Quiz 5

- Due Apr 11 at 11:59pm
- Points 50
- Questions 7
- Available Apr 10 at 3:30pm - Apr 11 at 11:59pm
- Time Limit 45 Minutes

This quiz is no longer available as the course has been concluded.

Attempt History

	Attempt	Time	Score
LATEST	[Attempt 1](#)	16 minutes	45 out of 50

Score for this quiz: 45 out of 50
Submitted Apr 18 at 6:45pm
This attempt took 16 minutes.

Correct answer

⠿

Question 1
5 / 5 pts

A stock is at $300 and moving with a volatility of 0.60. Use a 3-step tree for the stock with a time step of 1-year.

Rates are random. The 1-year rate is 6% and can go up and down by 1% each year with a probability of 50%.

What is the price of a 2-year zero coupon bond with FV = $1?

- ⦿ 0.8869
- ○ 0.8354
- ○ 0.9417
- ○ 1

Correct answer

⠿

Question 2
5 / 5 pts

Is the yield curve upward sloping or downward sloping?

○ Downward

○ Upward

○ Cannot compute

Wrong answer

⠿

Question 3

0 / 5 pts

What is the forward rate for the period between years 2 and 3?

○ 0.059

○ 0.043

○ 0.051

◉ 0.06

Correct answer

⠿

Question 4

5 / 5 pts

When you change the stock tree into a tree with 3-year zero coupon bond with FV =$1 as the numeraire, what is the forward risk neutral probability of an up move for the 2nd year? This is the node with time stamp of 2 years.

◉ 0.4028

○ 0.597

○ 0.3082

○ 0.5512

Correct answer

⠿

Question 5

10 / 10 pts

Price a 3-year binary option that pays $100 if the stock is above $300 at expiration and nothing otherwise.

◉ $29.75

○ $35.60

○ $22.12

○ $64,35

Correct answer

⋮

Question 6

10 / 10 pts

What is the delta for the binary option at initiation?

◉ 0.111

○ 0.5

○ 0.25

○ 0.08

Correct answer

⋮

Question 7

10 / 10 pts

What is the delta hedging recipe for someone who has sold one binary option?

a. Maintain long delta units of stock at all times

b. Maintain long delta units of stock futures that expire at the maturity of the option at all times

c. Maintain short delta units of stock futures that expire at the maturity of the option at all times

◉ b

○ a

○ c

○ No recipe since rates are random

Quiz Score: 45 out of 50