



Order-driven Market

- Limit (buy/sell) order: an order to trade (buy/sell) certain amount of a security at a given price.
- Limit orders are posted to a electronic trading system, and the state of outstanding limit orders can be summarized by stating the quantities posted at each price level: this is known as the limit order book.
- Bid price: The highest price for which there is an outstanding limit buy order.
- Ask price: The lowest price for which there is an outstanding limit sell order.



Order-driven Market (cont'd)

- Market (buy/sell) order: an order to buy/sell a certain quantity of the asset at the best available price in the limit order book.
- The dynamic of the limit order book can be modelled by Markov chain (See Cont, R., Stoikov, S. and Talreja, R., *A stochastic model for order book dynamics*. Oper. Res., 2010, 58, 549–563.)