**Week1 Seminar Questions**

1. You put $1000 in the bank at a continuously compounded rate of 5% for one year. At the end of this first-year rates rise to 6%. You keep your money in the bank for another eighteen months. How much money do you now have in the bank including the accumulated, continuously compounded, interest?
2. An investor buys a European put on a share for $3. The stock price is $42 and the strike price is $40. Under what circumstances does the investor make a profit? Under what circumstances will the option be exercised? Draw a diagram showing the variation of the investor’s profit with the stock price at the maturity of the option.
3. An investor sells a European call on a share for $4. The stock price is $47 and the strike price is $50. Under what circumstances does the investor make a profit? Under what circumstances will the option be exercised? Draw a diagram showing the variation of the investor’s profit with the stock price at the maturity of the option.

4. a. What is a lower bound for the price of a 4-month call option on a non-dividend-paying stock when the stock price is $28, the strike price is $25, and the risk-free interest rate is 8% per annum?

b. What is a lower bound for the price of a 1-month European put option on a nondividend-paying stock when the stock price is $12, the strike price is $15, and the risk-free interest rate is 6% per annum?

1. The price of a non-dividend-paying stock is $19 and the price of a 3-month European call option on the stock with a strike price of $20 is $1. The risk-free rate is 4% per annum. What is the price of a 3-month European put option with a strike price of $20?

6.

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描述已自动生成

Prove equation 11.7.