, banking stocks are among the most closely observed stock groups because bank performance is closely related to financial system stability, asset quality, liquidity, profitability, and capital adequacy. The Financial Services Authority of Indonesia reported that the Indonesian banking sector continued to show resilience through relatively maintained liquidity, profitability, and capital indicators in the post-pandemic period (Otoritas Jasa Keuangan, 2025).



Banking stocks have different characteristics from stocks in other sectors because the value of banks is strongly influenced by market perceptions of credit risk, asset quality, funding stability, and capital adequacy. Demirgüç-Kunt et al. (2021) show that bank stock performance during the COVID-19 crisis was affected by crisis pressure and financial sector policies. This finding indicates that bank stocks are sensitive to changes in financial system conditions and policy responses. Therefore, bank stock returns can be understood as market indicators reflecting changes in investor expectations regarding bank risks and prospects.

The period 2020–2025 is relevant for examining Indonesian banking stock returns because it covers the COVID-19 shock, economic recovery, and post-pandemic adjustment phases. In the early phase of the pandemic, the banking sector faced pressure from slowing economic activity, increasing credit risk, credit restructuring, and uncertainty regarding borrowers' ability to meet their obligations. Elnahass et al. (2021) find that the COVID-19 pandemic negatively affected global banking performance and stability. This finding indicates that the banking sector is one of the sectors that needs to be examined carefully during crisis and recovery periods.

The impact of the pandemic on the banking sector was not uniform across countries or banks. Shabir et al. (2023) show that the COVID-19 pandemic reduced bank performance and stability across countries, but the magnitude of the impact differed depending on bank characteristics, market structure, regulation, and the level of financial system development. This suggests that banking stock analysis should be conducted specifically at the firm level. Therefore, banking stock returns should not only be observed at the sectoral level but also compared across individual banks.

In addition to differences across banks in general, bank business model characteristics may influence market responses to bank stocks. Mirzaei et al. (2024) show that the stock performance of Islamic banks and conventional banks may differ during the COVID-19 crisis, and bank efficiency can help explain performance differences. This finding is relevant to the Indonesian context because the research sample includes both conventional banks and an Islamic bank, namely BRIS. Therefore, descriptive analysis across banks is needed to identify whether return characteristics differ among banking stocks with different business profiles.

In the Indonesian context, banking stability became an important concern during the COVID-19 pandemic. Maria et al. (2022) find that COVID-19 negatively affected bank stability in Indonesia, both among large and small banks and among state-owned and private banks. This



finding shows that pandemic pressure was not only a global issue but also relevant to the Indonesian banking system. Therefore, analyzing Indonesian banking stock returns during 2020–2025 is important to provide an overview of how bank stocks moved during crisis and post-crisis periods.

The COVID-19 crisis also affected bank lending functions. Çolak & Öztekin (2021) find that bank lending growth weakened in countries that were more severely affected by the health crisis. This finding shows that the pandemic affected not only stock markets but also the intermediation function of banks. In the context of banking stocks, changes in lending activities may influence investor perceptions of bank prospects, although this study does not test the causal relationship between lending and stock returns.

Beck & Keil (2022) show that banks more exposed to lockdown policies experienced increases in loss provisions and non-performing loans. This finding is important because credit quality and loan loss provisions are indicators that may influence investor perceptions of bank risk. In the capital market, rising credit risk may strengthen investor concerns about bank stock performance. Therefore, banking stock returns during 2020–2025 need to be understood in the context of credit risk and economic pressure caused by the pandemic.

Li et al. (2020) explain that in the early phase of COVID-19, banks faced a substantial increase in liquidity demand as firms drew down existing credit lines. This finding shows that banks served as lenders of first resort during the crisis. In the context of this study, this role is important because it demonstrates that banks were not only affected by the crisis but also played a central role in absorbing liquidity pressure in the real sector. This strengthens the rationale for analyzing bank stocks during the crisis and recovery period.

Bank stocks may also be influenced by investor sentiment during the pandemic. Albaity et al. (2022) find that bank stock returns in MENA countries were affected by COVID-19 dynamics and investor sentiment, although the effect varied depending on the indicators used. This finding shows that bank stocks are influenced not only by fundamentals but also by market perception and sentiment. Therefore, the analysis of bank stock returns should consider that stock price fluctuations may reflect investor responses to crisis-related information.

