

40.317 Lecture 1 Trading Game

Overview

- Students are divided into teams competing against each other in one or more timed rounds.
- Each team has three roles to fill: Trader, Runner, and Desk.
- Traders from each team assemble in a trading pit. Their job is to close deals with other traders, i.e. to match buy and sell orders at a mutually agreeable price.
- Runners carry orders from the desk to the traders as well as post closed deals with the exchange and with the desk.
- Each team's desk keeps track of their order book.
- The entire game is managed via an exchange. The exchange enforces the game rules and maintains overall accounting and scores.

In More Detail

- Each team has a book of live orders to fill, visible only to them.
- Each order is a buy or sell request on a single security at a designated reference price. For simplicity, all orders are assumed to be on the same security.
- A team can only fill an order from their book by agreeing a trade with another team, i.e. matching one of their buy/sell orders with one of the other team's sell/buy orders at an agreed trade price.
 - Matching buys and sells within the same team is prohibited.
- For simplicity all order sizes are assumed to be identical, so every order can only be fully filled, never partially filled.
- A trade's P&L is its trade price minus the related order's reference price, times the (fixed) order size, times 1 for buys or -1 for sells.
- (Therefore) each team is attempting to maximise its P&L by filling their buy orders at the reference price *or lower*, and filling their sell orders at the reference price *or higher*.
- The number of live orders in a team's book is fixed. As soon as a team fills an order, it drops out of their book and the exchange automatically generates and adds a new one.
- Orders never expire, however they do become cancellable after a fixed number of minutes. So a team can ignore a difficult order by choosing to wait until it becomes cancellable, then cancelling it.

Strategy Tips

- A clear division of responsibilities within your team will decrease the chance of errors and delays.
- The more time you spend negotiating each deal, the fewer deals you can make.
- You can win by making a small number of very profitable deals, or by making a large number of moderately profitable deals.