

PROBLEMS 2. 9.2.2015

Q1. With $x_+ := \max(0, x)$, $x_- := -\min(0, x)$, show that

(i) $|x| = x_+ + x_-$;

(ii) $x = x_+ - x_-$;

(iii) $x_+ = (-x)_-$.

Deduce put-call parity from

$$P - C = (K - S)_+ - (S - K)_+ = (K - S)_+ - (K - S)_- = K - S.$$

Q2. Justify the statement in the text (Baring's and Singapore/Osaka: II.7), that it was obviously impossible to systematically exploit price movements between these two exchanges in either direction.

Q3. *Financial failures.* Using the Internet, investigate the major financial failures of recent years, including:

(i) Barings;

(ii) LTCM;

(iii) Lehman Brothers.

Q4. *Sovereign default.* Using the Internet, investigate the major sovereign debt defaults of recent years (governments reneging on debts).

Q5. *Financial fraud.* Using the Internet, investigate the major financial frauds of recent years, including:

(i) Barings;

(ii) Société Générale;

(iii) UBS.

NHB