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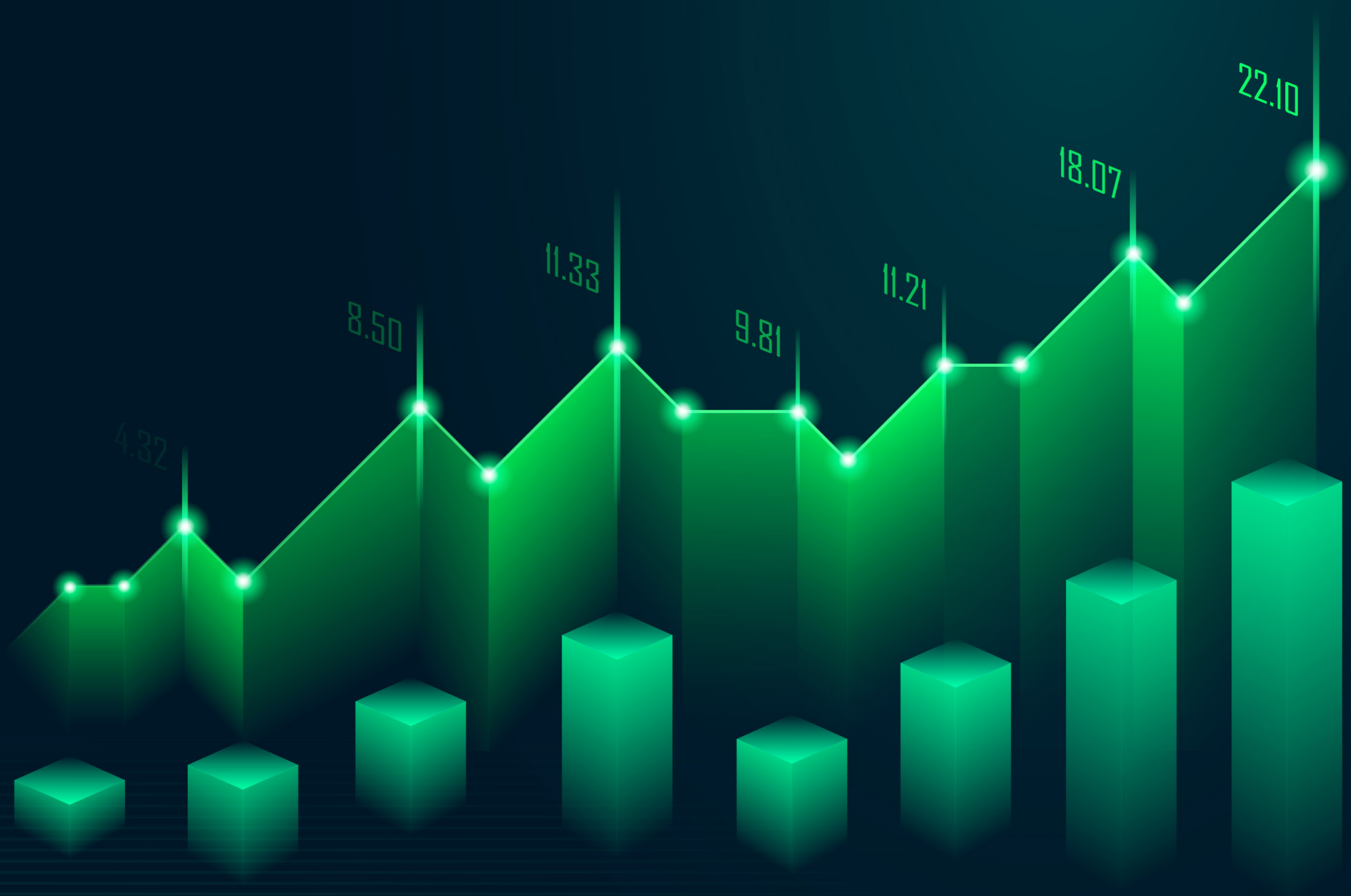
Financial
Center

