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Technical Analysis of Directional Movement Index Indicator, Ichimoku Kinko Hyo Towards Stock Price Movements in Indonesia's Finance Sector

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Abstract

Purpose: This research aims to provide recommendations related to investment or trading momentum using technical analysis based on two indicators, namely the Directional Movement Index (DMI) and Ichimoku Kinko hyo. The research population consists of stock price movements of financial companies listed on the Indonesia Stock Exchange in the 2023 period. Stock price movement data is analyzed using the TradingView app. The method used is technical analysis, where Ichimoku Kinko hyo serves to identify stock price trends at a certain time, and DMI is used to measure trend strength as well as provide signals related to investment momentum. The data is analyzed in a descriptive analysis, with visualizations of trends and momentum generated through TradingView. The results show that the combination of Ichimoku Kinko hyo and DMI is effective in predicting stock price trends and providing signals for investment decision-making. Ichimoku Kinko hyo charts the market trend clearly, while the DMI assesses the strength of the trend and provides the right momentum signal to buy or sell. This study makes an important contribution to investors and traders in the stock market, in determining the right time to make a buy or sell decision based on the strength of the trend and momentum. Thus, the combination of these two indicators can increase the accuracy of trading decision-making in the financial stock sector on the IDX.

Keywords: Technical Analysis, Stocks, Trading

Introduction Section

Investing in the capital market, especially in stock instruments, is one of the main choices for the Indonesian people. The development of the Composite Stock Price Index (IHSG) and the increase in the number of investors every year show high interest in stock investment. Stocks offer two types of income, namely dividends (the distribution of company profits to shareholders) for long-term investors, and capital gains (the difference between the selling and buying prices of shares) for short-term traders. However, stock investment also contains risks, such as low stock liquidity and potential capital loss. According to (Saiful Hasan et al., 2024), the shares of companies that go public are included in the high-risk investment category because they are very sensitive to political, economic, monetary, legal, and regulatory changes, both domestic and international, as well as changes in the industry and the performance of the stock issuing company.

Stock Investment Optimization Strategy To reduce risk in stock investments, investors can apply fundamental and technical analysis. By understanding these two approaches, investors can avoid speculative practices that are more like gambling (Monika & Yusniar, 2020). According to (Muhamad Aldin Hidayat, 2022), investors often combine several technical analysis indicators to get more accurate decisions in buying or selling stocks. This technique uses historical data as a basis to identify patterns that can aid decision-making.

Financial Sector Stock Outlook The financial sector Especially banking stocks, has its own attraction in the capital market. Positive sentiment towards corporate health and corporate action from financial sector issuers provide good prospects for investors. According to the Financial Authority (IDX October 4, 2024) according to OJK notes over the past five years, Indonesia's banking industry has shown solid growth despite being depressed by the Covid-19 pandemic. This industry is able to support the national economic recovery and play an important role in supporting the growth of the Indonesian capital market. Banking stocks listed on the Indonesia Stock Exchange (IDX) dominate the market capitalization, controlling around 33%. Banking stocks are also dominant in the group of liquid stocks with large capitalization, as reflected in the IDX80, LQ45, and IDX30 indices, where more than 45% of the stocks in the LQ45 and IDX30 indices come from the banking sector.

Literature Review

Figure 1. Capitalization of the financial sector (source: Heatmap Tradingview.com)

1. Financial sector

The Financial Industry includes companies that provide financial services such as Banks, Consumer Finance Institutions, Venture Capital, Investment Services, Insurance, and Company Holdings. (IDX website)

2. Directional movement index

Directional Movement (DMI) is actually a collection of three separate indicators combined into one. The Directorial Movement consists of the Average Directional Index (ADX), the Directional Indicator Plus/Plus Directional Indicator (+ DI) and the Directional Indicator Minus/Minus Directional Indicator (-DI).

