

# Quiz 5

- Due Feb 28 at 11:59pm
- Points 15
- Questions 3
- Available Feb 26 at 3:30pm - Feb 28 at 11:59pm
- Time Limit 15 Minutes

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

## Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	15 minutes	15 out of 15

Score for this quiz: 15 out of 15

Submitted Feb 28 at 4:11pm

This attempt took 15 minutes.

Correct answer

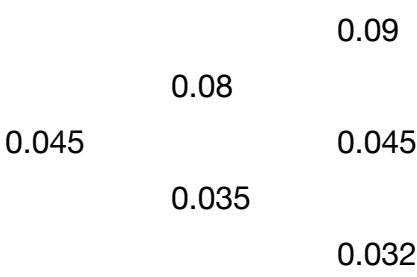


Question 1

5 / 5 pts

Consider the given interest rate tree. A bond has a maturity of 3 years, and the interest rate evolves according to the provided tree, with each step representing a one-year period. The probability of the interest rate increasing in each step is 50%. Calculate the price of the zero-coupon bond at time zero, assuming no arbitrage conditions and a face value of \$100.

Interest Rate Tree



- ☒ \$85.67
- ☐ \$95.60
- ☐ \$90.28
- ☐ \$89.22

Correct answer



Question 2

5 / 5 pts

Given the interest rate tree from earlier, determine the 1-year forward rate at the end of year 1

- ☐ 5.11%
- ☐ 8.91%
- ☒ 5.72%
- ☐ 6.21%

Correct answer



Question 3

5 / 5 pts

Given the interest rate tree and the actual yield curve in the market, calculate the no-arbitrage price of a European call option on the 3-Year Zero-Coupon bond, expiring 2 years from now. The option has a strike price of \$95.

Time (yrs)	Actual
1	0.05
2	0.06
3	0.07

To fit the yield curve change three rates in the top right corner of the model.

- ☐ \$2.11
- ☐ \$1.21
- ☒ \$0.43
- ☐ \$0.60

Quiz Score: 15 out of 15