

Bullish and Bearish Strategies Based on Technical Analysis: MACD, RSI, and SO JII30 2025

Miftahul Huda

Universitas Darussalam Gontor
miftahulhuda@unida.gontor.ac.id

Mufti Afif

Universitas Darussalam Gontor
muftiafif@unida.gontor.ac.id

Ahmad Suminto

Postgraduate Program UIN Sayyid Ali Rahmatullah Tulungagung
ahmadsuminto08@gmail.com

Amelia Putri Arizka Zaharani

Universitas Darussalam Gontor
ameliaarizka13@gmail.com

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Abstrak

Tujuan penelitian ini adalah meningkatkan literasi masyarakat dalam penggunaan aplikasi investasi syariah agar terhindar dari penipuan serta dapat meminimalisir kerugian dalam perdagangan saham. Seiring dengan kemajuan teknologi global, aktivitas perdagangan kini menjadi lebih efektif dan efisien, menuntut setiap individu untuk cerdas dalam mengelola keuangan. Salah satu bentuk pengelolaan keuangan produktif adalah investasi pada pasar modal syariah, yang memungkinkan dana berkembang tanpa melanggar prinsip syariah seperti gharar dan maisir. Penelitian ini menggunakan metode kualitatif deskriptif dengan menganalisis data *time series* selama enam bulan, dari Januari hingga Juni 2025. Data dianalisis menggunakan tiga indikator teknikal, yaitu Moving Average Convergence Divergence (MACD), Relative Strength Index (RSI), dan Stochastic Oscillator (SO), untuk menentukan posisi *bullish* dan *bearish* dalam perdagangan saham. Hasil penelitian menunjukkan bahwa penggunaan satu indikator teknikal secara tunggal belum mampu memberikan sinyal beli dan jual yang akurat. Sebaliknya, penggabungan ketiga indikator tersebut terbukti lebih efektif dalam meningkatkan keakuratan analisis teknikal dan mendukung pengambilan keputusan investasi yang sesuai dengan prinsip syariah. Penelitian ini diharapkan dapat menjadi referensi bagi investor pemula dalam memahami pentingnya literasi keuangan dan penerapan analisis teknikal pada investasi saham syariah.
Kata Kunci: Bullish and Bearish, Moving Average Convergence Divergence (MACD), Relative Strength Index (RSI), dan Stochastic Oscillator (SO).

Abstract

The purpose of this study is to enhance public literacy in the use of Islamic investment applications to prevent fraud and minimize losses in stock trading. Along with global technology advancement, trading activities have become more effective and efficient, requiring individuals to be financially

literate in managing their assets. One productive financial management strategy is investment in the Islamic capital market, which allows funds to grow without violating Sharia principles such as gharar and maisir. This study employs a descriptive qualitative method by analyzing time series data over six months, from January to June 2025. The data were analyzed using three technical indicators: Moving Average Convergence Divergence (MACD), Relative Strength Index (RSI), and Stochastic Oscillator (SO), to determine bullish and bearish positions in stock trading. The findings indicate that using a single technical indicator is ineffective in providing accurate buy and sell signals. In contrast, combining all three indicators proves to be more effective in improving the accuracy of technical analysis and supporting investment decisions that comply with Sharia principles. This research is expected to serve as a reference for novice investors to understand the importance of financial literacy and the application of technical analysis in Islamic stock investments.

Keywords: *Bullish and Bearish, Moving Average Convergence Divergence (MACD), Relative Strength Index (RSI), and Stochastic Oscillator (SO).*

INTRODUCTION

Some types of Islamic capital markets include Islamic stocks, Islamic bonds (sukuk), mutual funds, Islamic asset-backed securities (EBA Syariah), Rights Issues, and finally, Islamic Warrants.¹ Islamic bonds are debt instruments issued by issuers in accordance with Islamic principles, with a long-term duration (three years) and a profit-sharing mechanism.² Sharia investment is proof of ownership of a company that has met the criteria for issuers and complies with sharia principles.³ Stock investment is one of the things that is popular among the public. One of them is Sharia investment.⁴ The Sharia investment sector listed on the IDX (Indonesia Stock Exchange) is grouped under the ISSI (Indonesia Sharia Stock Index), which encompasses all Sharia sector stocks, and the JII30 Jakarta Islamic Index, comprising 30 leading Sharia stock sectors.⁵

Agung Purnomo⁶, this study indicates that using the MACD, RSI, and SO methods can address the research objective regarding the returns generated by each stock. It can be observed that the most effective factor is the buy-and-hold method. Priyo Preasetyo,⁷ this study indicates that among the indicators with the highest profit percentages, the MACD indicator produced the optimal profit. Navidatul Farida's analysis shows that buy and sell signals occur from the intersection between the MACD and signal lines using EMA 9. This indicates that the five highest stocks are ADRO, TLKM, ANTM, ASII, and INCO.

¹ Wisnu Wardana, "Potensi Perkembangan Pasar Modal Syariah Di Indonesia Sebagai Tujuan Investasi Generasi Muda," *Jurnal Taswiq: Jurnal Ekonomi Syariah* Vol.1, No. 1 (2024), p. 5

² S Pramono And A Fakhriana, "Transformasi Pasar Modal Syariah Melalui Inovasi Digital: Peluang Dan Tantangan," *Bisnistik: Jurnal Ilmiah Bisnis*, Vol. 1, No. 1, (2024), p. 30-41.

³ M Nasyah Agus Saputra, "Pasar Modal Syariah Di Indonesia," *Al-Qonun* Vol. 17, No. 1 (2014), p. 92

⁴ Lulu Nailufaroh, Ulfi Jefri, And Fenti Febriyanti, "Profitabilitas Dan Risiko Keuangan Terhadap Harga Saham Syariah Dengan Inflasi Sebagai Variabel Intervening," *Jurnal Revenue : Jurnal Ilmiah Akuntansi* Vol. 2, No. 1 (2021), p. 145.

⁵ Choirunnisak, "Saham Syariah; Teori Dan Implementasi," *Islamic Banking : Jurnal Pemikiran Dan Pengembangan Perbankan Syariah* Vol. 4, No. 2 (2019), p. 67.

⁶ Agung Pramono Et Al., "Analisis Teknikal Modern Menggunakan Metode Macd , Rsi , So , Dan Buy And Hold Untuk Mengetahui Return Saham Optimal Pada Sektor Perbankan Lq 45," *Proceeding Pesat (Psikologi, Ekonomi, Sastra, Arsitektur & Teknik Sipil) Bandung* Vol. 5, No. 1 (2013), p. 272.

⁷ Priyo Prasetyo And Heri Subagyo, "Analisis Komparatif Penggunaan Metode Stochastic , Moving Average Dan Macd Dalam Mendapatkan Keuntungan Optimal Dan Syar ' I (Study Pada Jakarta Islamic Index 2016 - 2018)," *Jimek* Vol.2, No.1 (2019), p. 52

Johan Leonardo⁸, this study indicates that candlesticks, support levels, resistance levels, trendlines, and MACD influence decision-making in investment. The sample taken in this study consists of banking companies listed on the Indonesian Stock Exchange. The research method used a qualitative approach with descriptive analysis. The data source was obtained from Pro Trade software. Dimitrios Vezeris,⁹ this study provides insights into predicting stock prices based on Deep Reinforcement Learning, combined with financial reports and technical analysis to enhance decision-making processes. The stock index used in this study is the JII30, which is guaranteed to include liquid companies, aiming to minimise losses. In this study, the researcher selected the three best stocks as samples for analysis using technical analysis with several technical indicators over three months, aiming to determine the effectiveness of technical indicators in minimizing losses.

