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## Analysis of the effect of fan gann and square nine in the forex market (Study of performance and profitability XAUUSD)

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### Abstract

Gann angles and the square of nine for technical analysis are tools for tracking prices and determining the price trend for currency pairs. Gann angles are considered as a trend line, meaning the price direction, and when the price angles intersect, a price reversal occurs, and the square of nine for determining entry and price reversal areas, helps traders speculate in the markets. Different types of things, such as (Forex), the stock market (Crypto), and other financial markets, and using programs that display price charts and technical analysis tools to help draw the current path taken by the price (high, low, low) and determine for them the current location that the price reached when merging more. It is a strategy that gives the market a clear vision of the future that helps traders make the best decision, and it is the appropriate decision that suits the location of the price, a high decision (buy) or a low decision (sell), and an occasional decision (wait) while taking into account reducing the risks for those decisions and managing capital.

**Keywords:** Premium, capital formation, insurance business, Nigerian, ordinary least squares

### 1. Introduction

The topic of financial markets and increasing demand for investment has become the primary concern for many traders to understand market movements and study all technical analysis systems and strategies in making investment decisions, especially in the foreign exchange market Forex. This has generated great interest among many people interested in technical analysis and the motivation to innovate many... It is one of the techniques and methods for the purpose of analyzing the performance of financial markets in general and foreign currencies in particular, with the aim of maximizing profits and minimizing losses. Traders suffer from the problem of choosing the appropriate timing to conduct the trading process. This problem is represented by the inability of most of them to choose the timing of entering the deal by selling and buying from the highest prices. From the lowest price, and allowing the losses to grow may lead them to the point of bankruptcy. Technical analysis techniques and Gann strategies have contributed to explaining whether the market movements are (rising or falling), and that this rise or fall will not continue indefinitely, as it must. There comes a period of time in which prices reverse and change their direction, and then those movements are exported in different stereotypical drawings and shapes that can be used to determine the appropriate timing for entering deals with strict capital management, to preserve capital and achieve a profit.

Some modern programs have been used to identify and analyze currencies, commodity pairs, or currencies to invest in, analysis programs (GANNZLLIA PRO) and (Trading View) and entering deals on one of the Forex platforms such as (Meta Trader 5).

### First: the problem of the study

Traders' decisions in the Forex market are affected by many factors, most notably the use of various technical analysis tools and indicators that help them identify speculative opportunities in the Forex market.

Active trading requires sound decisions because the wrong decision carries high costs and losses, especially since the decision to speculate in the Forex market requires a lot. Of data and information related to prices, which will determine a clearer picture of these prices in the future. When studying global markets, we find that they are concerned with technical analysis strategies and indicators to a great extent, as they are among the analysis tools that help the trader form a clear vision of market price trends. Accordingly, the research problem can be formulated in the following question:

1. Is it possible to predict the price direction of the GOLD/USD pair using the Fan Gann and Square of Nine strategies?
2. Is it possible to make profits from trading the Gold/USD pair using the Fan Gann and Square Nine strategies?

### Second: Study hypothesis

This study assumes that the application of the Gann Fan and Square Nine in the Forex market will lead to a tangible impact on traders' performance and profits. The hypothesis suggests that analyzing this effect will help determine the degree of effective influence of these tools on traders' performance and their ability to achieve tangible profits in the Forex market.

### Third: The importance of the study

The study attempts to highlight the importance of financial markets and their significant development, given the processes of openness and spread of modern techniques in analyzing and forecasting the movement of the foreign exchange market, especially the spread of technical analysis and Gann strategies and the emergence of analytical programs. Technical analysis and the Gann strategy seek to analyze what stands behind currencies in the Forex market. Rational and irrational factors and the extent of their influence on traders making investment decisions.

Here came the importance of the study to rationalize the decision, inform them of its work, and interpret its results in preparation for making the appropriate investment decision for the deal.

The importance of the study is that Iraqi libraries lack such a type of study, and it presents a practical and applied aspect of technical analysis in general and the Gann strategy in particular to contribute to increasing traders' information. Also, increasing traders' awareness of the importance of technical analysis as it provides important retracement timings and areas and reduces the percentage of risk in the investment decision in the Forex market.

### Fourth: Objectives of the study

The study aims to investigate what is the Gann strategy for technical analysis, how to use this strategy, the requirements for analyzing foreign currencies, interpreting its results and harnessing it in making a rational investment decision, and the necessity of combining it with other tools of technical analysis in order to increase the accuracy of forecasting price trends.

### Fifth: Study variables

1. Independent variable: Fan Jean and square nine.
2. Dependent variable: profitability in the Forex market represented by (resistance, support).

### Sixth: Study method

The goal is to complete the necessary information and data in this research, reach the most accurate results, and achieve the goals. The following has been relied upon

1. **Theoretical:** To complete the information on the theoretical side, Arabic and foreign sources, books, letters, and official websites were used, while taking advantage of the World Wide Web (www).
2. **Analytical:** The analytical side. The practical side of the study was written by conducting an analysis of the price movements of the gold pair/US dollar (XAUUSD) using the Fan Gann and Square Nine strategies.

### Seventh: Spatial and temporal boundaries

1. **Spatial boundaries:** the foreign exchange market (Forex).
2. **Time limits:** Data for the gold pair/US dollar (XAUUSD) at the viewing level (1 day to 1 hour to one minute) for the period from (10/6/2023) to (3/4/2024).

### The first section: The theoretical framework

First: The legal ruling - in Islam - for trading in currencies: The decision of the Council of the Islamic Fiqh Council of the Muslim World League regarding trading with the margin on which the currency market is based in the eighteenth session held in Mecca Al-Mukarramah from 15-14/3/1427 AH corresponding to 8-12/4/2006 AD, with a comment on the margin of the decision with some important points. This fatwa can be summarized in the following points:

1. Avoiding usurious interest represented by (overnight fees).
2. Do not trade bonds, as they are forbidden usury.
3. Trading in company shares without discrimination, as the purpose of the company or sector may be prohibited
4. Speculating without knowledge or awareness of market fluctuations and studying risks, and this is a type of gambled investment. (Jad, 2017, p. A) <sup>[12]</sup>.