# Futures Contracts on Stocks

## An Introductory Guide



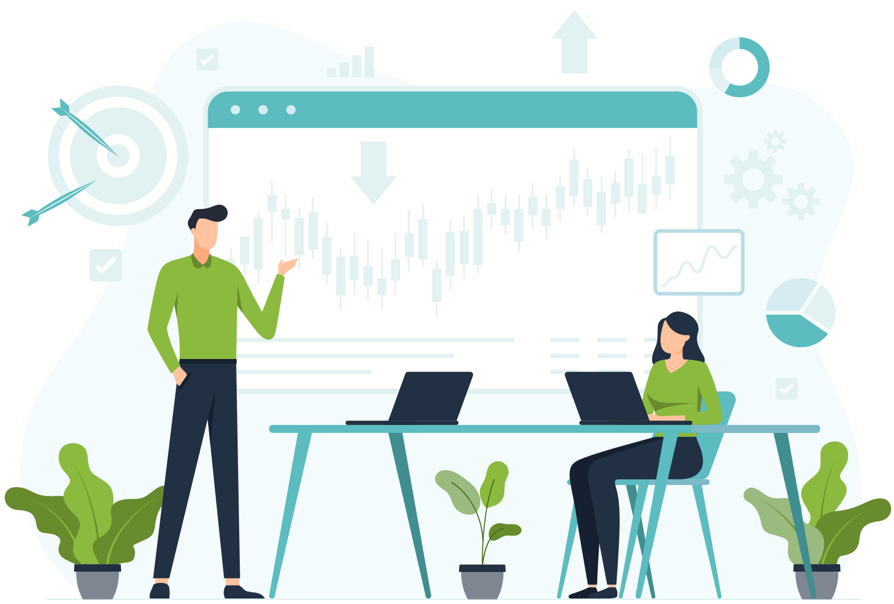
# Futures Contracts in Saudi Arabia

Tadawul Stock Exchange (TASI), the largest bourse in the Middle East and Africa in terms of market capitalization, has witnessed a remarkable performance in the past couple of years in terms of market improvement and development. Capital Market Authority (CMA) and Saudi Tadawul Group ("the exchange" or "Tadawul") have undertaken a wide range of market reforms under Vision 2030's Financial Sector Development Program. These reforms are aimed at deepening the market, supporting small & medium-sized companies for listing, easing regulations for both local and international investors to broaden the investor base, enhancing the overall standing of the market, and increasing products available to investors beyond traditional cash, equity, and sukuk/bonds.

The introduction of derivatives instruments is one such step toward the Financial Sector Development Program which promises to bring capital markets in KSA a step closer to its other comparable emerging and developed markets. Tadawul launched the Kingdom's first exchange-traded derivatives market and clearing house on 30 August 2020 as part of broader efforts by authorities to make the equity market more attractive to foreign investors and to boost liquidity. Tadawul, using Nasdaq technology, launched its first exchange-traded derivatives product, the "MT30 Index Futures", a futures contract based on the MSCI Tadawul 30 in August 2020. The MT30 Index Future includes the 30 largest and most liquid companies in Tadawul.

Tadawul is now gearing up to take the next step by introducing futures trading on single stocks to further improve liquidity and enhance the interest of retail clients. Initially, the exchange plans to allow futures trading in ten stocks in the second quarter of 2022, with the option to include more stocks on the futures counter when they meet the required criteria.

Futures contracts on stocks or indices are a relatively new concept for a large number of the current investor base in the Kingdom of Saudi Arabia ("KSA"), which is primarily dominated by retail clients. Therefore, to enhance investors' knowledge about these new products, we have presented some basic guidelines and concepts about these products to develop a better understanding. The discussion below primarily refers to futures contracts on stocks; however, it is equally applicable to other listed assets such as commodities, currencies, bonds, and interest rates.