The purpose of the ADX is to determine whether or not there is a trend. This does not take into account direction at all. The other two indicators (+DI and -DI) are used to complete the ADX. They aim to determine the direction of the trend. The momentum to buy stocks where + DI crosses from below -DI is called the golden cross momentum, while the momentum to sell where -DI crosses from below + DI is called the death cross momentum By combining the three, a technical analyst has a way to determine and measure the strength of a trend as well as its direction.

Analyzing the strength of the trend is the most basic use for the DMI. To analyze the strength of a trend, the focus should be on the ADX line, not the + DI or -DI line. Wilder (Creator of the DMI) believes that a DMI reading above 25 indicates a strong trend, while a reading below 20 indicates a weak or non-existent trend. The reading between the two values will be considered undeterminable. However, as mentioned earlier, experienced traders will not take the value of 25 and 20 and apply it in every situation. A really strong trend or a weak trend depends on the financial instrument being observed. Historical analysis can be helpful in determining the appropriate value. (tradingview.com)

3. Ichimoku Kinko hyo

Ichimoku Cloud, also known as Ichimoku Kinko, is a technical analysis tool that originated in Japan. It provides a comprehensive overview of price, support and resistance, and market momentum in a single view

When Leading Span A (senkou span A) drops below Leading Span B (senkou span B), it can confirm a downtrend. In this case, displaying a reddish color where the position of the clouds is above the price garfik, When Leading Span A is above Leading Span B, can confirm an uptrend. The cloud, in this case, will display a greenish color.with the position of the cloud below the price chart. While the range/distance between Senkou Span A and Senkou Span B is called the cloud. When the lagging span spans across the price it can signal an uptrend has started at the price. The price has started to move higher, because that's the only way lagging spans (chikou spans) can move above price. Similarly, if the lagging span drops below the price (after being separated for some time), this could indicate that the price has started to drop and may be heading downwards. (tradingview.com)

Metodology

This study uses a descriptive quantitative approach to analyze the price movements of financial sector stocks on the Indonesia Stock Exchange (IDX) in 2023. Purposive sampling is used to select stocks from the financial sector that have liquidity and are included in the main board type. Stock price movement data is taken from the TradingView platform and analyzed with two technical indicators:

1. Ichimoku Kinko hyo: Used to identify trends (uptrend, downtrend, or sideways).
2. Directional Movement Index (DMI): Used to measure the strength of a trend and provide sell or buy signals based on golden cross and death cross patterns. Validation is done by examining data from several different stocks and visualizing patterns on the chart to ensure replicable results.

Result And Discusions

Result

BBNI Shares

Figure 2. Stock Performance Chart of PT. BANK NEGARA INDONESIA (PERSERO)

In January 2023 at point A to September 2023 point B, Ichimoku showed a sideway indication where the same price did not move significantly which was marked by the price still in the kumo, which did not signal momentum to sell or buy, in this condition investors and traders can wait for the momentum of the next direction change whether it increases or decreases after the sideway trend phase.

Then in October 2023, the price chart moved away from kumo with the position of kumo below the price being an indication of a change in direction that was previously sideways to bullish at point C. However, the stock price had experienced a decline where the stock price entered the kumo area and +DI cut below -DI experienced temporary deathcros again at point D in October 2023 towards November 2024.the three, a technical analyst has a way to determine and measure the strength of a trend as well as its direction.

In December 2023 the price again moved away from the kumo to return to the bullish trend validated with the goldencros between +DI crossing above -DI and the movement of ADX signals strengthening to above 25 which could be a momentum for investors and traders to buy stocks from December 2023 to February 2024.

BRIS Shares

Figure 3. Stock Performance Chart of BANK SYARIAH INDONESIA TBK

At the beginning of 2023 from January to May 2023 marked by point A with B. Stock price has increased with the confirmation of kumo from ichimoku below the stock price becoming a validation of the bullish stock position which is a positive signal for traders and investors to buy stocks.