In Indonesia, banking stocks have also been shown to respond to pandemic-related information and regulatory policies. Wicaksono & Adyaksana (2020) find differences in abnormal



returns and trading volume before and after the announcement of COVID-19 as a global pandemic in the Indonesian banking sector. This finding indicates that Indonesian bank stocks are sensitive to crisis-related information. Therefore, banking stocks are relevant objects of analysis during crisis and post-crisis periods.

Other Indonesian studies also show that COVID-19 is related to banking stock return dynamics. Agustin & Agustino (2022) examine the response of the banking sector to the COVID-19 pandemic on the Indonesia Stock Exchange using indicators such as case growth, deaths, recoveries, and social restriction policies. Their findings indicate that banking sector stocks were related to pandemic conditions and policy responses. However, the study focuses more on testing responses to the pandemic rather than descriptively mapping return characteristics across banks.

Banking performance can also be analyzed through bank soundness indicators before and during the pandemic. Ratri et al. (2022) compare Indonesian banking performance before and during the COVID-19 pandemic using the CAMEL approach, which includes CAR, NPL, NPM, ROA, and LDR. Their study shows that the pandemic affected several bank performance indicators, although not all indicators showed significant differences. This finding supports the importance of further analysis of banking stocks because changes in bank financial performance may attract investor attention in the capital market.

Recent research on Indonesian banking stocks has also begun to compare bank stock performance before, during, and after the pandemic. Tompo et al. (2025) analyze banking stock performance on the Indonesia Stock Exchange before, during, and after COVID-19 using the Infobank15 index. Their study shows that the pandemic period was an important phase in changes in bank stock performance, although return differences across periods were not always significant. However, further research is still needed to specifically present descriptive statistics of banking stock returns based on mean, minimum, maximum, and standard deviation during 2020–2025.

In addition to studies based on period comparisons, several studies have used forecasting approaches to examine Indonesian banking stock prices. Ulyah et al. (2024) examine the Jakarta Composite Index and banking industry stock prices in Indonesia by considering the effect of COVID-19 using a multivariate regression model with time series errors. Their study shows that banking stock data can be analyzed using various quantitative approaches. However, descriptive



analysis remains necessary as an initial basis for understanding return characteristics before more complex causal or predictive analyses are conducted.

Research on Indonesian banking stock performance can also use investment evaluation approaches. Laksana et al. (2025) assess Indonesian banking stock performance using a multi-index approach involving Sharpe, Treynor, and Jensen measures. Their findings show that bank stock performance assessments may differ depending on the risk-return indicator used. This strengthens the importance of descriptive mapping of banking stock returns because simple indicators such as mean and standard deviation can provide an initial overview before more complex portfolio analysis is conducted.

Changes in stock returns and volatility during crisis periods have become important issues in capital market research. Ridhwan et al. (2024), through a meta-analytic approach, show that COVID-19 disrupted stock market returns and volatility across different research contexts. This finding strengthens the view that crisis periods can change stock return characteristics and increase market uncertainty. In the context of banking stocks, this condition is particularly important because banks have a systemic role in the economy.

Government policy responses may also affect bank performance during the pandemic. Yudaruddin (2023b) shows that government policy responses to COVID-19 were related to the performance of Islamic and conventional banks in Indonesia. This finding indicates that banks with different business models may respond differently to policies and crisis conditions. In this study, the inclusion of BRIS as an Islamic bank in the sample provides an additional context for understanding that banking stocks are not homogeneous.

Bank strategic transformation also became relevant during the pandemic and post-pandemic periods. Yudaruddin (2023a) finds that digital strategies and bank alliances were related to bank lending activities during the COVID-19 pandemic. This finding suggests that banks' ability to adapt digitally may become an important factor in assessing bank performance. Although this study does not directly examine digital strategy, the diversity of returns across banks can be interpreted as part of differences in bank characteristics, strategies, and market perceptions of each bank.

Based on the monthly stock return data used in this study, ten banking stocks are analyzed, namely BBKA, BBRI, BMRI, BBNI, BRIS, BBTN, BNGA, BNLI, NISP, and MEGA. The



research period covers 2020–2025 with 72 monthly observations for each stock. This period allows the study to describe banking stock return characteristics over a relatively long phase, from the pandemic period to recovery and post-pandemic adjustment. This study is relevant because Indonesian banking stocks may show different return and risk characteristics even though they belong to the same sector.