This study uses three technical analyses that are easy to understand for novice investors, aiming to provide a better understanding of appropriate technical analysis. Another reason for this study is the lack of education regarding technical analysis using relevant indicators. This causes investors to incur significant losses and engage in gharar trading due to a lack of understanding of the analytical procedures. The technical analyses used include moving average convergence divergence (MACD), relative strength index (RSI), stochastic oscillator (SO), and decision-making on stocks in bearish and bullish positions. These indicators were selected because they are considered to have different characteristics, such as MACD, which indicates the direction of the trend in overbought or oversold positions. RSI is an indicator of price strength that compares whether the market is overbought or oversold.¹⁰ The stochastic oscillator provides information on whether the market trend is in a buy or sell position.

METHOD

This study uses a qualitative method with a descriptive analysis approach using the Ajaib application. The indicators used in this study use technical analysis of RSI, MACD, and SO in bullish and bearish conditions. The qualitative method was used because this study focuses on technical analysis to determine the right time to make decisions before starting stock transactions. This method discusses the design used in the research, the research sample, and the overall recording procedure collection, followed by a discussion of data analysis and the methods used to present data, validate it, and demonstrate its potential in the research. The descriptive communication research method is research that only describes situations or events. This research does not discuss relationships. It does not test hypotheses or predictions. The purpose of descriptive research is to create a systematic picture.¹¹ This researcher used secondary data consisting of historical data, stock prices, technical indicators, and related data. Economic news was obtained from the official website of the Indonesia Stock Exchange and financial platforms such as Yahoo Finance, Investing, and TradingView, which provide historical stock prices for ANTM, INDF, and BRIS. The

⁸ Johan Leonardo, "Analisa Teknikal Pembuatan Trading Plan Keputusan Investasi Pada 3 Saham Perbankan Bumn Yang Terdaftar Pada Indeks LQ45 Tahun 2014 - 2019" *Manajemen dan Bisnis Sriwijaya*, Vol. 20, No. 4,(2021), p. 174.

⁹ Archana Y, Chaudhari and Smita Mahajan, "Prediction of Stock Market Using Sentiment Analysis and Ensemble Learning," *MethodsX* Vol.14, (2025), p. 1

¹⁰ *Ibid.*, p. 29-30

¹¹ Wiki Angga Wiksana et al., "Studi Deskriptif Kualitatif Tentang Hambatan Komunikasi Fotografer Dan Model Dalam Proses Pemotretan," 2017, 121-32.

research tools used were the TradingView application and the Ajaib application as a platform for buying and selling stocks.

A population is a group of objects or subjects in a study that are analyzed to draw relevant conclusions. A sample is a selected number of individuals from the population that represents the entire population. This study uses purposive sampling with the following criteria: the researcher observes a period of three months with the aim of proving the accuracy of the RSI (Relative Strength Index), MACD (Moving Average Convergence Divergence), and SO (Stochastic Oscillator) indicators. This is because if the observation period is too long, there is a risk of losses due to the ever-changing fluctuations in stock prices. The researcher selected stocks listed on the JII30 because these companies are guaranteed to adhere to sharia principles, having met the requirements supervised by the DPS (Sharia Supervisory Board), which classifies them as sharia-compliant issuers listed on the DES (Sharia Issuer List), and selected the 30 most liquid stocks among sharia-compliant issuers.¹² In the data analysis process, the researcher collected several financial reports accessed through the official website www.idx.co.id, Ajaib Sekuritas, and TradingView. After the data was collected, the researcher concluded that the financial reports would provide signals on whether the company was in an uptrend or a downtrend. This is referred to as fundamental analysis, which involves analysing stock price trends using various reports and company performance metrics.

RESULT AND DISCUSSION

Technical Analysis

1. Moving Average Convergence Divergence (MACD)

a. PT Aneka Tambang Tbk

Stock trading transactions of PT. Aneka Tambang Tbk uses technical analysis, including the Moving Average Convergence Divergence (MACD). Moving Average Convergence Divergence is one of the technical analysis tools used to assess trend strength and buy/sell signals. The MACD line and the signal line indicate this. If the MACD line is above the signal line, the stock is predicted to be bullish, and vice versa. Here is an overview of the MACD technical analysis:

Table 1. MACD Technical Analysis on ANTM

No	Date	MACD Line	Signal Line	Histogram	Signal	Result
1	02/01/2025	17	35	-18	Bullish Crossover	Buy
2	30/01/2025	10	10	0	netral	Sell
3	13/02/2025	-38	-21	-17	Bearish Crossover	Buy
4	04/03/2025	90	81	9	Bullish Crossover	Sell
5	18/03/2025	22	21	1	Bearish Crossover	Buy
6	24/04/2025	21	23	-3	Bullish Crossover	Sell
7	14/04/2025	28	15	14	Bullish Crossover	Buy
8	12/06/2025	287	304	-17	Bullish Crossover	Sell

Source: Tradingview.com¹³

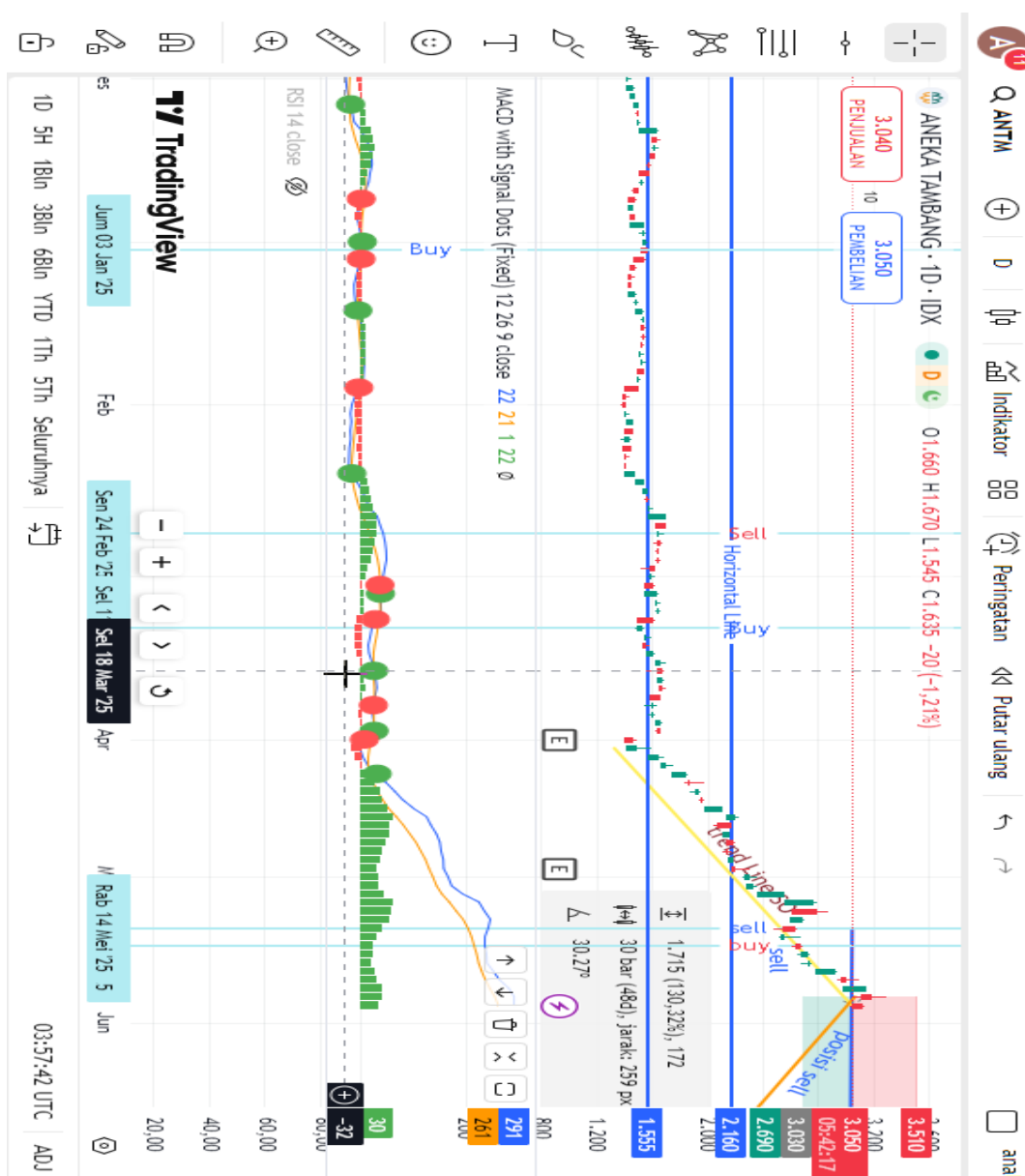
¹² Islamic IDX, "Daftar Saham Syariah Masuk Jakarta Islamic Index (JII) Periode 1 Desember 2023 s.d. 31 Mei 2024," n.d.

