Options, Futures and Derivatives

June 18, 2024

Question 1

1.1

A long forward is where you buy a forward contract, whereas a short forward is where you sell a forward contract.

1.2

- **Hedging** - Using derivatives to reduce risk.
- **Speculation** - Using derivatives to make bets in the financial markets.
- **Arbitrage** - Riskless profit by trading multiple derivatives.

1.3

For the latter, the strike price gives the holder of the contract the right, but not the obligation, to buy that contract in the future for that price. A forward price gives the holder the right to buy that contract in the future.

1.4

Selling a call option means that you are borrowing the call option, assuming that the price of the call option will go down or it will expire worthless. Buying a call option is the opposite.

1.5

Since short forward, initially he has:

$$1.5 \times 100,000 = 150,000$$

If:

- (a) Since shorted, he will gain:

$$150,000 - 149,000 = 1,000$$

- (b) He will lose:

$$152,000 - 150,000 = 2,000$$