IQIC - Quantitative Tools

#2: How Orders & Markets Work

From Decision to Trade

Why knowing what to buy isn't enough

- **Deciding to invest:** You have done your research and you want to buy a stock.
- **Executing a trade:** Actually placing an order and getting it filled at a price.
- **The gap:** The price you see on a screen may not be the price you get.
- **Why it matters:** Execution costs and order type affect your real return.

The Price You See Isn't the Only Price

Bid, ask, and the bid-ask spread

- **Bid:** The highest price a buyer is willing to pay right now.
- **Ask:** The lowest price a seller is willing to accept right now.
- **Spread:** The difference between the ask and the bid.
- **Why it exists:** Market makers earn the spread for helping trades happen.

	Price
Bid (price you can sell at)	$99.95
Ask (price you can buy at)	$100.05
Spread	**$0.10**

Why Some Trades Are Easy and Others Not

Liquidity and its impact

- **Liquidity:** How easily you can buy or sell something without changing its price.
- **High liquidity:** Many buyers and sellers, tight spread, fast execution (example: S&P 500 stocks).
- **Low liquidity:** Few buyers and sellers, wide spread, slow execution (example: tiny company stocks).
- **Why it matters:** Illiquid assets are harder and more expensive to trade.

	High Liquidity	Low Liquidity
Spread	Very small (0.01%)	Large (0.5% or more)
Execution	Happens instantly	May take minutes or hours
Price impact	Almost none	You might move the price

Buying at Any Price

Market orders and execution certainty

- **Market order:** Buy or sell immediately at the best available price.
- **Pro:** You are guaranteed to get filled (execution certainty).
- **Con:** You have no control over the exact price you get.
- **Best for:** Liquid assets where the spread is tight and speed matters.

Action	Result
You place a market buy for 100 shares of a big company	Filled immediately at $190.05
You place a market buy for 100 shares of a tiny company	Filled at $12.50, but price jumped from $12.20

Controlling Your Price

Limit and stop orders

- **Limit order:** Buy or sell only at a specific price or better.
- **Pro:** You control the price; you will never pay more than your limit.
- **Con:** Your order may never get filled if the market does not reach your price.
- **Stop order:** Becomes a market order when a trigger price is hit. Used to limit losses.

Order Type	What You Specify	How It Executes
Limit Buy	Maximum price you will pay	Only at or below your limit
Limit Sell	Minimum price you will accept	Only at or above your limit
Stop Loss	Trigger price	Becomes a market order when hit

Putting It Together

A simple scenario

- **Scenario:** You want to buy 500 shares of a stock trading at $50.
- **Liquidity check:** Average daily volume is 1 million shares. Spread is $0.02.
- **Your objective:** Get filled quickly but don't overpay.

Situation	Best Order Type	Why
Liquid stock, want fast execution	Market order	Tight spread, minimal slippage
Illiquid stock, want price control	Limit order	Avoid paying too much
Existing position, want to limit losses	Stop order	Automatic risk management

Additional Resources

Where to go next

- **"Order Types Explained" - Bullynx**
  Clear guide to market, limit, stop, and stop-limit orders with simple examples.
- **"Bid-Ask Spread" - Investopedia**
  Simple explanation of the spread and why it matters for traders.
- **"Market Liquidity" - CFA Institute**
  Short article on liquidity and its impact on execution and costs.