¹³Tradingview, "PT. Aneka Tambang," at [16:12], <<https://id.tradingview.com/chart/PN8585qk/?symbol=IDX%3AANTM>>, viewed Juni 9, 2025.

The table above shows the results of technical analysis using the Moving Average Convergence Divergence indicator for PT Aneka Tambang Tbk (ANTM) shares from January to July 2025. The MACD indicator provides information on buy and sell signals based on the intersection of the MACD line with the signal line and the histogram value, which shows the strength of the trend momentum.

Figure 1. MACD

Technical Analysis on ANTM



Source: Tradingview.com¹⁴

On 2 January 2025, a signal was generated by MACD indicating that the stock price was in a bullish crossover position, where the MACD line crossed above the signal line despite a negative histogram, giving a buy signal because the MACD signal indicated a potential

¹⁴ Tradingview, "PT. Aneka Tambang," at [16:11], <<https://id.tradingview.com/chart/PN8585qk/?symbol=IDX%3AANTM>>, viewed June 9, 2025.

reversal after a decline. On 30 January, the MACD condition provided the same signal (neutral), so the decision needed to be made was to sell before finally taking a sell position. This indicated market uncertainty about the continuation of the stock trend.

A bearish crossover signal appeared on 13 February and 18 March 2025; however, the signal provided by the MACD analysis was to take a buy position. This indicates that despite the technical analysis showing a price decline, it presents an opportunity for investors to buy at a low price and sell at a high price, expecting a price rebound.

Bullish crossover signals appeared on 7 March, 22 April, 5 May, and 26 May 2025, but the signals indicated a 'Prepare to Sell' position. This was done so investors could use short-term price increases to generate profits, especially after the opportunity for a bullish price trend emerged.

The discrepancy between technical signals and this decision indicates that external factors significantly influence stock price trends. Therefore, in addition to technical analysis, investors should also consider fundamental analysis factors, such as market conditions, the fundamental financial condition of the stock, and macroeconomic policies. Thus, investors should not only rely on technical analysis because this does not eliminate the gharar nature of a trade. — ss---s-

Table 2. MACD Technical Analysi

No	Date	MACD Line	Signal Line	Histogram	Signal	Result
1	15/01/2025	-46	-47	1	Bullish Crossover	Buy
2	20/01/2025	-60	-49	-11	Bearish Crossover	Sell
3	24/01/2025	-54	-54	0	Bullish Crossover	Buy
4	27/02/2025	30	45	-15	Bearish Crossover	Sell
5	08/04/2025	151	-155	3	Bullish Crossover	Buy
6	09/04/2025	-174	-159	-15	Bearish Crossover	Sell
7	10/04/2025	-158	-158	1	Bullish Crossover	Buy
8	23/05/2025	174	181	-7	Bearish Crossover	Sell
9	10/05/2025	140	135	4	Bullish Crossover	Buy
10	18/05/2025	150	157	7	Bearish Crossover	Sell

Source: Tradingview.com¹⁵

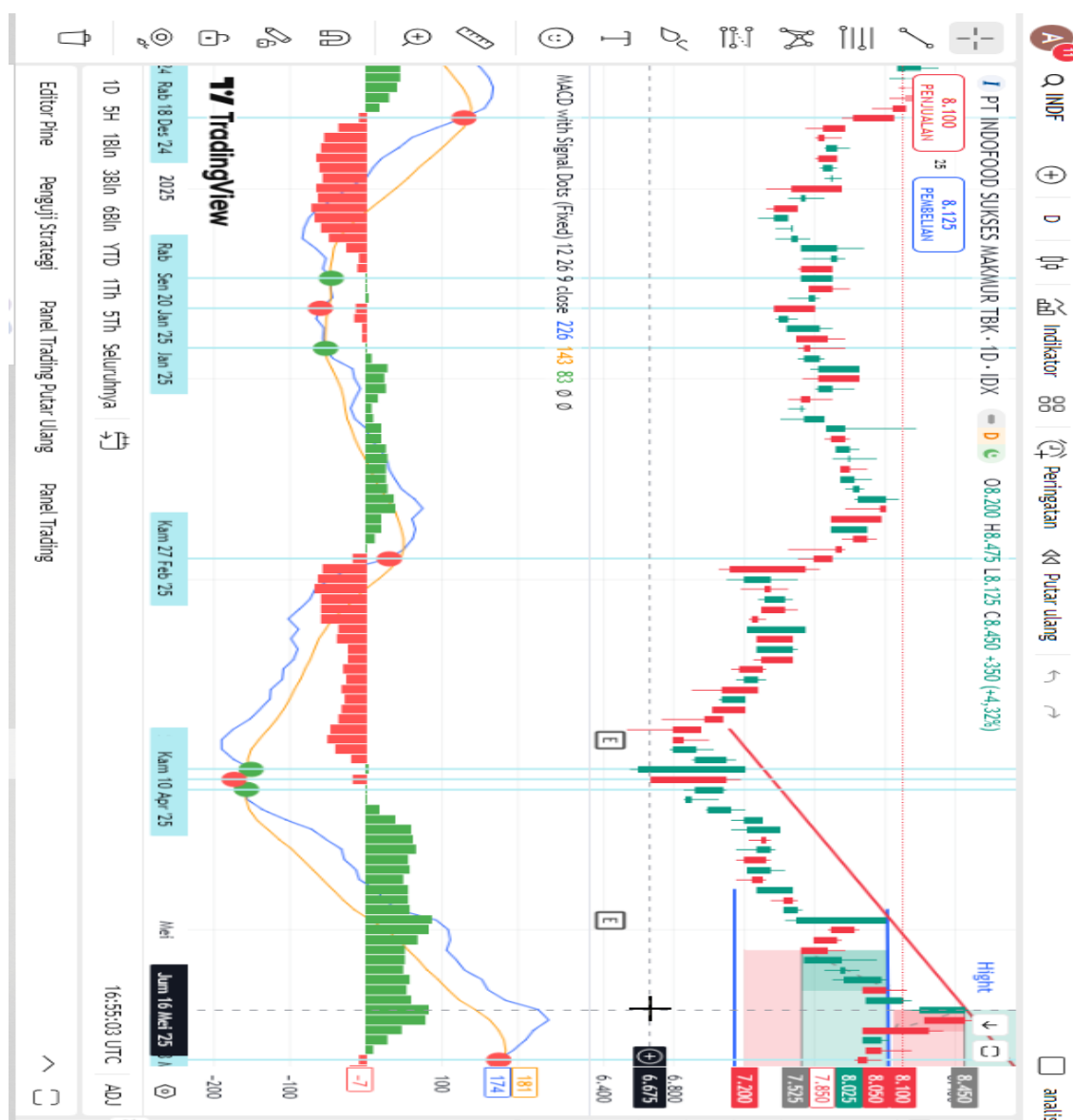
The table above shows the results of technical analysis using Moving Average Convergence Divergence (MACD) on PT Aneka Tambang Tbk (ANTM) shares from January to May 2025. The MACD indicator is used to capture signals of changes in share price trends by observing the intersection between the MACD line and the signal line and measuring momentum strength.