The novelty of this study lies in its descriptive analysis of Indonesian banking stock returns during 2020–2025. Unlike previous studies that mostly examined the effects of COVID-19, regulatory policies, or forecasting models on banking stocks, this study focuses on mapping return characteristics across banks. This study uses mean return, minimum return, maximum return, and standard deviation to compare the return and risk profiles of ten banking stocks. Therefore, this study is expected to provide practical contributions for investors and academic contributions to the Indonesian capital market literature, particularly in understanding banking stock return characteristics descriptively.

METHOD

This study uses a descriptive quantitative approach. The quantitative approach is used because the research data are numerical, namely monthly stock returns. The descriptive approach is used because this study aims to describe and compare the return characteristics of banking stocks without testing causal relationships among variables. Therefore, this study does not use regression, event study, ARCH/GARCH, or other causal models.

The population of this study consists of banking sector companies listed on the Indonesia Stock Exchange. The research sample was selected using purposive sampling, which is a sampling technique based on specific criteria relevant to the research objectives. The sample selection criteria are as follows: (1) the company is a banking sector issuer listed on the Indonesia Stock Exchange; (2) the company has monthly stock return data during the period 2020–2025; (3) the company was not delisted during the research period; and (4) the stock return data can be analyzed using descriptive statistics. Based on these criteria, the research sample consists of ten banking stocks, as presented in Table 1.

No.	Stock Code	Company Name
1	BBCA	Bank Central Asia Tbk.



No.	Stock Code	Company Name
2	BBRI	Bank Rakyat Indonesia (Persero) Tbk.
3	BMRI	Bank Mandiri (Persero) Tbk.
4	BBNI	Bank Negara Indonesia (Persero) Tbk.
5	BRIS	Bank Syariah Indonesia Tbk.
6	BBTN	Bank Tabungan Negara (Persero) Tbk.
7	BNGA	Bank CIMB Niaga Tbk.
8	BNLI	Bank Permata Tbk.
9	NISP	Bank OCBC NISP Tbk.
10	MEGA	Bank Mega Tbk.

Table 1. Research Sample

The type of data used in this study is secondary data in the form of monthly stock returns. The data were calculated from monthly closing stock prices obtained from Investing.com for the period 2020–2025. The dataset contains 72 monthly observations for each stock. The stock return data were then processed by the researcher to obtain monthly return values for BBKA, BBRI, BMRI, BBNI, BRIS, BBTN, BNGA, BNLI, NISP, and MEGA.

The main variable in this study is stock return. Stock return indicates the gain or loss obtained by investors from changes in stock prices over a certain period. Stock return is calculated using the capital gain/loss formula as follows:

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}}$$

Where:

R_{it} = stock return of company (i) in month (t)

P_{it} = closing stock price of company (i) in month (t)

P_{it-1} = closing stock price of company (i) in the previous month

A positive return indicates that the stock price increased compared with the previous month, while a negative return indicates that the stock price decreased compared with the previous month.

The data collection technique used in this study is documentation. Monthly stock return data were arranged based on stock code and observation period. The data were then analyzed using descriptive statistics. The statistical indicators used include mean return, minimum return, maximum return, and standard deviation. Mean return is used to determine the average monthly return of each stock. Minimum return is used to identify the deepest monthly decline. Maximum return is used to identify the highest monthly increase. Standard deviation is used to measure stock



return volatility. The higher the standard deviation, the greater the fluctuation of stock returns around the mean.

RESULT AND DISCUSSION

Descriptive Statistics of Banking Stock Returns

The descriptive statistics of monthly stock returns for ten banking stocks during the period 2020–2025 are presented in Table 2. These descriptive statistics provide an overview of the average return, lowest return, highest return, and volatility of each stock.