### Second: Forex (Foreign Exchange)

Forex: It is the global currency market (Forex) It is the largest trading market in the world in terms of spread and liquidity, and it is the true measure of the economies of countries and major banks, and with the extent of its wide spread and high monetary liquidity, here are the risks (Al-Mahmoudi, 2013, p. 7) <sup>[13]</sup>.

### The word (FORE what is the Forex market considered:

Forex is considered a decentralized market, meaning that it does not have a specific place that brings together sellers and buyers or where buying and selling operations take place. Trading in it is carried out via modern communication networks such as calculators and telephones, meaning you can trade in it regardless of your geographical location (Shendi, 2018, p. :157-160) <sup>[20]</sup>.

### Third: Types of currency markets: (Al-Faki, 2007, p. 41)

1. **Trading in futures contracts:** It is speculation on currencies in the future based on the expected future price, where it is worked according to a specific technique that depends on what is available about the movement of future financial currencies and the economic situation of the country.

2. **Trading in option contracts:** It is a type that depends on specific plans for entering the market and determining the percentage of loss that can be tolerated before starting speculation. That is, it is possible to prepare plans for entering and exiting the deal before the market starts and linking this type to other variables such as oil, gold, and the prices of other commodities.
3. **Exchange trading:** It is protected by the owners of import and export companies, where speculation is carried out on the stability of the value of the currency, and the profit for the exporter and importer is from the total change in exchange rates for export operations.
4. **Real-time or instantaneous trading:** This type is what causes currency prices to change and move from one second to the next, and speculation in it is characterized by speed.

**Fourth: Features of the currency market: (Al-Mahmoudi, 2013, p. 24) <sup>[13]</sup>.**

1. **High liquidity:** The currency market enjoys huge liquidity. Once you click on the orders in the trading program, they will be executed instantly. Forex is a market in which orders and offers are available at every price, unlike the stock market, which remains suspended in a purchase deal.
2. **Financial leverage:** It is a tool provided by financial brokerage companies that allows you to trade with multiples of your capital, and the company provides it in different sizes.
3. **Profit in both upward and downward directions:** Profit in Forex is possible in both directions. If you expect a rise, you will buy, and if you expect a decline, you will sell, unlike stock markets, where investors wait for a rise because in the event of a decline, the price will be exposed to losses.
4. **24-hour work:** The Forex market operates 24 hours a day, five working days a week, which allows you to work at a time that suits you.
5. **Trading without additional commissions:** Brokerage companies in the currency market do not charge any additional commissions in exchange for executing transactions and do not benefit from profits except through price differences (spreads).
6. **The possibility of opening a free demo account:** Brokerage companies provide free demo accounts, through which you can trade in the market to practice it, face different conditions, and test your method of trading. The difference between a real and a demo account is fake money (Demo).
7. **The impossibility of a specific group controlling the market:** It is not possible for a specific group to control currency prices and manipulate them up or down due to the huge liquidity of the market.

**The second topic: the concept of technical analysis**

Financial markets and their development have become a measure of civilizational progress in our contemporary world, and without them it is difficult for nations to rise and advance. They are considered an effective means of achieving economic development in all fields.

(Kavi, 2009, p. 9) <sup>[4]</sup> These markets are considered real mirrors that reflect the economic conditions of the country. The reality of the situation also reflects the companies registered in it, and while those markets were a source of

wealth for many investors and adventurers as well, they were a source of misery and bankruptcy because they are characterized by extreme sensitivity, huge liquidity, and extreme fluctuations (Hussein, 2008, p. 5) <sup>[5]</sup>.

The price includes all of these factors and influences, and hence investors make their buying and selling decisions based on the price offered by the market (Al-Jamil, 2011, p. 68) <sup>[6]</sup>.

In addition to behavioral factors that form a combination that is repeated from one economic cycle to another, which technical analysts focus on, considering that history repeats itself (up or down), that is, whenever the market rebounds, there must come a moment, speed, or specific day in which the general trend of prices is reversed, and that every The price rises whenever new buyers join the trading process, pushing prices upbeat and optimistic about the strength of the price trend (KIRKPATRICK & DAHLQUIST, 2007: 3) <sup>[16]</sup>. As for the definition of JON MERFE, he defined technical analysis as the study of market movement using (price charts), that is, Japanese candlesticks, to explore the trend. Future prices (Murphy, 2009, p. 14) <sup>[21]</sup> By reviewing the above, we can know the technical analysis

1. Studying the price movement of financial instruments through price charts with the aim of predicting future price trends (TSINASLANIDIS & ZAPRANIS, 2016:3) <sup>[17]</sup>.
2. The science and art of detecting changes that occur in the prices of financial instruments at an early stage of time with the aim of making an investment decision and the goal of maximizing the wealth of traders (Rockefeller, 2020: 7) <sup>[20]</sup>.

**First: Principles of technical analysis: There are three principles of technical analysis**

**First: Price movement reflects everything**

This saying is the basis of technical analysis, and if this concept is not completely accepted, it is not easy to deal with technical analysis tools. The technical analyst believes that everything that can influence the price is reflected in the performance of the market, whether this is related to political events or the current psychological events of traders (Central Bank of Egypt, 2007, p. 4) <sup>[1]</sup>

The movement of prices goes in two directions that can be determined, and all markets in the world, whether they are markets (stocks, bonds, or currencies) move in an upward, downward, or sideways direction. The goal of the technical analyst is to determine the direction the price is heading in the initial stage and then trade and invest, meaning If the trend is upward, the investor's goal is to buy, and vice versa. (Lotfy, 2006, p. 62) <sup>[8]</sup>.

**Second: Dealer behaviors and price movement patterns tend to be repeated, or what is called history repeats itself:**

This fact cannot be ignored, and the rule depends on that we can, through studying the past, predict the future movement of the market. This is considered a psychological and psychological study of dealers, and the reaction to certain variables tends to be repeated, and their style of dealing with the upward or downward trend of prices tends to be similar, so this is reflected in the movement. We find that prices tend to move, forming recurring patterns and shapes, and then we reach the conclusion that what happened in the past is expected to happen in the future (Central Bank of Egypt, 2007, p. 6) <sup>[1]</sup>.

## Second: Pillars of technical analysis

There are four pillars that a trader can use objectively (KAHN, 2010: 10) <sup>[19]</sup>.