On 15 January 2025, a bullish crossover occurred where the MACD line crossed the signal line, indicating a positive histogram value and creating a buy position, as there was identified potential for a price increase. However, on 20 January 2025, the signal shifted to a bearish crossover, marked by a negative histogram value of (-11), indicating the need to prepare for a sell position to respond quickly to the reversal in stock prices.

¹⁵ *Ibid*

b. PT Indofood Sukses Makmur Tbk

Figure 2. MACD Technical Analysis INDF

Sumber: Tradingview.com¹⁶

On 24 January 2025, there was a bullish crossover signal. The histogram showed a neutral value, but the technical analysis signal indicated a buy position. On 27 February 2025, there was a bearish crossover with a negative histogram, and the signal responded with a sell position due to a sustained decline.

On 8 April and 10 April 2025, both provided information to investors on a buy position despite the market being in a Bearish Crossover state, even with negative values. The MACD signal indicated a potential momentum reversal, despite ongoing selling pressure.

On 9 April and 23 May 2025, information was provided on the sell position to reinforce the consistency of the MACD strategy in decision-making. On 10 May and 18 May 2025, there were differing signals. The signal on 10 May indicated a buy position, while the signal

¹⁶ "PT. Indofood Sukses Makmur Tbk.", at [00:53], <https://id.tradingview.com/chart/PN8585qk/?symbol=IDX%3AINDF>, viewed July 7, 2025.

on 18 May showed a bearish crossover condition, with a sell decision, in line with the technical movements.

This analysis reveals consistent buy and sell positions, suggesting that the MACD technical analysis is reliable enough to serve as a valuable tool for investors utilizing short-term buy-sell periods. However, there are also moments in the stock histogram that are not entirely accurate, indicating that to read stock price trends, it is still necessary to combine other technical analyses and fundamental analysis information to avoid gharar trading.

c. PT Bank Syariah Indonesia Tbk

Table 3. MACD Technical Analysis (BRIS)

No	Date	MACD Line	Signal Line	Histogram	Signal	Result
1	15/01/2025	-44	-484	4	Bullish Crossover	Buy
2	20/02/2025	49	52	-3	Bearish Crossover	Sell
3	24/02/2025	53	52	1	Bullish Crossover	Buy
4	25/02/2025	48	51	-3	Bearish Crossover	Sell
5	11/04/2025	-134	-139	5	Bullish Crossover	Buy
6	19/05/2025	86	88	-1	Bearish Crossover	Sell
7	04/07/2025	-59	-59	0	Bullish Crossover	Buy

Source: Tradingview.com¹⁷

The table above provides information on the technical analysis of PT Bank Syariah Indonesia Tbk (BRIS) shares, using the Moving Average Convergence Divergence (MACD) analysis indicator from January to July 2025. When the MACD line crosses above the signal line, it indicates a Bullish Crossover, signaling investors to prepare for a buy position. Conversely, when the MACD line crosses below the signal line, it indicates a Bearish Crossover, signaling investors to prepare for a sell position.

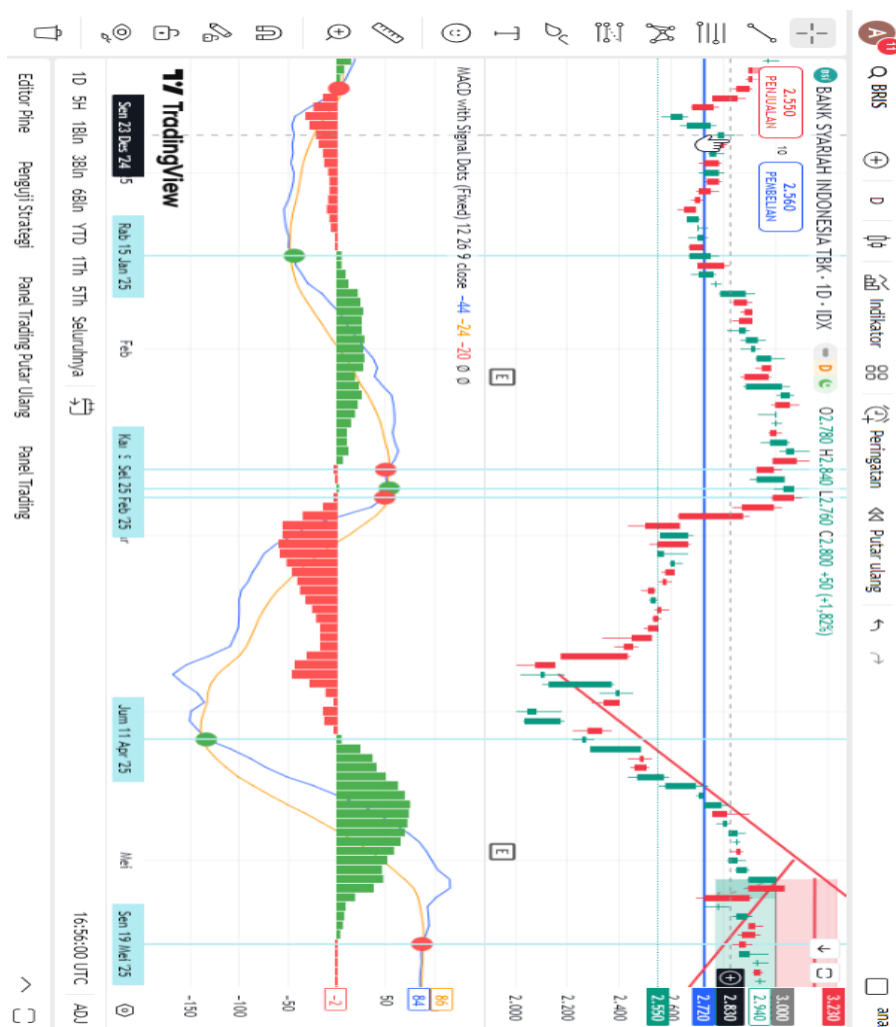
Based on the results of the analysis, a Bullish Crossover occurred on 15 January, 24 February, 11 April, and 4 July 2025. These four events are highlighted because they have the potential for price increases, presenting opportunities for profit growth in BRIS shares. Meanwhile, the Bearish Crossover signals that occurred on 20 February, 25 February, and 19 May 2025 indicate to investors that they should take a sell position. This suggests that technical signals should be responded to in anticipation of potential losses due to price declines.

Although there are signals close together between 24 and 25 February 2025, each giving sell and buy signals in succession, this provides information that there will be short-term price changes, based on the MACD signals that appear. Accordingly, the MACD indicator has proven to provide consistent and accurate signals regarding stock price movements during the observation period at BRIS. This reinforces the role of MACD as a tool to assist short-term investors in their decision-making.

¹⁷ *Ibid*

Figure 3.

Technical Analysis MACD (BRIS)

Source: tradingview.com¹⁸

2. Relative Strength Index

a. PT. Aneka Tambang Tbk.

Table 4. Technical Analysis RSI on ANTM

No	Date	Closing Price	RSI-14	Zone Status	Signal	Decision
1	23/04/2025	2.070	67	Overbought	Bearish Reversal	Sell
2	25/04/2025	2140	69	Overbought	Bearish Reversal	Sell

¹⁸ "PT Bank Syariah Indonesia Tbk," at <https://id.tradingview.com/chart/PN8585qk/?symbol=IDX%3AINDF>, viewed July 7, 2025.

