

Class 6

Derivatives: forwards and futures

Reading: GT: Chapter 7.

Question 1

The current value of a share in Robotronics is \$12.50. The one year riskless rate is 6%.

- a) What are the prices of three- and five-year forward contracts on Robotronics stock?
- b) Three-year forward contracts are currently being sold for \$16 in the market. Outline an investment strategy that could take advantage of the arbitrage opportunities this presents.

Question 2

The DAX spot price is 3,970.22. The annual interest rate is 3.5% and the annual dividend yield on the DAX index is 2.0%. What is the implied price of the 6 month DAX futures contract?

Question 3

The current spot exchange rate is £0.64=\$1. The riskless rate in the UK is currently 6% and that in the US is 4% p.a. Find the implied 5- and 10-year forward exchange rates. Assume continuously compounded interest rates.

Question 4

After a record harvest, grain silos are likely to be full to the brim. Are marginal storage costs likely to be high or low? What does this imply for the grain futures prices?