1. **Price:** It is the most important measure of profits and losses in trading operations, and it deserves the greatest amount of focus by traders.
2. **Size:** It includes concepts such as accumulation (aggregation) and (distribution) and how supply and demand are in the market.
3. **Time:** includes seasonal cycles and relationships between patterns and trends from the point of view of time.
4. **Sentiments:** This is a special area for measuring investors' consensus on a single opinion (optimism, neutrality, pessimism).

## Advantages and disadvantages of technical analysis

**Advantages:** Technical analysis has many advantages (Al-Tamim, 2010, p. 223)

1. Saving time and effort because it relies on information derived from financial markets.
2. The information that the technical analyst needs is available daily and regularly through market reports and daily newspapers.
3. The technical rule is characterized by its comprehensive application to any number of stocks.
4. Predicting price movements, finding market trends easily, and knowing patterns of investor behavior.

**Disadvantages:** (Hussein, 2008, p. 165) <sup>[5]</sup>.

As for analyzing emerging markets in general, technical analysis is not the best way to make investment decisions. This is due to the relatively paucity of historical data, as well as the paucity of followers and specialists in this type of analysis.

## Third: The concept of direction

The price trend is the backbone of technical analysis, as the goal of all technical analysis studies is to ultimately determine the trend, the extent of its continuity and reversal, and all the tools used in reading the chart and the price trend in a simplified manner, which is the direction that the market takes and the path that it moves. In it, and above all, it must be ensured that the price movement always proceeds in the form of a direction that can be identified. The price trend does not take the form of a straight line, as the market movement is characterized by a series of winding lines that consist of a number of ripples (peaks and troughs) if the price is high. A line is drawn from troughs, while the opposite is drawn from peaks. (Central Bank of Egypt, 2007, p. 24) <sup>[11]</sup>.

**Fourth: Support and Resistance:** (Meer, 1991, p. 46) <sup>[11]</sup>

In the previous series, we mentioned that the price moves from (highs and lows) and that the direction of these highs and lows is what determines the direction of the market. Now we can give a more appropriate name to these peaks and introduce the concept of support and resistance.

## First: the resistance area

Resistance represents the price level or the area that lies above the market movement chart, where selling pressure overcomes buying pressure and the price declines. The resistance level is usually recognized as the previous bouncing peak (Hamid, 2016, p. 72) <sup>[10]</sup>.

## Second: Support area

It is the opposite of the resistance area, which is the lowest levels from which the price bounces. Support is the level or area located below the chart where buying interest is strong (Murphy, 1991, p. 47) <sup>[22]</sup>.

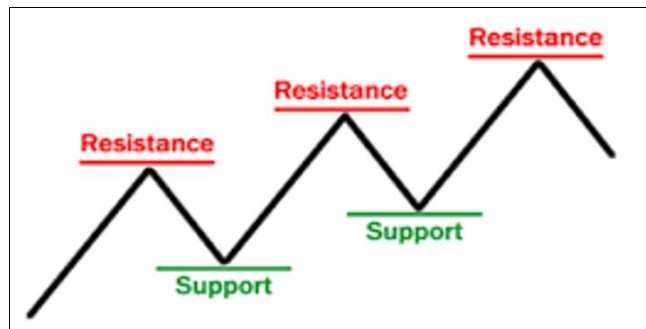


Fig 1: Is resistance

The source was prepared by the researcher, the outputs of the Trading View program

**Third: The area of reversal of the roles of support and resistance:** (Fand Qali, 2011, p. 14) <sup>[2]</sup>

After previously reviewing support and resistance, or what is known as (tops and bottoms), now the situation is not always this way. When the support or resistance level is broken by a fairly clear amount, we reverse their roles and it becomes the opposite, meaning the resistance level becomes support, and the resistance level becomes Support becomes resistance.

The source was prepared by the researcher, the outputs of the Trading View program

