

Research.

## Modern Technical Analysis of Investment Decisions in IHSG Shares in the Banking Sector in the Midst of Economic Recession Issues

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Received: November 3, 2023 Accepted: December 3, 2023 Published: December 31, 2023

To cite this article: **Afkar, MR.**, (2023), Analisis Teknikal Modern terhadap Keputusan Investasi Saham IHSG Sektor Perbankan di Tengah Isu Resesi Ekonomi. *The Management Journal of BINANIAGA.*, 8 (2) , 193-206. doi:10.33062/mjb.v8i2.51

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**Abstract.** The performance of banking sector shares was able to support the JCI and contribute to the index's highest points amidst the issue of the global economic recession which caused share prices in other sectors to fall. This research aims to analyze the trend of IHSG share price movements in the banking sector amidst the issue of the global economic recession on investment decisions. This type of research is descriptive with a qualitative approach using secondary data. The research subjects were 4 banking issuers included in the Top 10 IHSG Fact Sheet Constituents as of September 2023 published by the IDX. The object of the research is graphic data and monthly shares price movement trends for 4 issuers from November 2022 to November 2023. This data is analyzed using a modern technical analysis approach using MACD and RSI indicators via the tradingview.com site. The research results show that in general there is an upward trend in issuers' share prices as evidenced by signals of bullish momentum on the MACD and an overbought situation on the RSI. This provides investors with initial information to make decisions about selling shares in order to obtain optimal returns. The phenomenon of inflation and high interest rates because of the emergence of the issue of economic recession in 2023 will not have a significant impact on the trend of share price movements of banking issuers.

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**Keywords:** *Technical Analysis, IHSG, Investment Decisions, Economic Recession*

### Introduction

#### Background

The economic crisis that hit Asia a quarter of a century ago, to be precise in 1997, is predicted to shake the region again (Djirimu & Kunciotutu, 2023). The largest Asian economy's shares market and currency are projected to decline to their lowest levels in recent decades (Arianto, 2020; Yamali & Putri, 2020). The era of high and radical interest rates by world central banks such as the Federal Reserve (The Fed) as the strongest central bank, Great Britain (BoE), Europe (ECB), and Switzerland (SNB) increasingly threatens the decline of the global economy to the point of entering a recession ( Afifah & Fauziyah, 2023). This has been exacerbated by the emergence of several global polemics such as world central bank monetary policy, China's zero-Covid policy, the Russia-Ukraine geopolitical conflict, high European-United States inflation which has accumulatively resulted in an increase in interest rates by several central banks as a step and effort to suppress inflation rate (Anggraeni et al., 2023). However, this policy is considered to be in contrast and irrelevant to the recovery of the post-Covid-19 economic situation (Fitriaty & Saputra, 2022). The chances of economic risks arising

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from the Covid-19 pandemic can range from a delay in consumption (blip) or a decline in GDP growth to a full-scale recession (Bonaparte, 2020). The high rate of inflation in food raw materials and commodities because of the easing of money (Quantitative Easing/QE) as a recovery policy for the Covid-19 pandemic, causing a commodity boom in 2022, will encourage world central banks to suppress the rate of inflation by making high interest rate policies which will increase the risk of a recession. economy (Taufani, 2023).

One country that has the potential to experience a multisectoral economic recession is Indonesia. This is believed to be a manifestation of symptoms of national or global inflation as well as instability in the rupiah exchange rate against the dollar which tends to lead to depreciation (Anggraeni et al., 2023). In the closing 4th quartile of 2022, an increase in the national inflation rate was recorded, reaching 4.69% and continuing until the 3rd quartile of 2023 (Arifani et al., 2023). A similar thing is happening with Indonesia's benchmark interest rate which is increasingly rising to reach 4.8% in the 4th quarter of 2022. The high rate of inflation and interest rates as well as the depreciation of the rupiah exchange rate as an interpretation of recession symptoms will have an impact on fluctuations in the composite shares price (IHSG) in The Indonesian Shares Exchange (BEI) and the Indonesian capital market significantly (Febriyanti & Delfiani, 2023). IHSG is a shares market price index that contains changes in the prices of ordinary shares (common shares) and preferred shares (preference shares) recorded on the IDX since it was first published on April 1 1983 and is an indicator of changes in share prices (Lengkong et al., 2021; Darmawan & Haq, 2022). JCI fluctuations as an interpretation of the global economic recession will tend to lead to symptoms of a decline/weakening in share prices (Afifah & Fauziah, 2023; Huawei, 2022; Kroencke, 2022).