3	28/04/2025	2130	69	Overbought	Bearish Reversal	Sell
4	30/04/2025	2170	69	Overbought	Bearish Reversal	Sell
5	08/05/2025	2610	74	Overbought	Bearish Reversal	Sell
6	14/05/2025	2550	68	Overbought	Bearish Reversal	Sell
7	26/05/2025	3110	79	Overbought	Bearish Reversal	Sell
8	27/05/2025	3030	74	Overbought	Bearish Reversal	Sell
9	05/06/2025	3450	77	Overbought	Bearish Reversal	Sell
10	10/06/2025	3260	67	Overbought	Bearish Reversal	Sell

Source: tradingview.com ¹⁹

The table above shows the research results on ANTM shares using the Relative Strength Index technical analysis over 14 days from 23 April to 10 June 2025. The RSI 14 value during this period ranged from 67 to 79, indicating an overbought or oversold condition in technical analysis. While an overbought condition typically occurs above 70, values of 67 and 69 are also considered overbought. This signal suggests the potential for a price reversal. The signals appearing on each date indicate a Bearish Reversal signal, predicting that the stock will reverse from an upward to a downward trend. The recommended position is to sell the stock. This is done to minimise the risk of significant losses.

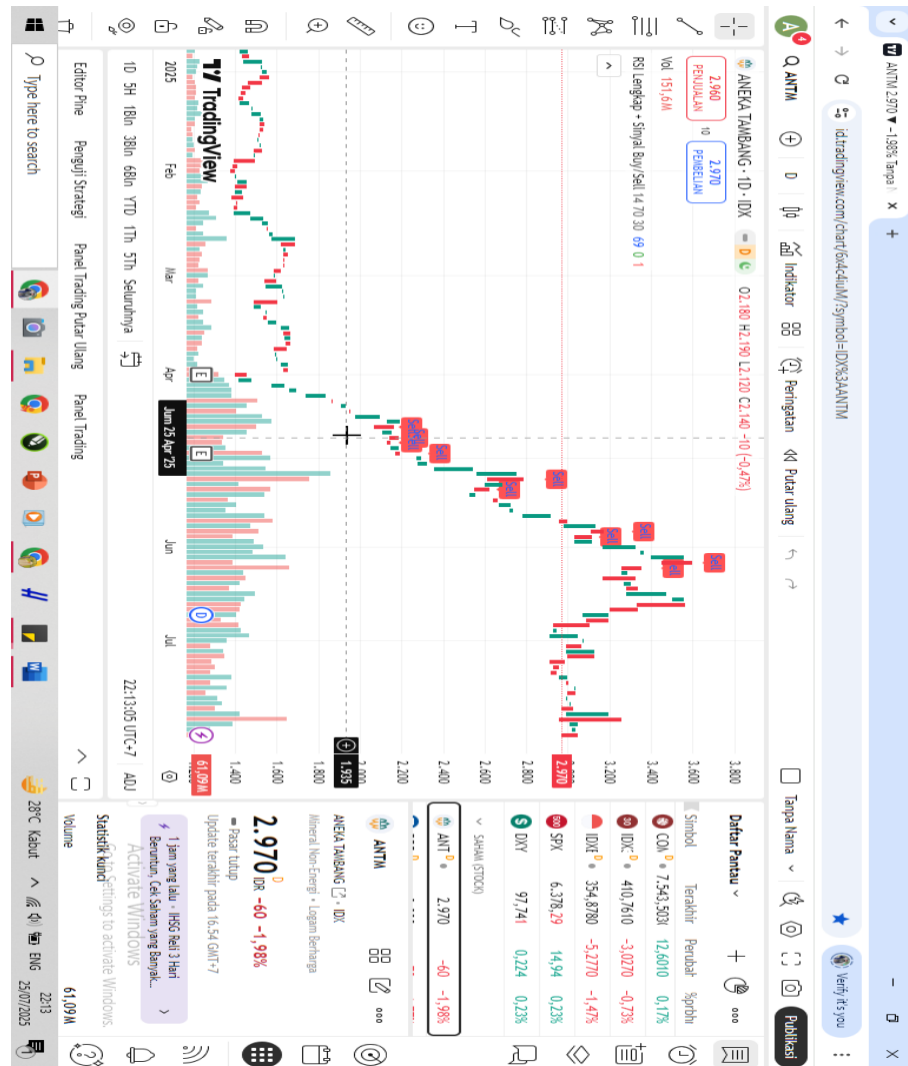
The signal on each date indicates a Bearish Reversal signal, which predicts that the stock will reverse direction from rising to falling. The recommended position is to sell the stock. This is done to minimise high losses. The signals on each date indicate a Bearish Reversal signal, which predicts that the stock will reverse direction from rising to falling. The recommended position is to sell the stock. This is done to minimise high losses. The signals that appear indicate a bearish reversal signal, which is predicted to have the possibility of a reversal in the stock price, to reduce excessive risk.

Additionally, the RSI movement pattern remains between 67 and 79, indicating that ANTM shares are under significant buying pressure during this period. However, excessive buying pressure typically does not last long, as investors will eventually take profits. This makes the bearish signal increasingly relevant, as investors tend to anticipate price declines after a period of oversupply.

Impact on investors: This technical analysis can be one consideration for making short-term trading decisions. Although bearish reversal signals dominate, investors must combine this with other technical analyses. So that investors can make more accurate decisions. Thus, the RSI helps identify potential trend reversals and can serve as an effective risk management tool in investment strategies.

¹⁹ "Relative Strength Index PT. Aneka Tambang Tbk," at [23:36], <https://id.tradingview.com/chart/6x4c4iuM/?symbol=IDX%3AANTM>, viewed July 27, 2025.

Figure 4. Technical Analysis RSI ANTM



Source: Tradingview.com

b. PT. Bank Syariah Indonesia

No	Date	Closing Price	RSI-14	Zone Status	Signal	Results
1	24/03/2025	2110	24	Oversold	Bullish Reversal	Buy

Table 5. Analysis Technical RSI BSI

Source: Tradingview.com²⁰

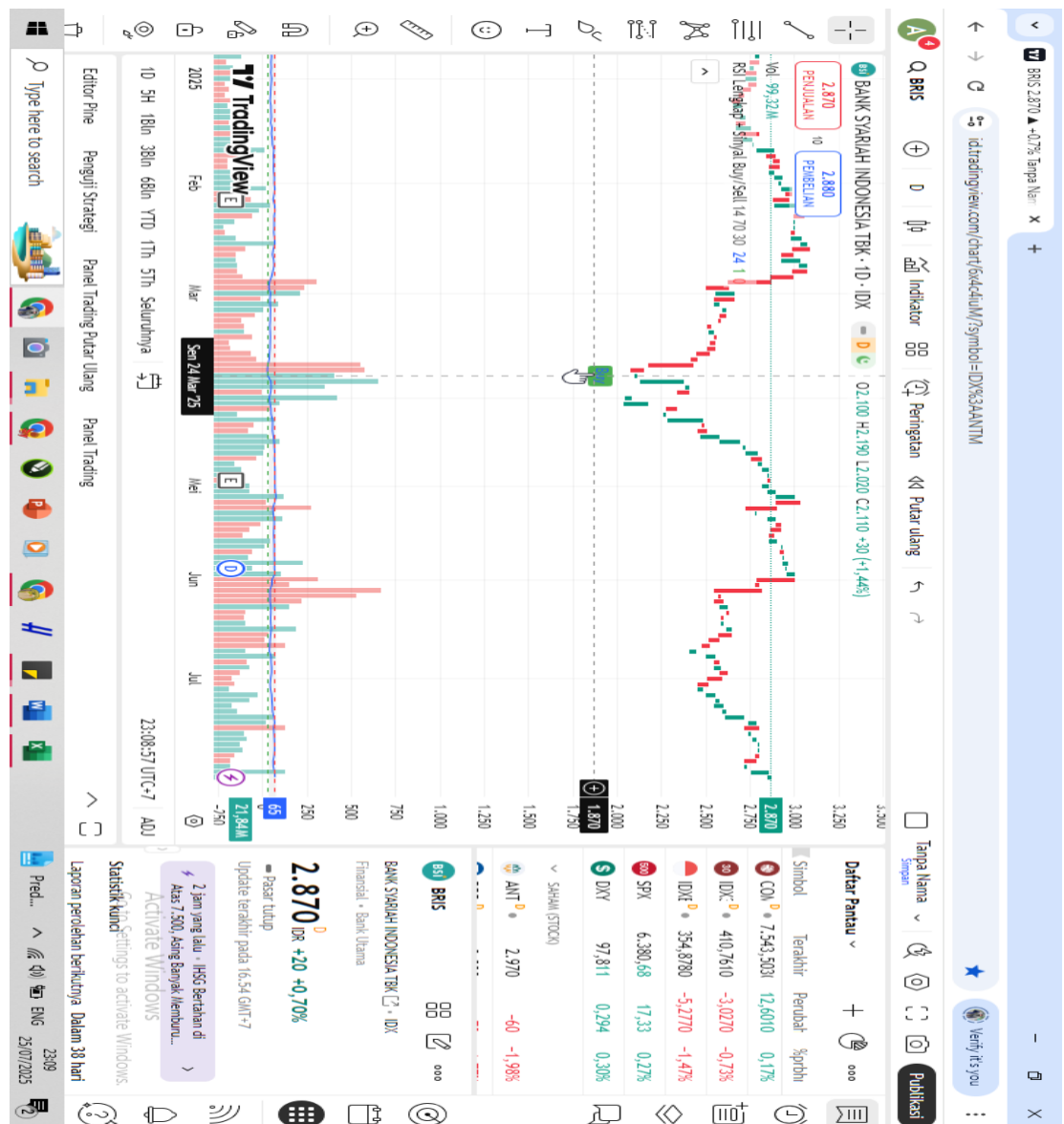
²⁰ "Relative Strebghth Index PT. Bank Syariah Indonesia Tbk,," at [23:38], <https://id.tradingview.com/chart/6x4c4iuM/?symbol=IDX%3AANTM>, viewed jule 27, 2025.