**Fifth: Gann fan theory (price angles) and (square of nine)**

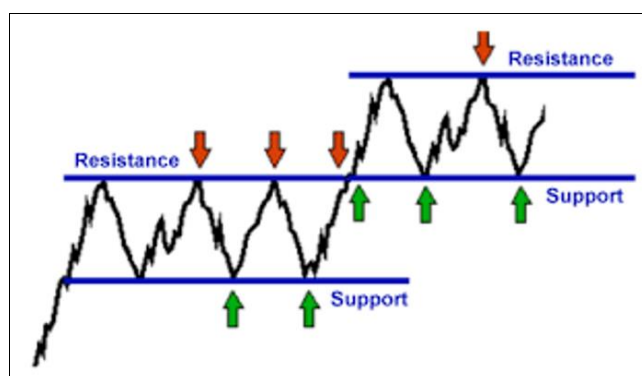


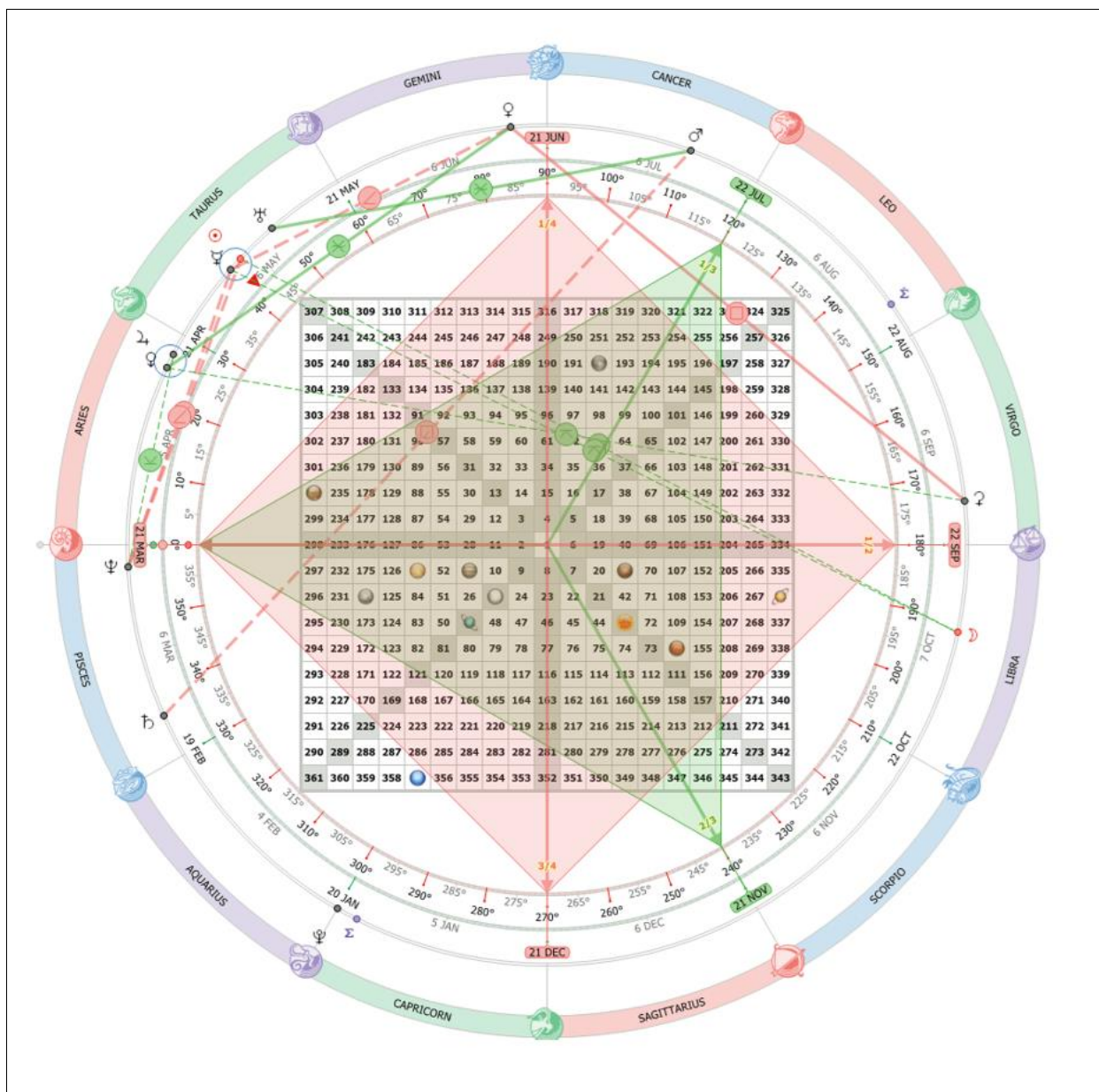
Fig 2: Support and resistance

William de Albert GANN said (that history repeats itself) when he reviewed historical events every (100) or (60) or (30) or (15) or (7) that had passed, and we see that in the year (1820) a cholera epidemic spread. After the year (100) and determining in (1918) the spread of the Spanish influenza epidemic, and in continuation of what Jean said that the price repeats itself after (100) in 2020, the Corona virus 19 spread, and just as Jean predicted the date of the start of the World War based on previous historical events, and from this standpoint that History repeats itself. He applied this idea to the financial markets, developing models of strategies in the field of technical analysis. It was known



that Jean was fond of and passionate about mathematics and numbers. A number of numbers and their multiples or divisions occupied prominent importance in his analyses, and for many reasons, including historical and religious. Likewise, the number (9) has gained attention because it is considered the last odd number in the count, followed by even numbers, and the basic idea of time-price angles is through what is called the square of nine, which was

developed based on the numbers (1,2,3,4,5,6). 7, 8, 9) that prices move in a spiral clockwise manner, and time moves in a circular manner (360) degrees. The square of nine was applied using the GANNZILLA PRO program as in Figure (4) to determine the areas of support and resistance represented by the geometric angles (Al-Ahmad And Al-Battat, 2023, p. 276) <sup>[3]</sup>.

