

The Single-Period CRR Model
Mathematical Finance
Winter 2006
Lecture Review List
Single Period Binomial Model (Cox-Ross-Rubinstein Model)
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1. Statement of the goal of the investigation
2. Description of the Single Period CRR Model, including both primary and secondary markets, the model assumptions, and the notation
3. Definitions: know statements
 - (a) Viable financial market
 - (b) Trading strategy for the primary market
 - (c) Replicating strategy
 - (d) Manufacturing cost
 - (e) Risk neutral probability
 - (f) Trading strategy for the secondary market
 - (g) Arbitrage opportunity for the secondary market
4. Lemmas: know statements and proofs
 - (a) Existence and uniqueness of the replicating strategy
 - (b) Able to derive a formula for the replicating strategy (formula provided otherwise)
 - (c) Manufacturing cost lemma
 - (d) Risk Neutral property
5. Contingent claim pricing theorem: know statement and proof