The RSI table at PT. Bank Syariah Indonesia Tbk shows that there was only one technical signal during the recorded period, which occurred on 24 March 2025. On that day, the 14-day RSI value for BRIS stock dropped to 24, which falls into the oversold or bearish zone. This suggests that the stock price is expected to reverse direction and move upward, indicating a bullish reversal. However, since no further signals followed, the stock remained in the neutral zone between 30 and 70.

The single signal appeared on 24 March 2025, indicating that despite briefly entering an oversold condition, buying pressure did not continue significantly, suggesting market participants are still waiting. The RSI has returned to the neutral zone, indicating a strong condition for both price increases and decreases. Thus, the RSI signal movement for BRIS stock during this period primarily shows a neutral signal trend. This indicates that BRIS stock is not experiencing extreme price increases in the short term.

This is not attractive for short-term traders because the opportunities presented are very few. However, long-term traders can use this to accumulate shares at relatively stable prices while waiting for stronger signals.

Figure 5. Technical Analysis RSI BRIS



Source: Tradingview.com²¹**c. Stochastic Oscillator****a. PT Aneka Tambang Tbk**

Table 6. Technical Analysis SO (ANTM)

No	Date	%K	%D	Signal	Results
1	15/01/2025	16	12	Bullish Crossover	Buy
2	20/02/2025	94	94	Bearish Crossover	Sell
3	24/02/2025	93	96	Bearish Crossover	Sell
4	25/02/2025	90	91	Bearish Crossover	Sell
5	11/04/2025	90	95	Bearish Crossover	Sell
6	19/05/2025	90	92	Bearish Crossover	Sell
7	04/07/2025	90	92	Bearish Crossover	Sell
8	30/06/2025	15	11	Bullish Crossover	Buy
9	10/07/2025	19	15	Bullish Crossover	Buy

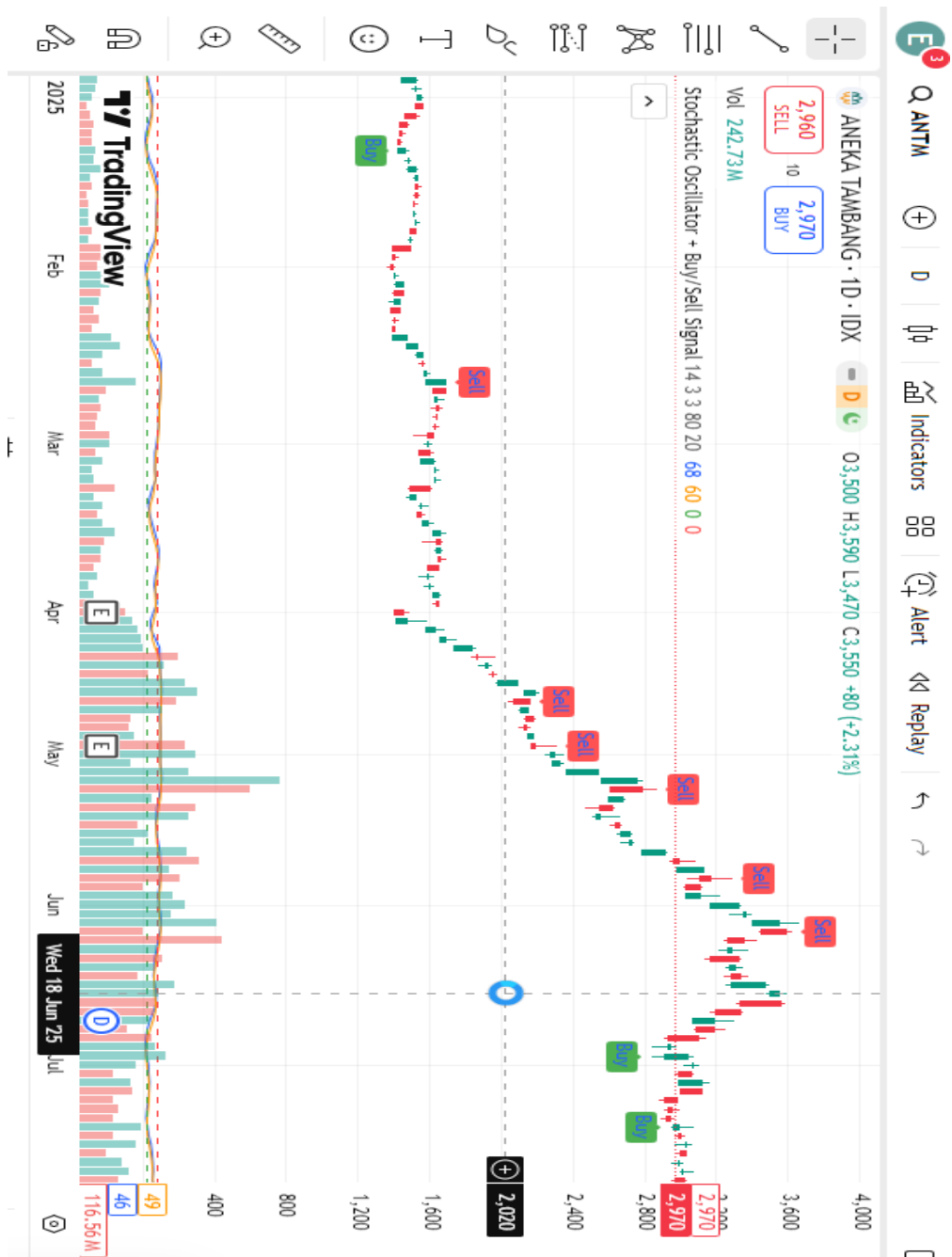
Source: Tradingview.com²²

The data analysis explains the technical analysis of ANTM shares using the Stochastic Oscillator indicator from January to July 2025, which obtained buy and sell signals as a basis for investment decisions. This indicator uses the %D and %K parameters, which serve as tools to identify stock price movements. When a bullish crossover occurs – when the %K line crosses the %D line from below – this signal indicates that investors should prepare to take a buy position, typically appearing in oversold or bearish market conditions. This is evident on 15 January, 30 June, and 10 July 2025, where the %K and %D values are below 20, indicating a rebound trend and signalling investors to prepare for a buy position. When a bullish crossover occurs, i.e., when the %K line crosses the %D line from below, this signal indicates that investors should prepare for a buy position.