Stock Code	Observations	Mean Return	Minimum Return	Maximum Return	Standard Deviation	Interpretation
BBCA	72	0.41%	-13.63%	11.80%	5.41%	Average return positive with relatively low volatility
BBRI	72	0.18%	-27.92%	21.73%	8.90%	Average return positive but exposed to moderate fluctuation
BMRI	72	0.80%	-35.67%	17.17%	8.69%	Average return positive with moderate downside risk
BBNI	72	0.74%	-45.62%	30.23%	10.44%	Average return positive with relatively deep monthly decline
BRIS	72	4.38%	-29.03%	78.70%	20.46%	Highest average return and highest volatility
BBTN	72	0.23%	-50.59%	63.81%	14.21%	Average return positive with deepest monthly decline
BNGA	72	1.13%	-18.00%	19.88%	7.35%	Average return positive with moderate volatility
BNLI	72	3.44%	-22.19%	87.70%	18.50%	High average return with the highest maximum return
NISP	72	0.81%	-7.50%	22.89%	5.33%	Relatively stable return with the lowest downside risk
MEGA	72	0.02%	-19.23%	25.00%	6.64%	Lowest average return with relatively moderate volatility

Table 2. Descriptive Statistics of Monthly Banking Stock Returns, 2020–2025

Source: Processed monthly stock return data, 2020–2025.

The results in Table 2 show that all banking stocks in the sample recorded positive average



monthly returns during 2020–2025. However, the magnitude of returns and volatility differed clearly across banks. This indicates that Indonesian banking stocks do not have uniform return characteristics, even though they belong to the same sector.

Based on mean return, BRIS recorded the highest average monthly return at 4.38%. The next highest stocks were BNLI with 3.44% and BNGA with 1.13%. These results indicate that BRIS, BNLI, and BNGA had higher average monthly return performance than other banking stocks in the sample. BRIS became the stock with the strongest average performance during the observation period. However, a high mean return should be interpreted together with standard deviation because a high average return may be accompanied by high volatility.

Meanwhile, MEGA recorded the lowest mean return at 0.02%, followed by BBRI at 0.18% and BBTN at 0.23%. Although these three stocks still recorded positive average returns, their values were relatively small compared with other stocks in the sample. This indicates that banking stocks do not always provide the same return performance. Differences in returns may reflect differences in bank characteristics, such as business scale, credit segment, customer base, stock liquidity, ownership structure, investor perception, and market expectations regarding bank performance prospects.

Based on minimum return, BBTN recorded the deepest monthly decline at -50.59%. Large declines were also observed in BBNI at -45.62% and BMRI at -35.67%. A highly negative minimum return indicates that these stocks experienced sharp monthly price pressure during 2020–2025. Since the research period includes the early phase of the COVID-19 pandemic, this result can be understood as part of market pressure on banking stocks when economic uncertainty increased. However, because this study is descriptive, the result cannot be interpreted as evidence that COVID-19 directly caused the decline in the returns of specific stocks.

Sharp return declines in several bank stocks show the importance of considering downside risk in investment analysis. Investors should not only pay attention to average return but also consider how deep the decline experienced by a stock was during a certain period. A stock with a positive average return can still have substantial downside risk if its minimum return is very low. In this context, BBTN and BBNI show relatively greater downside risk than other stocks in the sample.

Based on maximum return, BNLI recorded the highest monthly return at 87.70%, followed



by BRIS at 78.70% and BBTN at 63.81%. A high maximum return indicates that several bank stocks had large monthly upside potential. However, a high maximum return does not necessarily indicate stable stock performance. A stock may record a high monthly increase due to extreme price movement, changes in market sentiment, corporate actions, or increased investor demand in a certain period. Therefore, maximum return must be analyzed together with standard deviation.

BNLI became the stock with the highest maximum return and also had a high standard deviation. This indicates that the upside potential of BNLI was accompanied by substantial return fluctuation. BRIS showed a similar pattern, as it had the highest mean return, high maximum return, and the highest standard deviation. Thus, stocks with large upside potential may also have high fluctuation risk.

Based on standard deviation, BRIS recorded the highest volatility at 20.46%, followed by BNLI at 18.50% and BBTN at 14.21%. A high standard deviation indicates that stock returns are widely dispersed from their average value. Therefore, BRIS, BNLI, and BBTN can be categorized as banking stocks with relatively high return volatility in the research sample. Although BRIS and BNLI recorded high average returns, both also showed high fluctuation levels. This indicates that high return potential in certain stocks may be accompanied by high volatility risk.