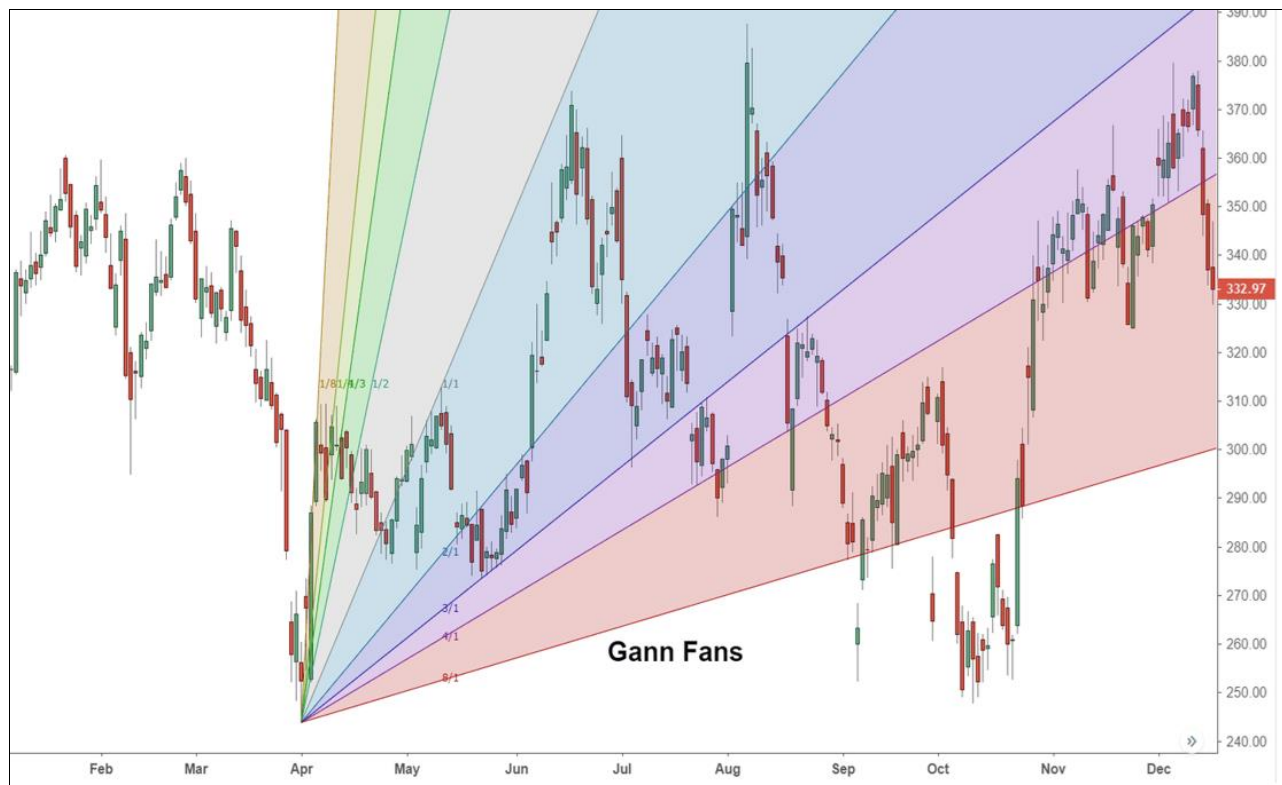


Source: Prepared by the researcher based on the program's outputs

Fig 3: GANNZILLA PRO program interface

After using the square of nine, we use a Gann fan, which is the price angles of the Gann, and it is one of the best means of expressing a balance between (price and time). It identifies the price reversal areas and the price retracement areas, and the method of drawing them from the peaks and bottoms that are prominent at an angle of (45) degrees, when determining the angles of the previous peaks and bottoms. It will determine for you trend lines, price bounces, future resistance and support areas, and trend lines, and at the intersection of the price angles, a price reversal and a change in direction occurs with the use of Fibonacci ratios

to determine the correction areas on the price angles. The ratios are (0, 0.33, 0.5, 0.66, 1). (Mair in, 1991, p. 70) <sup>[11]</sup> The previous strategies cannot be applied except after applying a mathematical equation (volatility), which is determining on the price charts (Japanese candlesticks), determining an angle (45) degrees, taking the highest price and subtracting it from the lowest price, then dividing by The number of candles in that wave on any frame, i.e. the views (day, hour, or even minute) and enter it in the chart metrics in the (Trading view) program (Hamid, 2016, p. 47) <sup>[10]</sup>. as in Figure (5).



Source: Prepared by the researcher from the Trading View interface

Fig 4: Trading view output

#### Sixth: Investment decisions

##### It is divided into two types of decisions

##### First: purchase

1. It starts from the number (1) and ends with the number (9). It starts from the corner (0), then faces an angle of (45 degrees), then the corner (90), then the corner (135), then the corner (180), then the corner (225), then angle (270), then angle (315), then angle (360), all of which are important angles that represent the price rebound.
2. Applying geometric shapes (square, triangle, octagon). Geometric shapes are taken to predict the reflection time, and the angles and sub-geometric shapes are also considered important areas.
3. Place Gann angles at the peak or bottom that is chosen in square nine.
4. Placing a 45 degree angle on a 1:1 angle will give confirmation areas for buying.
5. Take the measure of the price fluctuation chart when drawing the angles.
6. There are major and minor angles (major angles), which are the angles of a geometric figure (Secondary angles) are the numbered square angles.

##### Second: selling

If the market is in a rising state and then reverses to a falling state, then the angle before it is taken as the secondary or major angle (180) to the angle before it (135). As for confirming a Gann fan, if the price penetrates the lines of one of the Gann angles, then setting Fibonacci, we see the price trend. Corrective.

**The third section:** The analytical aspect: describing and studying the performance and profitability strategies and technical analysis to GANN.

##### First: describe the technical analysis of the study

1. **Price charts:** These are what Forex platforms display As (Meta Trader 5) for trading, the price line is represented by Japanese candles, in which the price fluctuates over time (open, highest, lowest, close), which makes up the body of the candle.
2. **Fan Gann:** This strategy requires opening the Trading View program to analyze the previous peaks and bottoms that have occurred and applying it to the angle measurement (45).
3. **Square of Nine Committees:** It requires taking the price of the bottom or top and dropping it in the middle of Square Nine along with the time date. The program (GANNZILLA PRO) is used, and it gives retracement zones on the corners of Square Nine, the minor and main ones.

##### Second: Description of the changes related to the study

With the aim of describing the variables on which strategies depend and how to extract them (analysis in Trading View and GANNZILLA PRO) and then entering trades in one of the Forex platforms (Meta Trader 5). An explanation of the extent of logical and philosophical correspondence between the theoretical and practical aspects includes all strategies of internal variables

1. **Price charts:** variables (price, time)
2. **Fan Gann:** Variables (trend, bounce)
3. **Square Nine:** Variables (price angles, support and resistance)

**Third:** Analyzing the role of the Gann fan and the square of nine in rationalizing the investment decision in the Forex market:

To achieve the goal of rationalizing the investment decision using the fan and square nine technical analysis of support and resistance for the period (10/6/2023) to (12/3/2023), the Trading View platform was harnessed to analyze and display price maps and enter into deals in The Meta Trader 5 platform, which starts on a specific date and time, and whether this is the price trend of the Forex currency (bullish or bearish), which is represented by a group of green candles that reflect the state of optimistic buyers' control over the pair (gold/dollar), but if the red candles appear, then this It means that sellers control a market, then identify the correct and prominent bottoms and tops that are chosen by traders as a starting point for their trading operations, and then monitor the price penetrations on the basis of which they are provided with a signal (wait - buy - initial sell).

**Fourth:** The role of investment strategies in making the investment decision of the gold/dollar currency pair

After opening the trading platform, taking a price (gold/dollar) and dropping the price value of the bottom or top that you expect to be the starting point in a fan and square nine and monitoring the movement of the price line in order to deduce the price angles, traders are required to do the following:

#### Open the Trading View program and choose the pair (Gold/Dollar)

Determine the price high or low of the pair (Gold/Dollar) and take the last high or low with its reversal and subtract the high from the low, then divide by the number of candles that the wave passed through, put the ratio in the chart scales, then choose the angle (45) degrees and place a Gann fan on it with Analyzing the previous tops and bottoms and using Fibonacci correction, seeing correction zones on the price angle lines and looking at the degree of price respect for the previous waves of the angle lines, as in the following figures:



**Fig 5:** Specifying propellers

1. After the Gann angles have been determined, we now use the square of nine in the GANNZILLA PRO program, which will determine the peaks, bottoms, and price cycles. The Japanese candlesticks showed

reversibility after the price faced previous support on (3/8/2023) at exactly the same time. (12) AM, according to the principle of technical analysis, a buy zone.