# What are Futures Contracts?

Futures contracts are highly standardized financial instruments in which two parties agree to exchange an underlying asset at a mutually agreed-upon price at a specific time in the future. Futures contracts on stocks allow investors to exchange stocks for cash on a specified date in the future based on a price determined at the time of buying or selling the contract. The futures contracts are enlisted on the stock exchange and are standardized in terms of expiration date and the number of underlying stocks. The key determinant of the price of the contract is the price of the stock on which the contract is written.

At the time of expiry, the investor is obligated to settle the contract in cash. The loser of the two parties has to pay the difference between the current price of the stock and the price specified in the futures contract to settle the contract. If the stock price moves up, the buyer of the futures contract makes a positive return, and the seller has to pay the difference to the buyer. Inversely, if the stock price moves down, the seller of the contract makes a positive return, and the buyer has to pay the difference to the seller. This is the only settlement mechanism available in Tadawul. In some other markets, alternatively, the buyer could settle by paying the agreed-upon price and the seller by delivering the underlying stock.

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# How does it work?

Unlike a regular investment in stocks, investors do not pay the full cash amount upfront for the value of the futures contract, nor do they own the underlying asset. However, investors are required to pay a percentage of the contract value as an initial margin. The amount of the margin depends on the fluctuations in the underlying stock and usually ranges between 5% and 10% for institutional investors, between 7% and 13% for qualified retail investors, and between 10% and 20% for non-qualified retail investors. Thus, investors are exposed to the total value of the contract though they are only required to pay a percentage of the contract value as an initial margin.

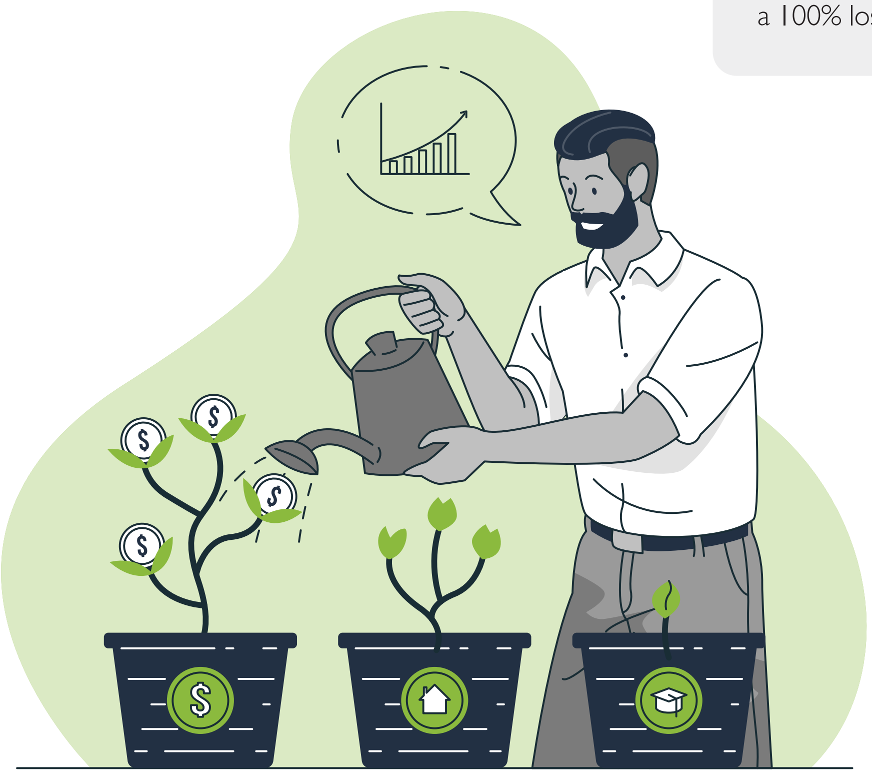
The value of a contract is calculated by multiplying the price of the contract by the number of shares in the contract. A single contract typically consists of 100 shares.