The downward trend in the IHSG can be proven empirically through the Rianda report (2023), which shows that the IHSG in the 4th quartile of 2022 ended in the red zone at the level of 6,786.99 or down 0.37%. In the 1st quartile of 2023, the JCI was also recorded to have fallen 38.04 points or weakened 0.57% to the level of 6,584.45 (Annur, 2023). Meanwhile, the last report on November 6 2023 showed that the JCI was observed to be in the green zone at the level of 6,852,045 or rising 0.93%. It is believed that the IHSG fluctuations which are experiencing a downward trend/trend are because of the phenomenon of increasing inflation and interest rates as well as the weakening of the rupiah exchange rate (Sumarto & Rachbini, 2020). A high level of inflation causes a decrease in investors' real rate of return, thereby changing investors' preferences for investment. This indicates that high levels of inflation result in low shares prices (Febriyanti & Delfiani, 2023). The decline in share prices will be followed by a downward trend in the IHSG (Putra & Nurmatias, 2024). The same thing applies to changes in interest rates. A high Bank Indonesia reference interest rate (BI rate) will increase deposit interest (Silalahi & Sihombing, 2021). Investors will sell their shares and divert their money in the form of deposits, causing share prices to tend to decline. On the other hand, low BI interest rates will result in an increase in net profit per share so that share prices also increase (Sella & Ardini, 2022). So, the lower the prevailing interest rate, the higher the IHSG (Sartika & Choiriyah, 2019). While different things are shown by the rupiah exchange rate, the strengthening of the rupiah exchange rate against foreign currencies is a positive signal for an economy experiencing an inflationary trend (Gampito & Melia, 2022). When the rupiah exchange rate strengthens, the cost of importing raw materials for production needs will decrease, accompanied by a decrease in interest rates (Rahmawati & Setyobudi, 2023). The weakening of the rupiah exchange rate will encourage investors to make fund allocation decisions which will result in a fall in share prices (Istinganah & Hartiyah, 2021). Appreciation of the rupiah exchange rate will increase the IHSG and vice versa (Pratama & As'ari, 2023).

Inflation and high interest rates as a result of the emergence of the issue of economic recession in 2023 have basically resulted in a downward trend in shares prices on the IHSG in the capital market (Hikmah et al., 2023; Mahendra et al., 2022). However, this did not have a significant impact on banking sector shares. According to the IHSG fact sheet released by IDX as of September 2023, the banking sector is the biggest

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supporter of the IHSG (Top Leading Shares) with the best shares performance among other sectors in the classification of company sectors on the Indonesian Shares Exchange amidst the polemic of the global economic recession which resulted in inflation and changes in interest rates. (BI rate) (BEI, 2023). The banking sector contributed +141.40 points to the IHSG year-to-date (Jan-Sep 2023), followed by the raw goods sector (+48.66) in second place, and the primary consumer goods sector (+30.87) in second place. third order. This phenomenon is often termed Window Dressing and January Effect (Year End Effect) which indicates an increase in shares prices, especially in the banking sector at the end of the year when shares close until the first week of January (Indriyani 2019; Chandra et al., 2022). This gives an idea that the issue of economic recession on the one hand has had a positive impact on banking sector share prices on the IHSG. This statement is reinforced by the findings of Kurniawan & Yuniati (2019), inflation has a positive and significant effect on the share prices of the banking sector listed on the IDX. In this case, inflation is able to increase banking interest income because the increase in credit demand is higher than the increase in business costs. The increase in banking interest income is a positive signal for investors to invest, resulting in a significant increase in share prices. Furthermore, the findings of Tofan et al. (2022) shows that an increase in the interest rate (BI rate) will be followed by an increase in other commercial bank interest rates which will encourage an increase in the cost of banking credit products. Increasing interest rates will effect investors to allocate their funds to banks so that liquidity and profitability will increase, which will have a positive impact on increasing share prices.