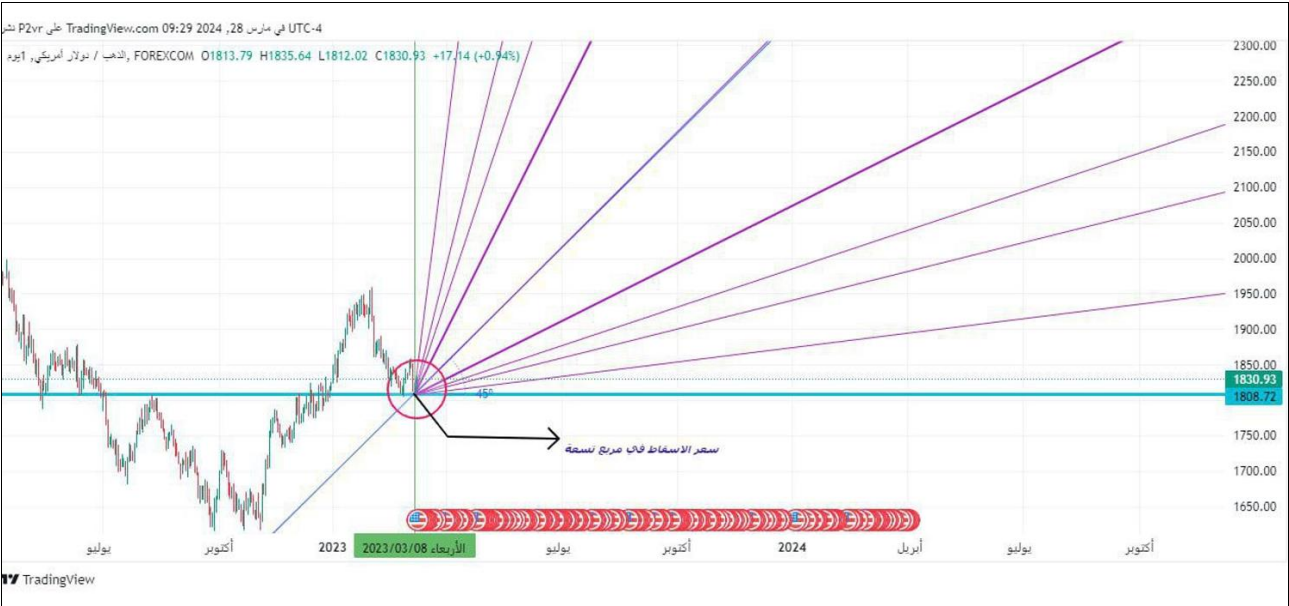


Fig 6: Determine entry

2. We take the bottom price and drop it into the middle of the square of nine the price of the pair (gold/dollar). (1810) at (10/6/2023) at (8) AM, and setting the target angles and prices.

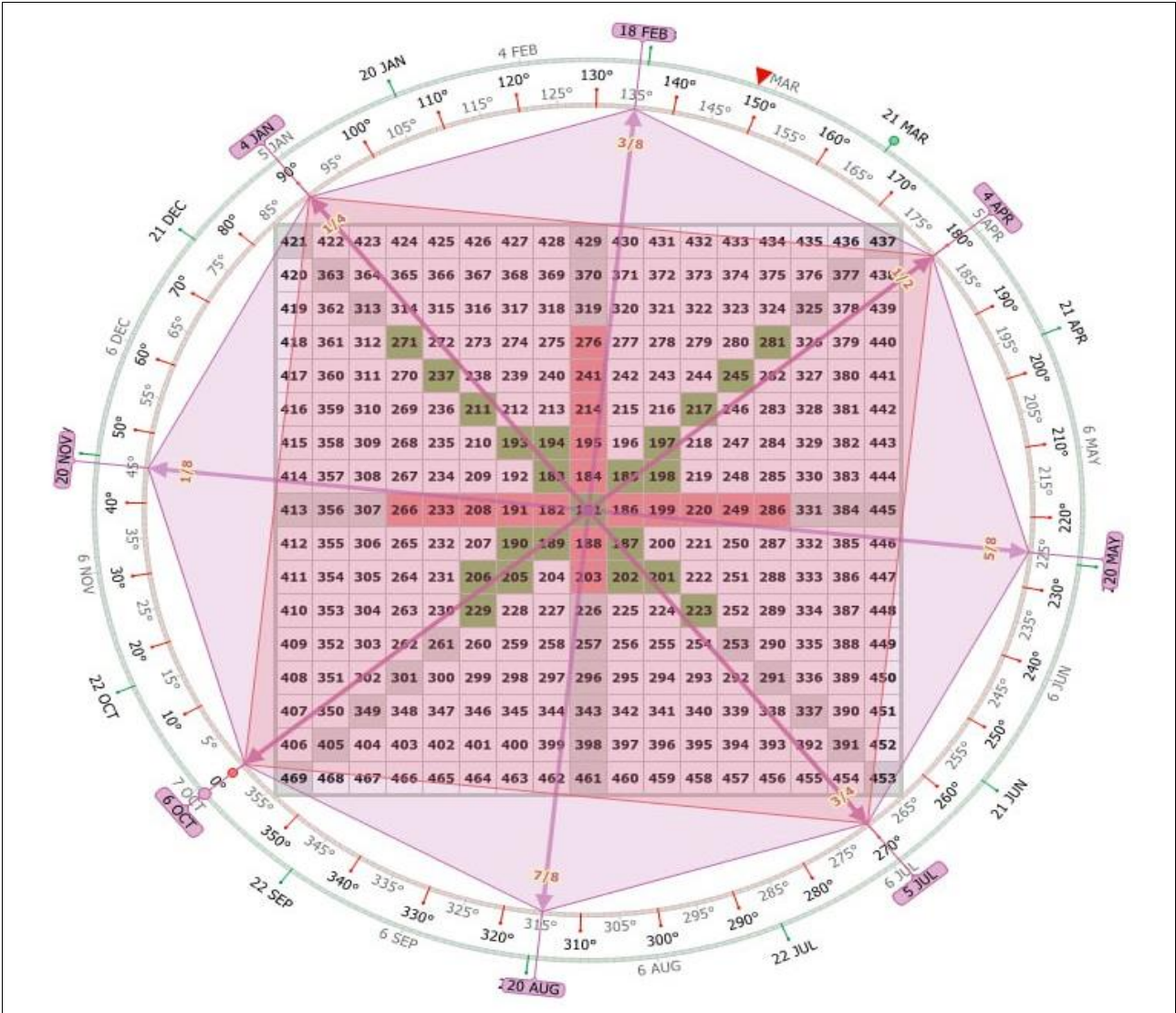


Fig 7: Drop the price



3. Based on the data of the GANNZILLA PRO program, prices were determined according to the square geometric shape.

#### First session

T	Corner	Price	Type corner
1	0	1810	Main
2	45	1820	Secondary
3	90	1830	Main
4	135	1840	Secondary
5	180	1850	Main
6	225	1860	Secondary
7	270	1870	Main
8	315	1880	Secondary
9	360	1890	Main