From May 2023 to September 2023, the stock experienced sideways after experiencing an increase with price validation entering the kumo zone at point C. Then after the sideway phase ended, it was followed by bearish or price decline from September 2023 to November 2023 which was validated by +DI cutting down -DI.

In November 2023 to December 2023, the stock price experienced a reversal of movement from bearish to bullish, which was marked by the price successfully cutting up from kumo, then validated by +DI cutting upwards -DI followed by ADX, getting stronger and stronger into momentum for investors and traders to buy stocks.

BBCA Shares

Figure 4. Stock Performance Chart of BANK CENTRAL ASIA

At the beginning of the year in January, the stock price was experiencing a reasonable decline with an indication that the price was below the kumo, entering February the stock had experienced a reversal from downtrend to uptrend. However, the price could not cut above the kumo to continue the increase so that the stock price was held and reversed towards the downtrend at point A. So that market participants, investors and traders to wait for the ideal momentum

In April at point B the stock began to reverse its direction again, with the confirmation that the price crossed above the kumo was a signal from the change of trend which was originally a downtrend to an uptrend with the additional confirmation of the +DI indicator crossing above the -DI indicator. This momentum can be used by investors and traders to buy stocks.

In September at point C the stock price experienced a reversal after a fairly long uptrend, which could be an indication of a reasonable correction with the stock price movement again cutting below the kumo (deathcros) and the + DI indicator cutting below the -DI indicator which can be used for traders' sell signals. Then the price decreased marked by the price in the kumo until mid-December.

In mid-December before the market closes at the end of the year, the stock price had jumped upwards with the volume of The sizable signal was followed by the signal that the ADX moved to 25 and the +DI crossed upwards – the DI is a confirmation that the stock price is moving from a downtrend to an uptrend that can be used as a buying momentum for investors and traders before the market closes at the end of the year.

BBYB Shares

Figure 5. Stock Performance Chart of BANK NEO COMMERCE TBK

At the beginning of the year from January to February, the stock price had experienced an increase, making an attempt to cross above the kumo as a strong validation for a sustainable uptrend, but the stock price was not able to cross above the kumo which has not become an ideal momentum for investors and traders to buy stocks. Then the stock price movement continues to change the trend from uptrend to downtrend.

After the price reverses, the price experiences a significant decrease at point A to point B. With the kumo always above the stock price, DI above +DI and the adx value above 25 makes the validation that the stock price has decreased, many factors that can affect the stock price significantly are important for investors and traders to be sensitive and careful in looking at the condition of a stock.

At point C, the stock price cuts upwards from the kumo validated with +DI meomotong ketas -DI thus creating a trend reversal momentum that was originally downtrend into an uptrend that can be used by investors and traders for buy signals.

ARTO Shares

Figure 6. Stock Performance Chart of BANK JAGO TBK

At the beginning of the year in January to February, the movement of stock prices increased, the uptrend did not last long considering that the movement of stock prices was still below the kumo so that there was a momentum of sell signals for investors and traders in the continuation of the reversal of the trend direction from uptrend to downtrend which was marked at point A to point B.

In May, the stock price movement tried to reverse the direction from downtrend to uptrend marked by the price entering the kumo zone, followed by the price movement crossing up the kumo at point C and followed by +DI crossing up -DI which can be used as a buy signal momentum for investors and traders. However, the stock price movement experienced a periodic decline in July approaching kumo and managed to move down followed by +DI cutting down -DI can be indicated as a selling momentum at point D, then the decline in stock price movements continued until November.

At point E in mid-November, there was a surge in stock price movements as well as cutting up the kumo and the +DI position above – DI so that it became a trend reversal momentum from downtrend to uptrend which can be used as a momentum for stock buy signals for investors and traders. The price movement periodically rose until the close in December.