The increase in interest rates has an impact on increasing the credit ratio borne by banks and is reflected in the Non-Performing Loan (NPL) ratio (Arfan, 2020). An increase in NPL will be accompanied by a decline in the IHSG in the banking sector, and vice versa (Manda & Taslim, 2021; Ihrom & Hersugondo, 2021; Handayani et al., 2023). Nevertheless, anomalies emerged at the close of 2022 and in the 3rd quarter of 2023 along with the widespread issue of a global economic recession. Instead of experiencing an increase in banking share prices as reflected in the NPL ratio which shows a decrease in the level of bad loans at the end of 2022 with a ratio of 2.44%, most banking share prices have actually experienced a decline (Rochman & Andayani, 2023). Furthermore, instead of decreasing the NPL ratio from the previous year because of the increase in most banking share prices amidst the issue of economic recession, the NPL ratio actually showed a monthly increase with a ratio of 2.51% (Figure 1) (OJK, 2023). However, the cumulative NPL ratio is still below 5% as per the banking gross NPL threshold set by Bank Indonesia (Kartika, 2023).

The two phenomena above are interesting to analyze in depth considering the performance of shares in the banking sector which was able to support the IHSG and contribute to the index's highest points amidst the issue of a global economic recession which caused a decline in share prices in other sectors. The success of the banking sector in responding to various issues and polemics has become an important indicator and reference for investors' investment decisions today. Investors certainly expect capital gains and abnormal returns as feedback from their investments (Chania et al., 2021). However, to achieve this, investors need various logical considerations because shares are an investment instrument with large profits but with a high level of risk (high risk high return) and continue to experience price movements in accordance with demand or supply in the capital market and are sensitive to changes. (Rofiq, 2022; Juliani et al., 2021). On this basis, investors need appropriate analytical skills in order to minimize investment risk (Lating et al., 2023), avoid the illusion of control (Dewi et al., 2023), obtain excessive returns (Amenda et al. , 2022), and improve skills and financial literacy in developing mature and targeted shares investment decision-making strategies amidst the issue of economic recession (Afifah & Fauziyyah, 2023). The analytical ability in question is the investor's skill in predicting future shares price movement trends through graphs and statistical data utilizing past trading activities with an irrational approach and referring to historical market data such as price and volume information which in the investment

world is currently termed analysis. modern technical (Mahendra et al., 2022b; Sadikin & Agustina, 2023).

Modern technical analysis is a general recommendation for investors and traders in analyzing shares price movement trends in a relatively short period of time to determine buy signals and sell signals through bullish markets and bearish markets (Alimin et al., 2023). The performance of modern technical analysis is believed to be able to generate profits for investors because the process utilizes information technology with complex algorithms and requires that market action signals can be obtained through graphic patterns determined according to statistical calculations, not subjective inference of a graphic pattern (Agustin & Fariono, 2023). In general, modern technical analysis indicators are classified into oscillator indicators and trend following indicators. Oscillator indicators that are often used by investors include the Moving Average Convergent Divergent (MACD), Stochastic Oscillator (SO), Relative Strength Index (RSI), and Relative Volume Index (RVI) (Irahadi et al., 2022). However, Monika & Yusniar (2020) stated that the MACD indicators introduced by Gerald Appel in the 1970s and the RSI introduced by J. Welles Wilder in 1978 are more popular for investors today because they are easy to implement and have been proven to provide more profits for investors. with a high level of accuracy when determining sell signals and buy signals. According to Setiawan et al. (2021), the MACD and RSI indicators have significant similarities so it can be assumed that in the same period and object the MACD and RSI indicators tend to show statistically significant buy and sell signals or in other words, the MACD and RSI indicators can be used as a validation tool for analysis results. each other so that its implementation can strengthen investors' decisions in predicting future share price movements. According to this, the MACD and RSI indicators can be used simultaneously and are suitable as guidelines in determining shares investment decisions.

### **Formulation of the Problem**

1. How do investors decide to invest in IHSG shares in the banking sector using a modern technical analysis approach using MACD and RSI indicators?
2. What is the impact of the issue of economic recession on the trend of IHSG share price movements in the banking sector?

## **LITERATURE REVIEW**

### **Shares**

Shares are capital of individuals or parties (business entities) in the form of securities as a sign of participation and ownership or part of a company (issuer) (Purwanti, 2022). Individuals or parties who own shares are called shares holders. Shares are an investment instrument that is sensitive to change and always experiences price fluctuations in the capital market according to supply and demand for these shares. The demand and supply for shares is an interpretation of economic factors such as company performance and the phenomenon of economic recession which is characterized by increasing interest rates and high inflation rates or decreasing currency exchange rates as well as non-economic factors such as socio-political conditions (Riana, 2022). Investors need to conduct shares analysis to maximize profits and minimize risks in investing. According to Setiani & Nugroho (2022), determining the value of shares requires accurate analysis of the shares on the capital market so that they can then optimize share returns. There are two basic approaches to shares analysis, namely fundamental analysis and technical analysis (Putri & Shabri, 2022).