²¹ “Relative Strengthening Index PT. Bank Syariah Indonesia Tbk.,” at [23:38], <https://id.tradingview.com/chart/6x4c4iuM/?symbol=IDX%3AANTM>, viewed jule 27, 2025.

²² “Stochastic Oscillator PT. Aneka Tambang Tbk.,” at [23:45], <https://www.tradingview.com/chart/A2UaZOQ7/?symbol=IDX%3AANTM>, viewed jule 27, 2025.

Figure 6. Technical Analysis SO (ANTM)



Source: Tradingview.com²³

This occurs in oversold or saturated selling market conditions. This was observed on 15 January, 30 June, and 10 July 2025, where the %K and %D values were below 20, indicating a rebound trend and signalling the need to prepare for a buy position. A bearish crossover occurs when the %K crosses below the %D from above, signalling a sell, while a period above the %D indicates potential price reversal and signals a buy.

b. PT. Indofood Sukses Makmur Tbk

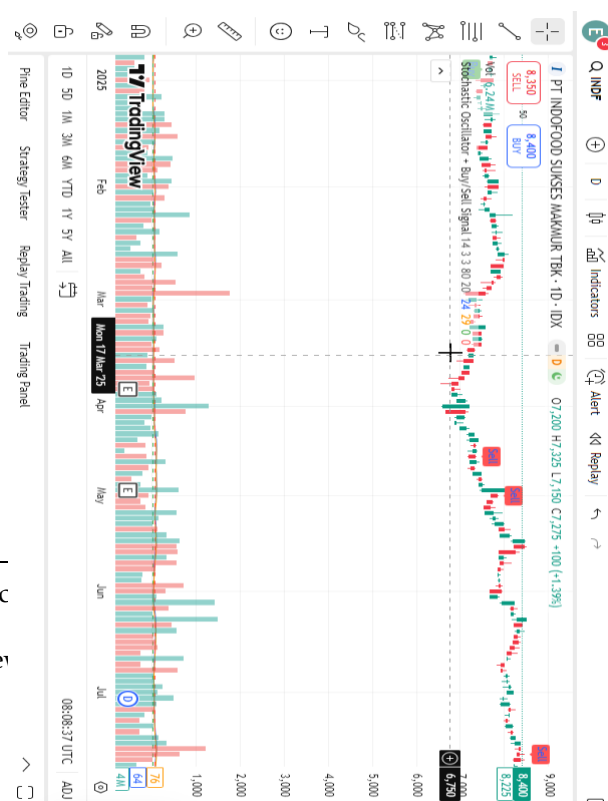
Table 7. Technical Analysis SO (INDF)

No	Date	%K	%D	Signal	Results
1	22/04/2025	87	92	Bearish Crossover	Sell
2	02/05/2025	90	94	Bearish Crossover	Sell
3	16/07/2025	88	93	Bearish Crossover	Sell

Source: Tradingview.com²⁴

The table above shows the Stochastic Oscillator signal from April to July 2025. All data indicates a Bearish Crossover signal occurs when the %K line crosses below the %D line at the highest level, above the 80 mark. This shows an overbought position, signalling that investors are preparing to sell. On 22 April, the %K line was 87 and the %D line was 92, generating a sell signal. A similar pattern emerged on 2 May and 6 July 2025, where the %K line was below the %D line despite being at a high value of 90. This indicates that INDF shares are under intense selling pressure, leading to a sell signal for investors

Figure 7. Technical Analysis SO (INDF)



²³ "Stochastic Oscillator"
²⁴ "Stochastic Oscillator"
<https://www.tradingview.com>

Indofood Sukses Makmur Tbk," at [23:55],
 M, viewed July 27, 2025.

Source: Tradingview.com²⁵**c. PT. Bank Syariah Indonesia Tbk.**

Table 8. Technical Analysis SO (BRIS)

No	Tanggal	%K	%D	Signal	Decision
1	05/02/2025	84	86	Bearish Crossover	Sell
2	03/03/2025	15	15	Bullish Crossover	Buy
3	14/03/2025	16	16	Bullish Crossover	Buy
4	18/03/2025	17	16	Bullish Crossover	Buy
5	24/04/2025	93	95	Bearish Crossover	Sell
6	02/05/2025	93	93	Bearish Crossover	Sell
7	07/05/2025	92	95	Bearish Crossover	Sell
8	21/07/2025	91	94	Bearish Crossover	Sell

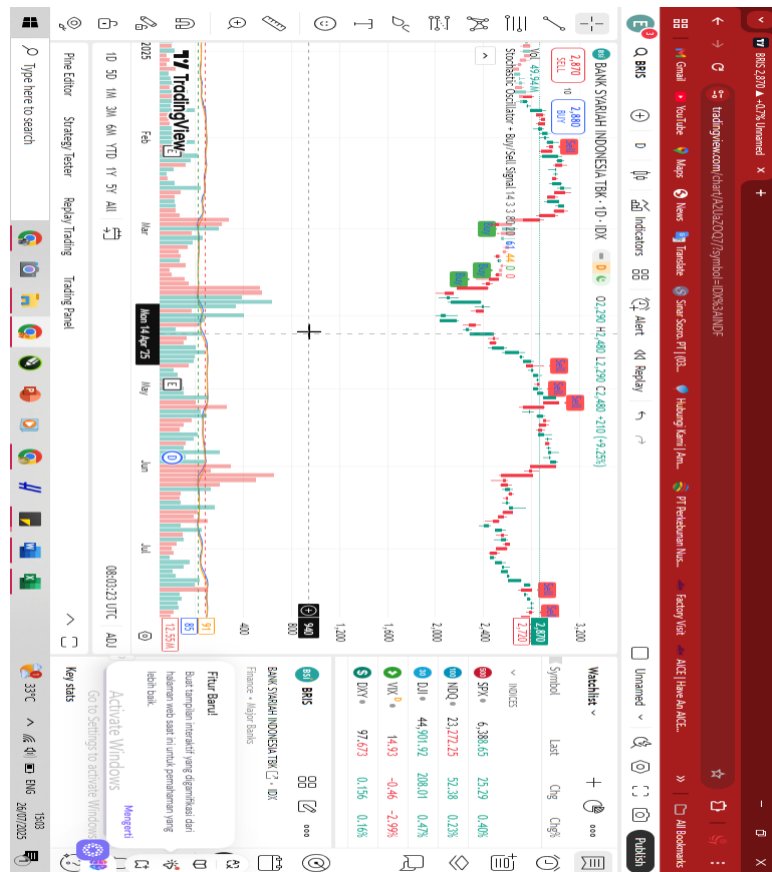
Source: Tradingview.com.²⁶

The table above shows the technical analysis of BRIS shares using the Stochastic Oscillator, from February to July 2025. This indicator uses two lines, %K and %D, to identify sell and buy signals based on stock price movements. On 5 February 2025, %K was at 84, below %D at 86, indicating an overbought condition. This signal suggests that the stock price is in a bearish crossover position, leading to a decision to sell. On 3 March, 14 March, and 18 March, a bullish crossover signal appeared with %K and %D in the low range of around 15-17, indicating an oversold condition and signalling to investors to prepare for a buy position. On 24 April, 2 May, 7 May, and 21 July 2025, a bearish crossover signal appeared with %K and %D in the high range of 90. This indicates that BRIS stock is experiencing a downward trend after a price increase, resulting in a sell signal.

²⁵ "Stochastic Oscillator PT Indofood Sukses Makmur Tbk."

²⁶ "Stochastic Oscillator PT Bank Syariah Indonesia Tbk.," at [00:01], <https://www.tradingview.com/chart/A2UaZOQ7/?symbol=IDX%3AANTM>, viewed jule 27, 2025..