#### Second session

T	corner	price	type corner
1	45	1910	Secondary
2	90	1930	Main
3	135	1950	Secondary
4	180	1970	Main
5	225	1990	Secondary
6	270	2010	Main
7	315	2030	Secondary
8	360	2050	Main

#### Third session

Table No. (T)	Corner	Price	Type corner
1	45	2080	Secondary
2	90	2110	Main
3	135	2140	Secondary

Transactions will be made according to the previous schedules

**Table 4:** Deals Schedule

T	Price	Corner	Transaction Type	Target	Points
1	1840	Secondary 135	Buying	Main 2010 270	169.27
2	2010	Main 270	Sale	90 Main 1930	58.009
3	1915	Secondary 135	Buying	90 Main 2110	189.54
4	2110	90 Main	Sale	180 Main 1970	139.44
5	1990	Secondary 225	Buying	45 Secondary 2080	90.60
6	2052	Main 360	Sale	225 Secondary 1990	60.70
7	2010	Main 270	Buying	90 Main 2110	100.40

**Table 5:** Transaction history

T	The beginning of the deal date	The end of the deal date
1	6\10\2023	27\10\2023
2	31\10\2023	13\11\2023
3	14\11\2023	3\12\2023
4	4\12\2023	13\12\2023
5	14\12\2023	28\12\2023
6	31\1\2024	16\2\2024
7	19\2\2024	4\3\2024

#### Transaction analysis

**The first deal:** Japanese candlesticks display that the price of the gold/dollar pair has reached an important price area called support. This area is considered to the trader (buying area) and indicates that the price of gold has reached the lowest price that attracts buyers and investors and is called (demand area).

As for the technical analysis of the Gann angles in the previous analysis of the peaks and bottoms that had passed, the corners of a retracement zone appeared and indicated a price reversal, and when green candles appeared in the chart indicating a change in the price trend and the formation of a correct bottom at the price level (1810), here it was dropped. The bottom price in the GANNZILLA PRO program, and

the price levels appeared, and from here we entered the first purchasing deal, targeting the nine square corners (main or subsidiary).

**The second deal:** The second deal was entered after the price reversal appeared from the corners of the Gann fan, targeting the corner (45), as well as the price reversal from the corners of the square of nine, the main corner (270). The second round, targeting the lower corners, so the deal was a sale from the price of (2010) to the price of the corner (270). 90) (1930).

**The third deal:** After the price rebounds from the corner (90) and penetrates the price corner (135), it reverses upward, targeting the completion of the second cycle and the formation of the third cycle, penetrating the resistance area at the corner (270), re-correcting and forming support at this corner (270), targeting the third cycle, and the price fluctuates between (45) The angle of which is lower forms an ascending price channel, as in the following figure, showing all trades.

#### The fourth deal

The square corner target (135) was hit. The price formed a new historical peak in the market. Then the price returns down after penetrating the corner (90). Then we enter from this decline by (selling). As for the fan's decision, the price

is confirmed to fall after respecting the fan corner. (45) The target is the lowest angles.

#### Fifth deal

After the price rebounds and opens candles to confirm the rise and bounce at the corner (180) and takes confirmation of the fan of the price corners and breaks the corner (45), the corners are targeted at the top nine square (45) of the third session, and the decision is to buy.

#### The sixth deal

After a period of time has passed, the price moves in a horizontal area, and now the market gives a sell signal from the angle (360), and the price fluctuates above the fan lines, landing, targeting the angle (225) and returning to test the support area.

#### The seventh deal

After reversing from an angle of (225) and breaking an angle of (270), we enter with the upward trend, targeting the higher angles while observing the fan lines, and after confronting one of Gann's fan lines and breaking it today, gold confirms its return to the test, the historical peak that we talked about previously in the price (2140) area. The resistance (the supply area) and the Gann fan confirm the breach of the new peak to complete the third cycle.