### **Share Technical Analysis**

Share technical analysis is an approach to shares analysis using prediction techniques for shares movements and other shares market indicators according to historical data in the form of price and volume information (Ong, 2016). This historical

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data is determined according to the following three basic perceptions: 1) Market Price Discount Everything, determined according to changes in charts and graphs that affect the market; 2) Price Moves in Trend, determined according to price movements in a pattern (trend) which will not stop before a sign of the movement pattern stopping and reversing direction is found; and 3) History Repeats Itself, determined according to behavior in responding to market news in the past and now (Albab & Andriasari, 2022). According to Edwards et al. (2018), there are several forms of technical statistics that can be used, including: 1) Graphs (charts); 2) Trend Line (Trend Line); 3) Support and Resistance; 4) Overbought and Oversold; and 5) Chart Pattern.

This research uses trend lines and Overbought & Oversold in analyzing shares price movements by observing the trend of movement in one price direction and looking at the level of market saturation. There are three classifications of trend lines, namely; 1) An increasing trend or uptrend (Bullish Market), 2) A decreasing trend or downtrend (Bearish Market), and 3) A horizontal trend (Sideways/Consolidation). Meanwhile, oversold is a market condition that becomes saturated because of large demand which causes share prices to tend to fall/weaken. Meanwhile, overbought is a situation where the market becomes saturated because of the large number of offers which causes share prices to tend to rise/strengthen (Basrowi et al., 2020).

Historical data in technical analysis can be a benchmark for investors in making investment decisions, whether deciding to sell or buy shares (Hans et al., 2022). In its implementation, investors use indicators or a combination of several indicators to analyze and determine shares investment decisions (Saputro et al., 2023). This research uses two technical analysis indicators, namely Moving Average Convergent Divergent (MACD) and Relative Strength Index (RSI).

#### ***Moving Average Convergeni Divergent (MACD)***

Moving Average Convergent Divergent (MACD) is a further development of the Moving Average (MA) indicator which was first introduced by Gerald Appel in the 1960s. The MACD indicator is a shares assessment method using the difference between two EMAs (EMA-12 and EMA-26) according to the closing price and banking shares signal line on the IHSG (Hans et al., 2022). MACD identifies the beginning and end of a trend or when a trend will change (Ong, 2016).

#### ***Relative Strength Index (RSI)***

Relative Strength Index (RSI) is a shares assessment method introduced by J. Welles Wilder in 1978 using market saturation information (overbought and oversold) and has a low and high level limit, namely a scale of 0 – 100. Wilder recommends “levels at above 70” as an area declared overbought and “level below 30” as oversold. The RSI period used as Wilder's standard is 14 days (Ong, 2016).

#### **Shares Investment Decisions**

Guidelines for making investment decisions are according to the following two things.

1. In the MACD indicator, decisions to buy and sell shares are seen according to the signals contained in the graph (charting). A sell signal occurs when the MACD line crosses the signal line from top to bottom, as well as the opposite condition for a buy signal. The next method is to use the center-line (zero line) to interpret the direction of the shares price trend. A strong buy signal occurs if the MACD line crosses the zero line from bottom to top, which indicates a change in the bearish situation to bullish. A fairly strong sell signal occurs in the opposite situation. The oscillator section is divided into two parts which do not have a lowest or highest limit by the level 0 line. On the oscillator display there are two lines called the MACD line and the signal line. A sell signal is obtained when the MACD line crosses below the signal line,

and vice versa. Then there is the histogram section which is what the MACD line looks like when converted into bar form. The function of this indicator is the same as the MACD line, but the way it is conveyed is different (Hans et al., 2022).

2. In the RSI indicator, decisions to buy and sell shares are reviewed according to the level of shares market saturation. RSI only has 1 line that goes up and down following market prices and moves in the range 1-100%. If the RSI value is very high or low, it means that the price is saturated and will most likely reverse direction. The position of the RSI line which is above 70% indicates a signal to sell (Overbought), while a signal to buy (Oversold) occurs if the line is below 30% (Monika & Yusniar, 2020).

