Quiz 25 for Nov 30

Started: Nov 25 at 12:43pm

Quiz Instructions

Complete this quiz by 11:00 a.m. on Wednesday November 30.

Question 1

1 pts

The discount function is $P(0,1) = 0.9724$, $P(0,1.25) = 0.9651$, $P(0,1.5) = 0.9575$, and $P(0.1.75) = 0.9497$. Now consider the forward rate for a forward rate agreement (FRA) that exchanges a fixed forward rate for a 3-month interest rate observed at date T where the exchange occurs at date T+1/4. What is the no-arbitrage forward rate, $f_0(T,T+\Delta t)$, if T = 1.25 and $\Delta t = 0.25$?

State your answer as a percentage rate to 3 decimal places, e.g., 2.428 .

3.1749

Question 2

1 pts

Based on the discount function in Question 1, what is the Black model value of a caplet with a notional principal of $40 million that is written on the 3-month interest rate with a cap rate of 3.50%, where T=1.25, and where the volatility of the underlying forward rate is $v_T = 0.3$?

State your answer in dollars to the nearest $100, e.g., 58,400 .

28,800

Question 3

1 pts

A corporation has just borrowed $60 million in the form of an 8-year syndicated loan that makes quarterly payments equal to 3-month LIBOR plus 4.00%. If the firm wishes to limit the interest it pays each quarter to have a maximum of $1.5 million and a minimum of $900,000 it should buy a collar with

- ○ X_c=0.10 and X_f = 0.06
- ○ X_c=0.08 and X_f = 0.02
- ○ X_c=0.08 and X_f = 0.04
- ◉ X_c=0.06 and X_f = 0.02

Question 4

1 pts

The current swap rate on a 10-year interest swap making quarterly exchanges based on 3-month LIBOR is 2.00%. A 10-year interest rate cap based on 3-month LIBOR with a cap rate of 2.00% and a notional principal of $10 million is currently worth $500,000. What is the current value of a 10-year interest rate floor based on 3-month LIBOR with a floor rate of 2.00%?

State your answer in dollars to the nearest $1,000, e.g. 376,000 .

500,000

Question 5

1 pts

Ask one or more questions or make one or more comments regarding the material covered in this class.

Edit View Insert Format Tools Table

12pt Paragraph

why do we always assume the Normality when valuating?

p

9 words

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Quiz saved at 8:36pm

Submit Quiz