#### Transaction summary and analysis

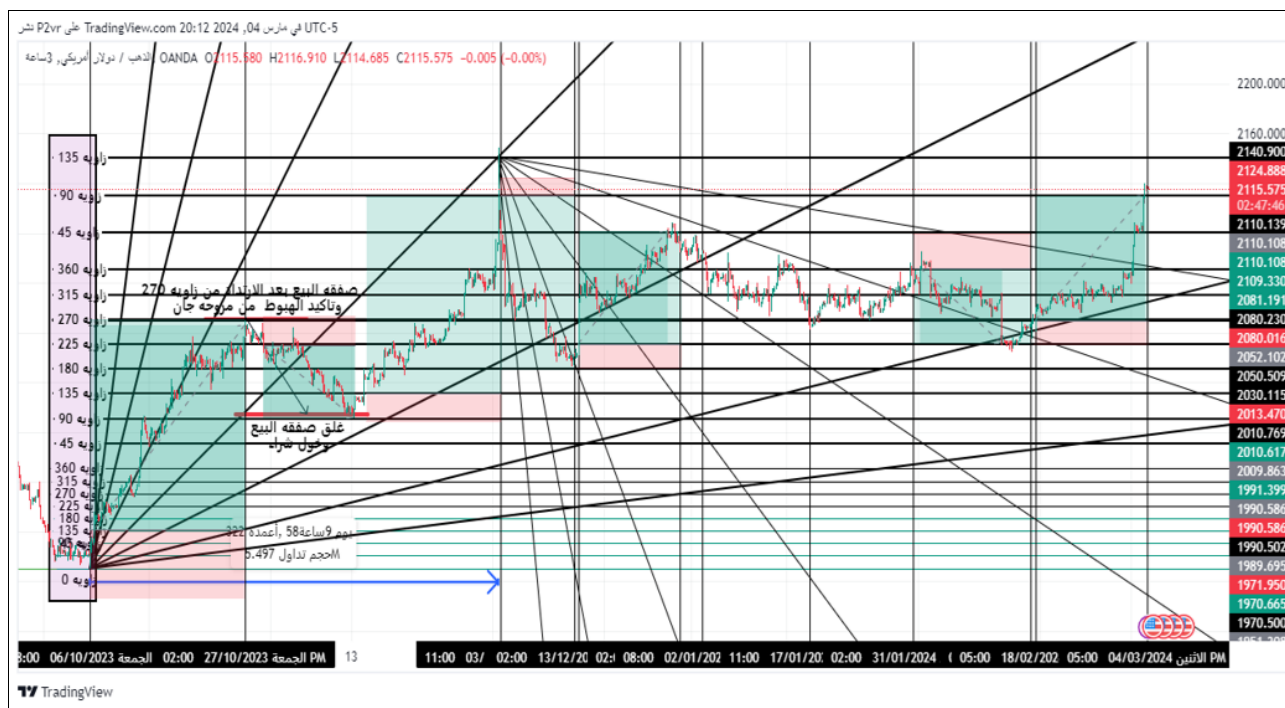


Fig 9: Deals

### Conclusions and suggestions

#### First: Conclusions

We conclude that technical analysis is an important entry into the analytical field, which distinguishes it with accuracy and simplicity at the same time. It crosses one of the fields that tracks the path of the market trend and explains the entry and exit sites from the markets. The Forex market crosses the (gold/dollar) pair from the pairs with great liquidity that reflects all natural and non-natural factors. The

Trading View or Meta Trader 5 platform is also considered a platform for displaying price charts and technical analysis tools for identifying support and resistance. The Fan Gann strategy is also considered a tool for identifying areas of retracement, support and resistance, and the Nine Committees Square also works as an arithmetic and mathematical machine. Geometric tracking of prices and identifying areas of support and resistance at geometric angles provided complete results in achieving price targets.

## Second: Proposals

**First:** Training on technical analysis platforms and strategies, and gaining experience in dealing with financial markets.

**Second:** Commitment to the moving stop loss order (insurance) to preserve profits and capital and allow it to grow.

**Third:** Capital management and risk management, as it is considered the biggest task of preserving capital and increasing profits and knowing how to invest capital through the mathematical equation, and applying it in an example (your account is \$1000 and we say that for each deal the risk rate is 1% of the capital, so here the loss From the capital of \$10 out of \$1000, through the equation knowing the contract size  
(Entry contract = value of loss in dollars / number of stop points) Before entering the deal, you must set a loss limit, for example, 50 points. The loss limit is if  $10/50 = 0.2$  contract size to enter the deal.

**Fourth:** We suggest to the trader to adopt a Gann fan and a nine square for technical analysis or more as a strategy for accurate decision making and to devise a system specific to the trader.

**Fifth:** The highest views are analyzed from (day) to (minute) to obtain a clear vision of the market.

## References

1. Central Bank of Egypt. Technical analysis of financial markets. Egypt; 2007.
2. Fandakli MA. Timing investor decisions according to technical analysis indicators by applying them to a number of shares of companies registered in the Arab financial markets. Mosul; 2011.
3. Al-Ahmad AS, Al-Battat MF. The role of nine-committee square technology in rationalizing investment decisions for traders in digital currencies. Journal of Business Economics. 2023.
4. Kafi MY. Stock exchange. 1st ed. Raslan Foundation for Printing and Publishing, Syria; 2009.
5. Hussein E. Stock markets (Stock Exchange). 1st ed. Dar Osama for Printing and Publishing, Amman; 2008.
6. Al-Jamil SK. Introduction to financial markets (Theories and Applications). Dar Ibn Al-Atheer for Printing and Publishing, Mosul, Iraq; 2011.
7. Mer J. The ease of drawing maps. Ahmed Salah Abdel Aziz, Egypt; 2009.
8. Lotfy ASA. Financial analysis for the purposes of evaluating and reviewing performance and investment in the stock exchange. University House, Alexandria; 2006.
9. Al-Tameem AF. Financial markets, a framework for regulation and evaluation of instruments. Dar Al-Yazouri Scientific, Jordan; 2010.
10. Hamed T. Jan's methods. Dar Al-Kutub Al-Ilmiyya for Publishing and Distribution, Egypt; 2016.
11. Mir J. Technical analysis of financial markets. Translated by Shaima Suleiman. Jordan; 1991.
12. Jad R. Forex trading. Dar Al Nour for Printing and Distribution; 2017.
13. Al-Mahmoudi SA. Forex, the foreign exchange market. King Fahd National Library Publishing House; 2013.
14. Shindi AQ. Financial markets and their impact on economic development and the Iraqi Stock Exchange. Baghdad: Journal of Economic Sciences Publishing House.
15. Al-Faki AT. Capital markets. 1st ed. Dar Al-Jinan for Publishing and Distribution.
16. Kirkpatrick C, Dahlquist J. Technical analysis: The complete resource for financial market technicians. 2nd ed. United States of America; 2007.
17. Tsinaslandis PE, Zapranis AD. [Book title not specified]. Springer International Publishing Switzerland. doi:10.1007/978-3-319-23636-0.
18. Rockefeller B. Technical analysis. 4th ed. John Wiley & Sons, Inc., Hoboken, NJ; 2020.
19. Kahn MN. Technical analysis plain and simple: Charting the markets in your language. 3rd ed. United States of America; 2010.
20. Shendi E, Sivri Özyay DI, Özkaya M, Üstünel N. changes occurring in chemical composition and oxidative stability of virgin olive oil during storage. ocl. 2018;25.
21. Murphy MP. How mitochondria produce reactive oxygen species. Biochemical journal. 2009 Jan 1;417(1):1-3.
22. Murphy KM, Shleifer A, Vishny RW. The allocation of talent: Implications for growth. The quarterly journal of economics. 1991 May 1;106(2):503-530.