In contrast, NISP had the lowest standard deviation at 5.33%, followed by BBCA at 5.41% and MEGA at 6.64%. NISP also had the least negative minimum return at -7.50%. This indicates that NISP had relatively more stable return characteristics than other banking stocks in the sample. BBCA also showed low volatility with a standard deviation of 5.41%, making it one of the stocks with relatively more controlled return fluctuations. However, return stability does not always mean the highest average return. BBCA had low volatility, but its mean return was 0.41%, lower than BRIS, BNLI, and BNGA.

When compared based on the combination of return and risk, several important patterns appear. First, BRIS had the highest average return but also the highest volatility. Second, BNLI had a high average return and the highest maximum return but also had a high standard deviation. Third, NISP and BBCA showed low volatility, so they can be viewed as stocks with more stable return movements during the observation period. Fourth, BBTN recorded the deepest monthly decline and relatively high volatility, indicating downside risk that investors need to consider.

The findings show that banking stocks should not be treated as a homogeneous group.



Although all sample companies belong to the banking sector, each stock has different return characteristics. These differences may be related to business models, asset size, credit composition, funding base, stock liquidity, ownership structure, and market perceptions of each bank's risks and prospects. However, because this study does not use a causal model, these factors are used only as interpretive context and cannot be stated as direct causes of changes in stock returns.

The findings of this study are relevant to Demirgüç-Kunt et al. (2021), who show that bank stocks can react to crises and financial sector policies. The findings are also consistent with Elnahass et al. (2021), who emphasize that the pandemic affected bank performance and stability globally. Shabir et al. (2023) show that the impact of COVID-19 on banking may differ across countries and banks. Mirzaei et al. (2024) show that bank business models may be related to differences in stock performance during crises. In the Indonesian context, Agustin & Agustino (2022) show that banking stocks responded to pandemic conditions. Tompo et al. (2025) also show that Indonesian banking stock performance differed before, during, and after the pandemic.

Practically, the results provide an initial overview for investors regarding the risk and return profiles of Indonesian banking stocks. Investors seeking high return potential may pay attention to stocks with high mean returns such as BRIS and BNLI, but they should also be aware that these stocks have high volatility. Investors who prioritize stability may consider stocks with low standard deviation such as NISP and BBKA, although their average returns are not as high as those of more volatile stocks. Therefore, investment decisions in banking stocks should consider the balance between return and risk.

Academically, this study contributes by presenting an empirical mapping of the return characteristics of Indonesian banking stocks during 2020–2025. This period is important because it covers the crisis, recovery, and post-pandemic adjustment phases. The findings of this study can serve as a basis for future research examining factors that influence banking stock returns, such as bank financial performance, credit risk, efficiency, liquidity, interest rates, inflation, exchange rates, monetary policy, and macroeconomic conditions.

CONCLUSION

This study aims to describe and compare the return performance of Indonesian banking stocks during the period 2020–2025. Based on the descriptive statistical analysis of ten banking



stocks, the findings show that all stocks in the sample recorded positive average monthly returns. However, return and risk characteristics differed across companies. BRIS recorded the highest mean return at 4.38%, followed by BNLI at 3.44% and BNGA at 1.13%. Meanwhile, MEGA recorded the lowest mean return at 0.02%. In terms of downside risk, BBTN had the deepest minimum return at -50.59%, followed by BBNI at -45.62% and BMRI at -35.67%. In terms of upside potential, BNLI recorded the highest maximum return at 87.70%, followed by BRIS at 78.70% and BBTN at 63.81%.

Based on standard deviation, BRIS had the highest volatility at 20.46%, followed by BNLI at 18.50% and BBTN at 14.21%. Conversely, NISP had the lowest volatility at 5.33%, followed by BBCA at 5.41% and MEGA at 6.64%. These findings indicate that stocks with high average returns tend to have higher volatility, while stocks with lower volatility do not necessarily generate the highest average returns.

This study does not conclude causal relationships because it uses a descriptive quantitative approach. Therefore, the results cannot be interpreted as evidence that the COVID-19 pandemic, banking policies, bank financial performance, or specific macroeconomic factors directly caused increases or decreases in stock returns. This study only provides an empirical overview of the historical return characteristics of Indonesian banking stocks. Future research may extend this study by using regression, event study, volatility models, or portfolio analysis to examine the factors that influence banking stock returns in Indonesia.

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