



**Options Basics**

**Core Concepts**

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|-------------------------|---|
| <b>Call Option</b>      | Gives the buyer the right, but not the obligation, to <i>buy</i> an asset at a specific price (strike price) on or before a specific date (expiration date).  |
| <b>Put Option</b>       | Gives the buyer the right, but not the obligation, to <i>sell</i> an asset at a specific price (strike price) on or before a specific date (expiration date). |
| <b>Strike Price</b>     | The price at which the underlying asset can be bought (for a call) or sold (for a put) when the option is exercised.  |
| <b>Expiration Date</b>  | The last date on which the option can be exercised.   |
| <b>Premium</b>          | The price paid by the buyer to the seller (writer) for the option contract.   |
| <b>Underlying Asset</b> | The asset on which the option is based (e.g., a stock, index, or commodity).  |

**Option Positions**

|                   |   |
|-------------------|---|
| <b>Long Call</b>  | Buyer of a call option; profits if the underlying asset price increases.  |
| <b>Short Call</b> | Seller (writer) of a call option; profits if the underlying asset price stays below the strike price or decreases. Has unlimited risk.  |
| <b>Long Put</b>   | Buyer of a put option; profits if the underlying asset price decreases.   |
| <b>Short Put</b>  | Seller (writer) of a put option; profits if the underlying asset price stays above the strike price or increases. Risk is limited to the strike price minus the premium received. |

**Option Moneyness**

|                               |   |
|-------------------------------|---|
| <b>In-the-Money (ITM)</b>     | <ul style="list-style-type: none"> <li>Call option: Underlying price &gt; Strike price</li> <li>Put option: Underlying price &lt; Strike price</li> </ul> |
| <b>At-the-Money (ATM)</b>     | <ul style="list-style-type: none"> <li>Underlying price = Strike price</li> </ul>   |
| <b>Out-of-the-Money (OTM)</b> | <ul style="list-style-type: none"> <li>Call option: Underlying price &lt; Strike price</li> <li>Put option: Underlying price &gt; Strike price</li> </ul> |

**Futures Contracts**

**Futures Fundamentals**

|                                |  |
|--------------------------------|--|
| <b>Definition</b>              | A futures contract is an agreement to buy or sell an asset at a predetermined price at a specified time in the future. |
| <b>Participants</b>            | Hedgers (seek to reduce risk) and Speculators (seek to profit from price movements).                                   |
| <b>Margin</b>                  | A performance bond required to enter and maintain a futures position. It is not a down payment.                        |
| <b>Mark-to-Market</b>          | Daily settlement process where profits and losses are credited or debited to the margin account.                       |
| <b>Contract Specifications</b> | Each futures contract has standardized specifications: quantity, quality, delivery location, and delivery month.       |

**Key Terminology**

|                       |   |
|-----------------------|---|
| <b>Long Position</b>  | Agreement to <i>buy</i> the underlying asset at the specified future date.                                  |
| <b>Short Position</b> | Agreement to <i>sell</i> the underlying asset at the specified future date.                                 |
| <b>Delivery</b>       | The process of transferring the underlying asset from the seller to the buyer at the contract's expiration. |
| <b>Settlement</b>     | Can be physical delivery or cash settlement, depending on the contract.                                     |

**Futures vs. Options**

|                 |   |
|-----------------|---|
| <b>Futures:</b> | <ul style="list-style-type: none"> <li>Obligation to buy or sell.</li> <li>Symmetrical payoff (profit or loss).</li> <li>Margin requirements.</li> </ul>  |
| <b>Options:</b> | <ul style="list-style-type: none"> <li>Right, but not the obligation, to buy or sell.</li> <li>Asymmetrical payoff (limited loss, unlimited profit or vice versa).</li> <li>Premium payment.</li> </ul> |

**Options Strategies**

**Basic Strategies**

|                       |  |
|-----------------------|--|
| <b>Covered Call</b>   | Selling a call option on a stock you already own. Generates income but limits upside potential.  |
| <b>Protective Put</b> | Buying a put option on a stock you own. Limits downside risk.  |
| <b>Long Straddle</b>  | Buying both a call and a put option with the same strike price and expiration date. Profits if the underlying asset price moves significantly in either direction. |
| <b>Short Straddle</b> | Selling both a call and a put option with the same strike price and expiration date. Profits if the underlying asset price remains relatively stable.              |

**Advanced Strategies**

|                         |   |
|-------------------------|---|
| <b>Bull Call Spread</b> | Buying a call option with a lower strike price and selling a call option with a higher strike price (both with the same expiration date). Profits from a moderate increase in the underlying asset price. |
| <b>Bear Put Spread</b>  | Buying a put option with a higher strike price and selling a put option with a lower strike price (both with the same expiration date). Profits from a moderate decrease in the underlying asset price.   |
| <b>Butterfly Spread</b> | A combination of call or put options with three different strike prices, designed to profit from low volatility.  |

**Volatility and Greeks**

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|---------------|--|
| <b>Delta:</b> | Measures the sensitivity of an option's price to a change in the underlying asset's price.     |
| <b>Gamma:</b> | Measures the rate of change of delta with respect to a change in the underlying asset's price. |
| <b>Theta:</b> | Measures the time decay of an option's value.  |
| <b>Vega:</b>  | Measures the sensitivity of an option's price to a change in implied volatility.               |
| <b>Rho:</b>   | Measures the sensitivity of an option's price to a change in interest rates.                   |

**Futures Trading Strategies**

## Basic Strategies

|                   |   |
|-------------------|---|
| <b>Long/Buy</b>   | Betting the price of the asset will increase. Profit is unlimited, and loss is limited to initial investment.     |
| <b>Short/Sell</b> | Betting the price of the asset will decrease. Profit is limited to initial price and loss potential is unlimited. |

## Advanced Strategies

|                       |  |
|-----------------------|--|
| <b>Spread Trading</b> | Taking a position in two or more related futures contracts to profit from changes in the price differential (spread) between them. Examples: calendar spreads, inter-market spreads. |
| <b>Arbitrage</b>      | Exploiting price differences in the same asset across different markets to generate risk-free profit.  |
| <b>Pair Trading</b>   | Identifying two highly correlated assets and taking opposing positions (long one, short the other) when the correlation temporarily breaks down.                                     |

## Risk Management

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| <b>Stop-Loss Orders:</b> Automatically exit a position when the price reaches a specified level, limiting potential losses.                |
| <b>Position Sizing:</b> Determining the appropriate amount of capital to allocate to each trade, based on risk tolerance and account size. |
| <b>Diversification:</b> Spreading investments across different assets and markets to reduce overall portfolio risk.                        |
| <b>Hedging:</b> Using futures contracts to offset potential losses in an existing portfolio.   |