## RESEARCH METHODS

This research is descriptive in type with a qualitative approach using secondary data in the form of documentation of share prices of banking sector issuers. Research subjects were determined using the Purposive Sampling technique with the provisions of banking sector companies that were in the Top 10 Constituents on the Composite Shares Price Index (IHSG) Fact Sheet as of September 2023 published by the Indonesia Shares Exchange (BEI). There are four issuers who are the research subjects, namely PT. Bank Mandiri (Persero) Tbk. (BMRI), PT. Bank Rakyat Indonesia (Persero) Tbk. (BBRI), PT. Bank Central Asia (Persero) Tbk. (BBCA), and PT. Bank Negara Indonesia (Persero) Tbk. (BBNI). The research object is data in the form of graphs and trends in monthly shares price movements of four issuers starting from November 2022 to November 2023. Secondary data is analyzed using a modern technical analysis approach using the Moving Average Convergent Divergent (MACD) and Relative Strength Index (RSI) indicators via the Platform Charting in the form of tradingview.com.

## RESULTS AND DISCUSSION

### BBRI



Figure 1. Shares Movement of PT Bank Rakyat Indonesia Tbk. with MACD and RSI

According to Figure 1 above, in May 2023 BBRI shares showed a positive signal with the MACD crossing above the signal line. This can be interpreted as an indication of the potential strengthening of the bullish trend. Apart from that, the RSI indicator also shows an overbought situation with a breakthrough of the upper limit, which indicates the possibility of a significant price increase. However, in November 2023, even though

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MACD crossed again above the signal line, the RSI indicator did not show extreme movements by remaining between the upper and lower limits. This can be interpreted as a possible consolidation or decrease in market volatility, indicating the strength of the trend may not be as strong as before. Therefore, investors need to pay attention to further developments to identify whether BBRl shares will continue their bullish trend or experience a significant change in direction.

## BBNI



Figure 2. Shares Movement of PT Bank Negara Indonesia Tbk. with MACD and RSI

According to Figure 2 above, in September and October 2023, the BBNI share price chart shows a bullish signal according to the MACD technical indicator which penetrates the signal line and the RSI indicator which penetrates the upper limit. This indicates upward momentum in share prices. However, in November 2023 there was a significant change where the MACD signal line penetrated the MACD signal and the RSI indicator did not penetrate the upper or lower limits. This condition shows that the momentum for the increase in BBNI share prices is weakening and could reverse direction into a price decline. Overall, it can be concluded that the bullish momentum for BBNI shares appears to be weakening in November 2023.

## BMRI



Figure 3. Shares Movement of PT Bank Mandiri Tbk. with MACD and RSI



According to Figure 3 above, the BMRI share price chart in August 2023 shows a bearish signal according to the MACD breaking below its signal line even though the RSI broke the upper limit. This indicates that even though downward price momentum is occurring, the RSI shows that BMRI shares are still in an overbought condition so downward corrections may be limited. Then entering November 2023, conditions changed where the MACD penetrated above the signal line and the RSI did not penetrate the upper or lower limits. This indicates that market sentiment towards BMRI shares has changed to bullish again, marked by increasing price momentum even though it is not yet in an overbought or oversold condition. Overall, there has been a change in the direction of the momentum of BMRI share price movements from a decline in August 2023 to an upward momentum in prices in November 2023.

## BBCA



Figure 4. Shares Movement of PT Bank Central Asia Tbk. with MACD and RSI

According to Figure 4 above, in April 2023, even though the MACD of BCA shares penetrated below the signal line indicating downward price momentum, the RSI actually penetrated the upper limit, which means the shares are still in an overbought condition. This indicates the potential for a minor correction in share prices amidst a long-term uptrend. Then in November 2023, the MACD is seen breaking above the signal line which confirms the change in momentum to positive, while the RSI does not penetrate the upper or lower limits which means BCA shares are in a neutral condition. Moments of price increases are seen appearing again in BCA shares in November 2023 after experiencing a minor correction several months earlier. Overall, BCA's long-term uptrend is expected to continue although it remains vulnerable to market volatility in the short term.

## CONCLUSIONS AND RECOMMENDATIONS

The share prices of banking sector issuers in the Top 10 Constituents on the IHSG Fact Sheet as of September 2023 published by the IDX according to technical analysis using a combination of MACD and RSI indicators show a phase of rising share prices or a general uptrend as evidenced by bullish momentum signals on the MACD and an overbought situation on RSI. This provides investors with initial information to make decisions about selling shares in order to obtain optimal returns. Thus, it can also be concluded that the phenomenon of inflation and high interest rates as a result of the emergence of the issue of economic recession in 2023 in reality does not have a significant impact on the trend of share price movements of banking issuers when there is a decline in share prices in other sectors.

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