**Futures Contracts in Practice**

Today is January 1st, and an investor wants to buy Jarir's Stock as he expects it to rise in six months. Since he is currently short of funds, he decides to enter into a futures contract expiring in June 2022 for 100 shares of Jarir. The contract is trading at SAR 20,000, and the investor's broker requires an initial margin of 10% of the total value of the contract. Thus, with only SAR 2,000 investment in the futures contract, the investor has been able to gain an exposure of SAR 20,000 in Jarir.

After six months, owing to positive performances in the underlying stock, the futures contract rises to SAR 24,000 and the cash settlement at that date results in total profit of SAR 4,000, as the investor will receive his initial margin of SAR 2,000 in addition to his profit of SAR 4,000, to make a 200% profit.

Alternatively, if the market went down, resulting in a decrease in the futures contract value to SAR 18,000, the investor would lose SAR 2,000, a 100% loss on his investment.



# Daily Settlement

Tadawul uses the variance margin method for daily settlement. At the end of each trading day, Tadawul determines the closing price based on the futures trades in the last 10 minutes of the day or based on the theoretical price if there are no trades. The closing price becomes a basis for the calculation of margin requirements and daily profit or losses of the investors.

Depending on the new value of the contract, the contract holder's account is either debited or credited. If the buyer makes a profit from an increase in the value of the contract, the profit will be added to his balance, and there will be no action required from him. However, if the value of the contract decreases, the loss will be deducted from the investor's balance; and if his balance falls below the initial margin, the buyer will have to pay the difference to the broker no later than the next morning.

# Early Settlement

If an investor decides to unwind their position before the maturity date of the futures contract, they can enter into an opposing position in a futures contract of the same stock with similar characteristics. For example, if an investor has bought a futures contract on 100 stocks of Aramco that expires in June 2022, he can close it by selling another futures contract with the same underlying stock and maturity date.

**Daily Settlement in Practice**

An investor purchased a futures contract that expires in September 2022 for 100 shares of Almarai. The contract value is SAR 5,000 with an initial margin of SAR 1,000 (20% of the total value of the contract).

A day later, Almarai's stock went up; and as a result, the value of the futures contract increased to SAR 5,200, recording a profit of SAR 200. Therefore, the investor's balance with his broker became SAR 1,200 (initial margin + profit). The new balance still meets the initial margin requirement of SAR 1,000.

Next day, Almarai's stock declined, leading the value of the futures contract to fall to SAR 4,900, recording a loss of SAR 100. Saleh's balance is now SAR 900 (initial margin - loss) and therefore does not meet the initial margin requirements anymore. He has to deposit SAR 100 to raise his balance to SAR 1,000.

## Determinants of the Stock Price in the Futures Contract

The stock price in the future contract (futures price) is typically higher than the current stock price in the market (spot price). This condition is called "Contango", and it occurs because the futures price in normal situations equals the spot price plus the interest the investor can earn if he sells the stock today and lend the cash he receives for the duration of the futures contract.

