Options and Futures Trading Cheat Sheet

A quick reference guide to options and futures trading, covering key concepts, strategies, and terminology for both beginners and experienced traders.

Options Basics

Core Concepts

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

Option Positions

Long Call	Buyer of a call option; profits if the underlying asset price increases.
Short Call	Seller (writer) of a call option; profits if the underlying asset price stays below the strike price or decreases. Has unlimited risk.
Long Put	Buyer of a put option; profits if the underlying asset price decreases.
Short Put	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

In-the-Money (ITM)

- Call option: Underlying price > Strike price
- Put option: Underlying price < Strike price

At-the-Money (ATM)

- Underlying price ≈ Strike price

Out-of-the-Money (OTM)

- Call option: Underlying price < Strike price
- Put option: Underlying price > Strike price

Futures Contracts

Futures Fundamentals

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

Key Terminology

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

Futures vs. Options

Futures:

- Obligation to buy or sell.
- Symmetrical payoff (profit or loss).
- Margin requirements.

Options:

- Right, but not the obligation, to buy or sell.
- Asymmetrical payoff (limited loss, unlimited profit or vice versa).
- Premium payment.

Options Strategies

Basic Strategies

Covered Call	Selling a call option on a stock you already own. Generates income but limits upside potential.
Protective Put	Buying a put option on a stock you own. Limits downside risk.
Long Straddle	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.
Short Straddle	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

Bull Call Spread	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.
Bear Put Spread	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.
Butterfly Spread	A combination of call or put options with three different strike prices, designed to profit from low volatility.

Volatility and Greeks

Delta: Measures the sensitivity of an option's price to a change in the underlying asset's price.

Gamma: Measures the rate of change of delta with respect to a change in the underlying asset's price.

Theta: Measures the time decay of an option's value.

Vega: Measures the sensitivity of an option's price to a change in implied volatility.

Rho: Measures the sensitivity of an option's price to a change in interest rates.

Futures Trading Strategies

Basic Strategies

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

Advanced Strategies

Spread Trading	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.
Arbitrage	Exploiting price differences in the same asset across different markets to generate risk-free profit.
Pair Trading	Identifying two highly correlated assets and taking opposing positions (long one, short the other) when the correlation temporarily breaks down.

Risk Management

Stop-Loss Orders: Automatically exit a position when the price reaches a specified level, limiting potential losses.

Position Sizing: Determining the appropriate amount of capital to allocate to each trade, based on risk tolerance and account size.

Diversification: Spreading investments across different assets and markets to reduce overall portfolio risk.

Hedging: Using futures contracts to offset potential losses in an existing portfolio.