NISP Shares

Figure 7. Stock Performance Chart of BANK OCBC NISP TBK

At the beginning of the year in January, the stock price movement had experienced a sideways, followed by the price movement cutting the kumo into a momentum of changing the trend from sideway to uptrend followed by +DI cutting upwards -DI as validation, the momentum can be used for traders as a buy signal. After the stock price movement experienced a less significant increase, it was followed by a gradual decline in stock prices to cut the kumo and +DI cut down -DI so that it became a selling momentum for investors and traders.

At point A in April, the stock movement again increased by cutting the kumo and validated with +DI cutting upwards -DI followed by an adx value above 28 which can be used by investors and traders for the momentum of buy signals. Stock price movements experienced a significant increase from April to the end of July.

In mid-August, the movement of stock prices decreased after experiencing a significant increase, the stock price cut below the kumo followed by +DI cutting down -DI as a validation of the trend change from uptrend to downtrend so that the momentum became a sell signal for investors and traders at point B and continued to decline until November.

In mid-November towards December, the stock price movement tried to cut above the kumo and +DI cut above -DI, but the price was unable and returned to the kumo zone. In December, at point C, the stock price movement managed to cross above the kumo and +DI crossed above -DI, which validated the signal momentum to buy stocks for investors and traders.

TRIM Shares

Figure 8. Stock Performance Chart of TRIMEGAH SEKURITAS INDONESIA TBK

At the beginning of the year in January, the stock price was declining with an indication that the price was below the kumo, entering February the stock had experienced a reversal from downtrend to uptrend. The stock price movement did not succeed in trying to cut the kumo upwards but did not succeed so that the stock price movement again experienced a decline at point A until June.

In July, the stock price movement experienced a reversal of the direction that was originally a downtrend to an uptrend with price validation cutting above the kumo and +DI crossing up -DI thus forming a buying signal momentum for investors and traders at point B until October.

In October, the movement of stock prices decreased until it entered the kumo zone, indicating that the trend changed direction from uptrend to sideway at point C until December. In the middle of December, the stock price movement crossed above kumo followed by +DI cutting up -DI so that there was a sideway trend change menuju uptrend. Menjadikan momentum sinyal beli saham untuk para investor maupun trader.

BFIN Shares

Figure 9. Stock Performance Chart of BFI FINANCE INDONESIA TBK

In January, the stock price movement crossed above the kumo and +DI crossed up - DI indicates an uptrend signal, making the momentum for a buy signal for investors and traders at point A. In mid-April, the stock price movement decreased until it entered the kumo zone. However, the price movement did not cross below the kumo even though +DI cut below -DI.

In July, the stock price experienced significant movements in a period of about 4 days so that the stock price crossed above the kumo and +DI crossed up -DI. However, the price periodically decreased at point B until it cut the kumo which became a momentum for selling signals for investors and traders. Until the stock price declined in November, it became a trend change from uptrend to downtrend.

In November, the stock price movement crossed above the kumo and +DI crossed above -DI became a validation of the trend change from downtrend to sideway even though the stock price was above the kumo.

Discussion

Based on this study, the use of the Directional Movement Index (DMI) and Ichimoku KinkyoHyo indicators has proven to be effective in predicting stock price trends and providing signals for investment decision-making. The combination of these two indicators can increase the accuracy of trading decision-making in the financial stock sector on the Indonesia Stock Exchange.

Conclusion and Suggestions

The conclusion of this study is sufficient to summarize the main findings, namely the use of the Directional Movement Index (DMI) and Ichimoku Kinko hyo indicators can provide relevant signals for investment in the financial stock sector on the Indonesia Stock Exchange. Practical implications for investors and traders can also be further developed, for example in the context of more dynamic market conditions or high volatility that often triggers false signals. In addition, the limitations of using DMI on stocks with high volatility need to be explored further.

Suggestion for future researchers

Suggestions for leading research are to use it in other sectors on the Indonesian stock exchange, or to use it in other financial instruments such as cryptocurrency and also forex/foreign exchange and to use it in a smaller time frame daily or hourly or to use a combination of more accurate indicators.

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