**Futures Price = Spot Price + Interest on the Spot Price over the Life of the Contract**

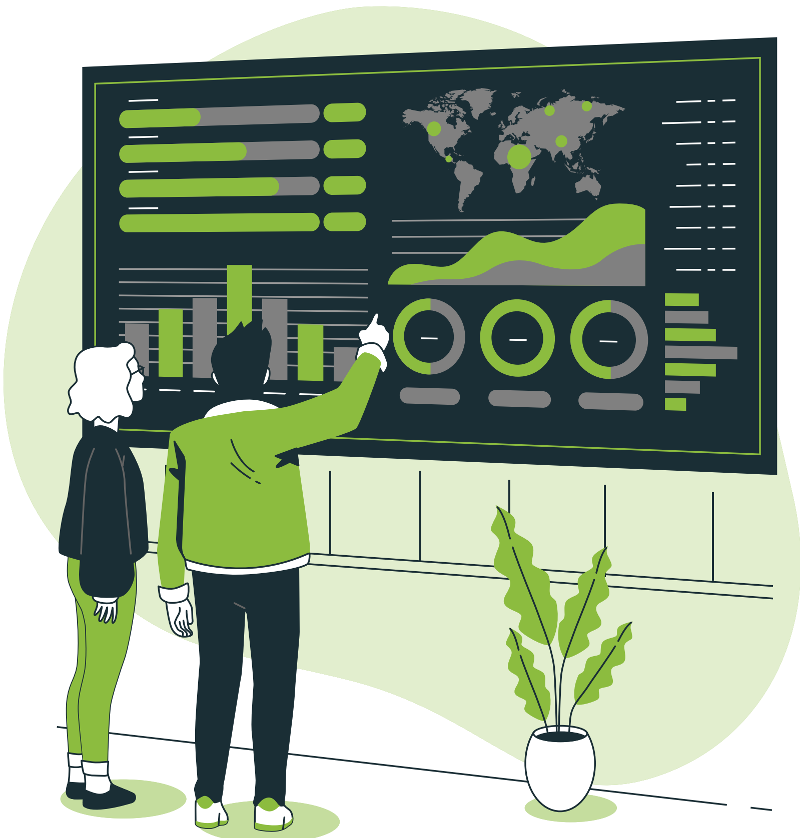
Hence, the main determinants of the stock futures price are the spot price of the stock, the market interest rate and the term of the contract.

## The Effect of Dividends on a Stock Futures Price

If a company announces cash dividends with the ex dividend date (the first day of trading of stock without the entitlement of dividend) before the expiry of the futures contract, the futures price should reflect a decrease equivalent to the cash dividends and the interest that can be earned on the cash dividend.

**Futures Price = Spot Price + Interest on the Spot Price over the Life of the Contract - Cash Dividend - Interest on Cash Dividend until the End of the Contract**

It is worth noting that this effect may cause the futures price to be lower than the spot price, a condition called "Backwardation", the opposite of "Contango".



## Purposes of Futures Contracts

Futures contracts serve three main purposes:

1. **Hedging:** Futures contracts are primarily used for hedging risk for any unfavorable and unforeseen price movements. Investors enter into a futures contract at a fixed price minimizing uncertainty and risk of adverse price movements.

   For instance, an investor owns a number of shares in Al Rajhi Bank, and he wants to sell them after 3 months, but he fears that the stock price will fall below its current price of SAR 175. To hedge this risk, the investor enters into a futures contract to sell the stock in three months for SAR 176. This way, the investor has hedged against any drop in the stock price below SAR 176 during the contract term, but at the same time, he has given up any potential profits if the stock increases above SAR 176 during the same period.

2. **Speculation:** Speculators have no intention of taking physical delivery of assets but look to make quick profits at or before the expiry of the contract by taking advantage of price movements. Futures are attractive to speculators because they only need to invest a small percentage of the contract's value as a margin to own the contract. If the investor properly predicts market movement, he will earn handsomely, as illustrated earlier in "Futures Contracts in Practice".

3. **Arbitrage:** Arbitragers attempt to generate a risk-free profit by simultaneously buying and selling an asset at different prices to exploit the price differential of the same asset in different markets or forms. Arbitrage opportunities arise due to market inefficiencies, and the presence of active arbitragers helps to mitigate these inefficiencies.

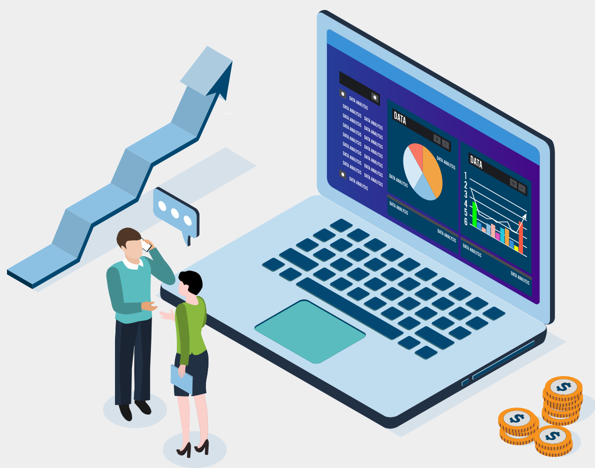
## Main Risks of Futures Contracts

Future contracts are associated with several sources of risks, the most important of which are the following:

1. **Highly leveraged Investments:** The Futures contracts allow investors to invest a small amount that may not exceed 20% of the total cost of the investment, while getting a full exposure to the full value of the investment, which leads to higher expected returns on the invested amount. On the other hand, risks also increase, as a small change in the value of the underlying asset could cause the investor to lose all his investment.

   For instance, the investor in the in "Futures Contracts in Practice" example was got a SAR 20,000 exposure with an investment of only SAR 2,000, implying a 10-time leverage. That means that profits and losses are also magnified by 10 folds.

2. **Settlement and Delivery Risk:** All contracts must be settled on their maturity date, in addition to daily settlement to cover the margin requirements. Clients' failure to meet the daily or final settlement requirements poses a great risk to brokers. Hence, brokers must be proactive when clients fail to make margin calls and take the necessary actions to close out the positions.



# MT30 Index Futures on Tadawul

Currently, Tadawul offers one futures product, called MT30 Index Futures with the contract code SF30. The underlying asset is the MSCI Tadawul 30 Index (MSCI 30), an index developed by MSCI, the leading provider of equity and other benchmarks globally. MSCI 30 Index represents a basket of approximately 30 largest & most liquid securities listed on the Tadawul Stock Exchange.

SF30 is available in different maturities: current month, next month, and the next two quarters. The contract size of SF30 is a product of its last closing price and factor of 100 with each increment of 0.5 points or SAR50. The daily price limit is set at 20% with a daily mark to market settlement at the end of the trading session. The actual name of the contract for different maturities is set according to the following formula:

**Product Code + Expiry Year + Expiry Month**

The following are the month and year codes for different months years:

| Month Codes | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | G | H | J | K | M | N | Q | U | V | X | Z |

| Year Codes | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 |

For example, a futures contract with expiration in June 2022 would trade with the following contract code: SF302M.

# Glossary

- **Expiration Date** (also known as maturity or expiry date) refers to the last trading day of the futures contract, on which the final settlement is made. In Tadawul, the expiry date is the third Thursday of the month in which the contract expires; and if it is a holiday, the expiry day of the contract will be the previous trading day.

- **Initial Margin:** The minimum guarantee required by the exchange before an investment is allowed. It is typically about 5-10% of the value of the contract for institutional investors, 7% to 13% for qualified retail investors (33% more than the initial margin imposed for institutional investors), and 10% to 20% for non-qualified retail investors (100% more than the margin imposed on institutional investors).