Figure 8. Technical Analysis SO (BRIS)



Source: Tradingview.com

Table 9. Combined Technical Analysis

No	Tanggal	Indikator	RSI	MACD	SO	Signal	Decision
1	14/01/2025	MACD	54	MACD= -9, Signalline= -9	%K= 73, %D= 52	Bearish Crossover	Buy
2	21/02/2025	RSI	62	MACD= 34,	%K= 78,	Bullish	Sell

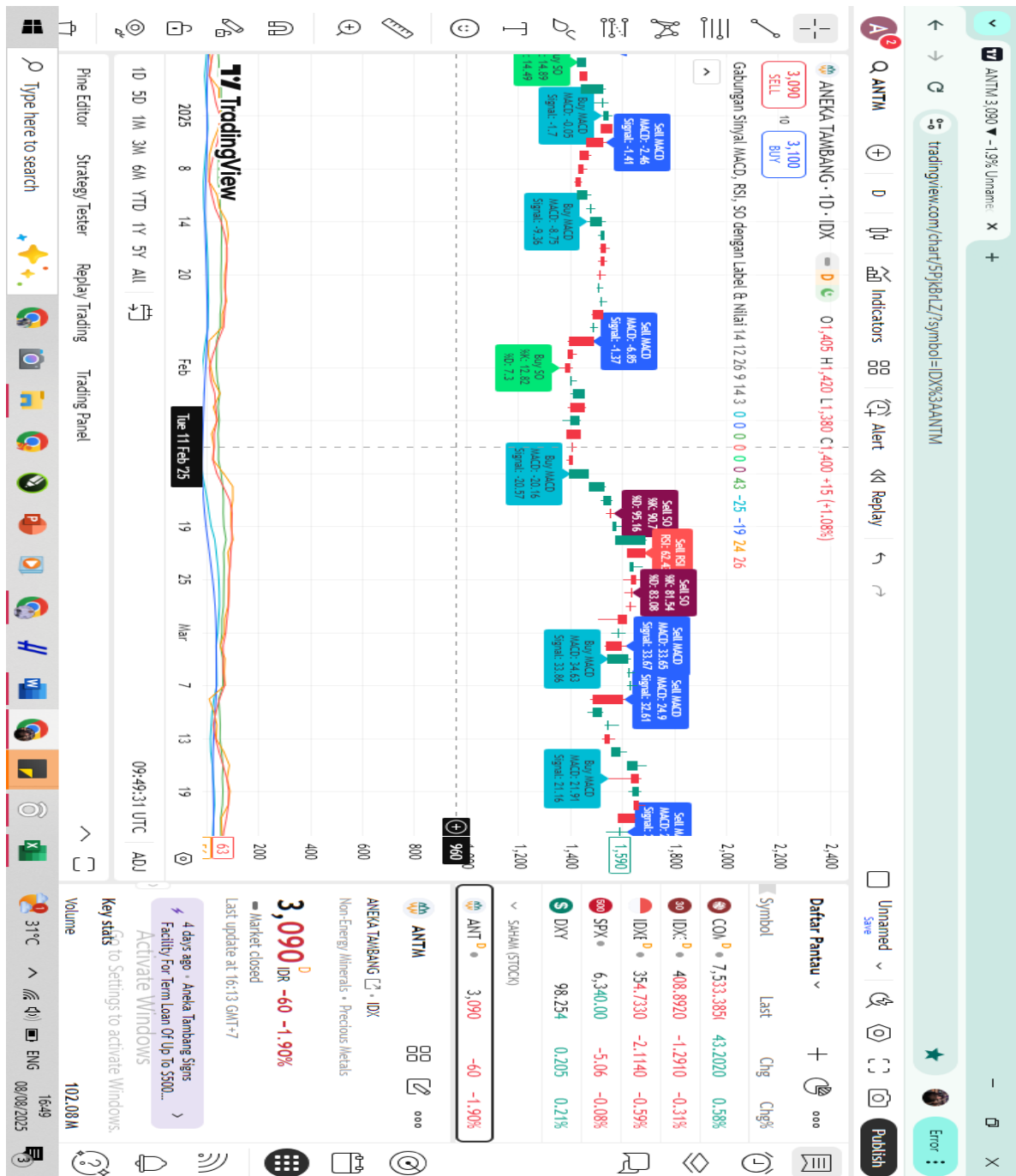
				Signal line= 8	%D= 90	Crossover	
3	05/03/2025	MACD	59	MACD= 35, Signal= 34	%K= 67, %D= 61	Bearish Crossover	Buy
4	19/06/2025	RSI	61	MACD= 251, Signal= 276	%K= 49, %D= 68	Bullish Crossover	Sell
5	26/06/2025	SO	46	MACD= 103, Signal= 193	%K= 14, D= 8	Bearish Crossover	Buy

Source: Tradingview.com

The table above shows a combined analysis table combining three technical analysis indicators, MACD, RSI, and Stochastic Oscillator, from January to July 2025. Each row shows the primary signal and the three indicators that provide the main signal, with values for the three technical indicators in one bar. For example, on 14 January 2025, the primary signal was from the MACD technical indicator, which first indicated a Bearish Crossover with the MACD and signal line values at -9, while the RSI was at the 54 level.

The SO values showed %K at 73 and %D at 52. Based on these values, the decision was to buy. Similarly, on 26 June 2025, the primary signal is from the Stochastic Oscillator technical analysis, with the %K value at 14 and the %D value at 8, while the MACD and RSI are still recorded for analysis. This analysis does not rely on a single indicator but combines multiple indicators to obtain a more comprehensive market view.

Figure 9. Combined Technical Analysis



Source: Tradingview.com

Researchers conducted separate technical analyses during the analysis stage by separating MACD, RSI, and Stochastic Oscillator to obtain information about the generated patterns. This analysis showed that each indicator has its own advantages and disadvantages. Among them is MACD (Moving Average Convergence Divergence), which often gives buy and sell signals but is sometimes too sensitive to stock price movements. This can lead to false signals.

The Relative Strength Index (RSI) provides signals less frequently because the RSI formula itself waits for prices to enter overbought (>70) or oversold (<30) positions, so buy signals are sometimes stronger because they are limited in number. The Stochastic Oscillator

is similar to the RSI in providing signals that wait for overbought and oversold conditions. However, this indicator is more responsive to short-term price changes.

Test results show that if technical analysis is used alone, it only indicates signals that dominate one direction, thus not providing investors with complete information about whether to take a buy or sell position. Given the limitations of technical analysis, researchers attempted to combine the three technical analyses. The aim is to obtain a more balanced signal between sell and buy signals, improve the accuracy of information provided to investors by considering signals from multiple indicators, and minimise the risk of one-sided decision-making.

CONCLUSION

Technical analysis using the Stochastic Oscillator (SO) shows three buy signals, five sell signals for PT: Aneka Tambang Tbk, and three sell signals for PT. Indofood Sukses Makmur Tbk. There were three buy signals and five sell signals for PT. Bank Syariah Indonesia Tbk. This indicates that the SO signal is more sensitive to stock price movements, enabling it to provide faster signals for short-term changes. The formula states that if the signal is below the 20 level, this informs investors to take a buy or Bullish Crossover position. Conversely, if the value is above 80, it indicates a sell position, known as a Bearish Crossover.

Based on the research findings above, it can be concluded that each technical analysis method has its own limitations in providing signals for stock prices. Some indicators, such as RSI and SO, rarely provide consistent signals. This ultimately risks investors missing out on opportunities to buy or sell. The researcher combined the three technical analyses to obtain comprehensive buy or sell signals to address this. This is considered more effective in providing accurate signals to investors for determining the optimal time to enter or buy and the optimal time to exit or sell. Among these were three buy signals and two sell signals, including two MACD signals, two RSI signals, and one SO signal.

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