

# M86 Homework 1

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## Exercise 1

### Wilmott Ch. 1 Questions

**Question 1.1** A company makes a three-for-one stock split. What effect does this have on the share price?

**Answer** The share price will decrease by a factor of three. So if the share price was \$90 before the split, it will be \$30 after the split. The total value of the shares will remain the same.

**Question 1.2** A company whose stock price is currently  $S$  pays out a dividend  $DS$ , where  $0 \leq D \leq 1$ . What is the price of the stock just after the dividend date?

**Answer** The price of the stock after the dividend date will be  $S' = S - DS$ . So if the stock price is \$100 and the dividend is \$0.50, the price of the stock after the dividend date will be  $S' = \$100 - \$0.50 = \$99.50$ .

**Question 1.3** The dollar sterling exchange rate (colloquially known as 'cable') is 1.83,  $\text{£}1 = \$1.83$ . The sterling euro exchange rate is 1.41,  $\text{£}1 = \text{€}1.41$ . The dollar euro exchange rate is 0.77,  $\text{\$}1 = \text{€}0.77$ . Is there an arbitrage, and if so, how does it work?