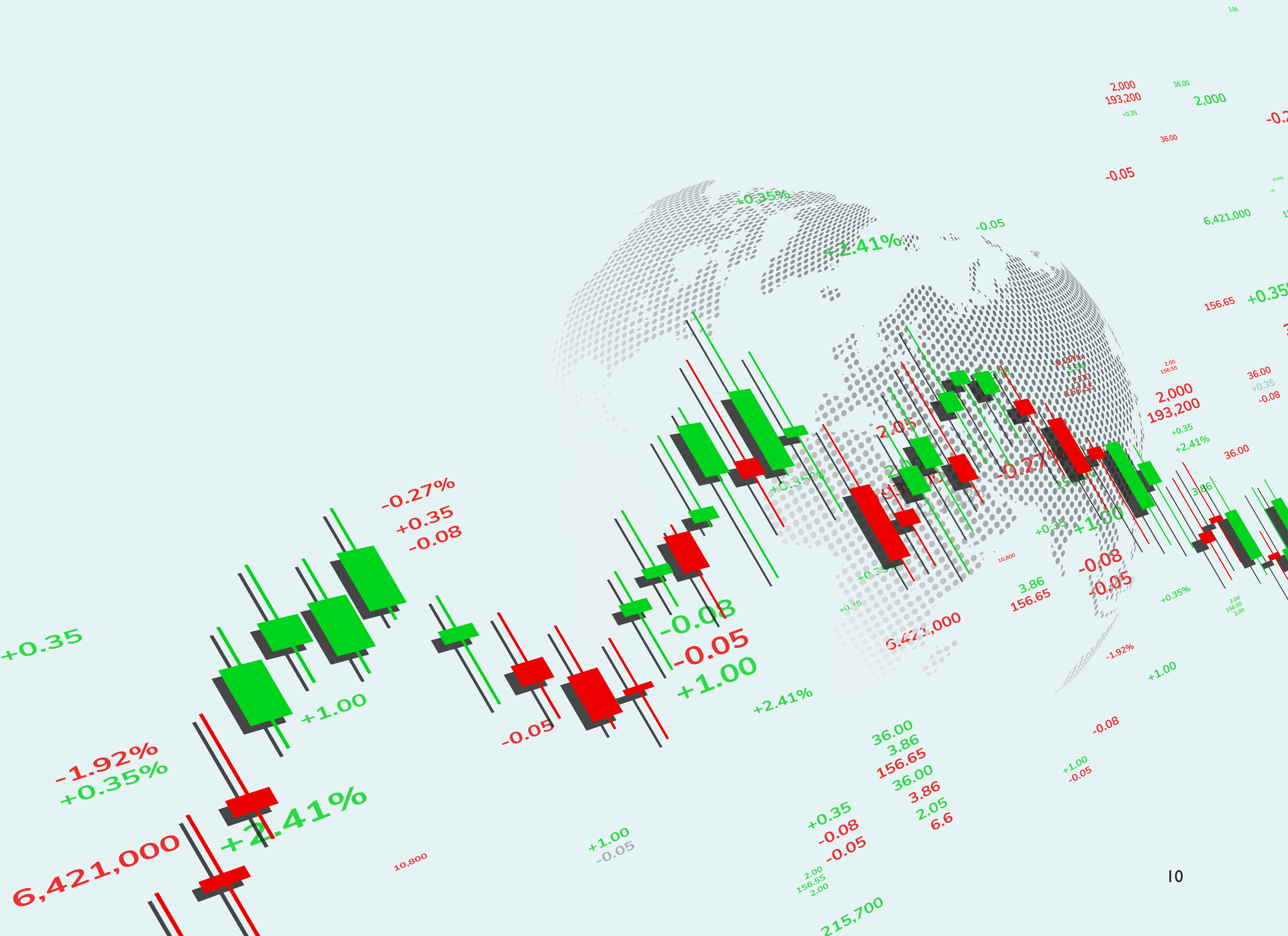
- **Variation margin** is the change in the investor's balance based on daily profits or losses. If the investor makes a profit, it will be added to his balance and no additional payments are required. However, If the investor incurs a loss, it will be deducted from his balance, and he will be asked to make a deposit to increase the balance in his account to cover the initial margin no later than the morning of the next day.

- **Daily settlement** refers to the process whereby the exchange debits and credits all accounts based on price movements.

- **The speculative position limit** is 10,000 contracts, which is the maximum number of net long or net short positions that an investor can hold at one point. Qualified investors can hold positions beyond 10,000 subject to approval from Tadawul.

# About Us

Tharaa Financial Center ("Tharaa", formerly Center for Financial Studies) is a research outfit affiliated with Prince Sultan University. Tharaa aims to support the financial markets as an independent outfit for capital market research, training of finance professionals, and promotion of investor education. In this regard, Tharaa focuses on two major areas, (i) publication of analytical, in-depth, and value-added investment research on public equities in KSA, and (ii) thematic ideas on key issues relevant to policymakers, investors, and the general public. Tharaa is staffed by well-qualified market professionals with extensive experience in investment research, private equity, investment banking, and asset management.



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