Quiz 07 for Sept 19

Started: Sep 18 at 11:28pm

Quiz Instructions

Complete this quiz by 11:00 a.m. on Monday September 19. Read the questions carefully, and use caution in submitting your answers. No credit is given for incorrectly submitted answers.

Question 1	1 pts

Suppose that in one year there are 3 possible states: state H (High economic growth) with probability 0.3; state N (normal economic growth) with probability 0.5; and state L (low economic growth) with probability 0.2. The possible values of the real stochastic discount factor at the one-year horizon, m_{01}, are 0.6, 0.9, and 1.6 in states H, N, and L, respectively. What would be the current continuously-compounded real yield to maturity on a zero-coupon bond that pays a riskless real cashflow in one year?

State your answer as a continuously-compounded percentage interest rate to 2 decimal places, e.g., 3.41 .

5.13

Question 2	1 pts

On September 13, 2022 the US government announced that consumer prices had risen in August by 0.6 %, which was higher than the expected rise of 0.3%. Based on the theory in Note 13 Real and Nominal Interest rates, we would expect that the bond market reaction to this announcement was

○ an increase in the 5-year break even inflation rate.

○ a rise in nominal Treasury bond prices.

● a rise in TIPS bond prices.

○ a decline in the 5-year break even inflation rate.

Question 3
1 pts

If the market price of a coupon bond is less than the value of a portfolio of STRIPs that mature when the bond pays its cashflows and whose face values equal the bond's coupons and principal payments, then

● an arbitrage is to buy the coupon bond, STRIP it, and sell the coupon and principal STRIPS.

○ an arbitrage is to buy the portfolio of STRIPS, reconstitute the coupon bond, and then sell the coupon bond.

○ an investor who owns the coupon bond should sell it and buy the STRIPS.

○ the coupon bond's price would be expected to depreciate relative to the value of the STRIPS.

Question 4
1 pts

Coupon STRIPS that mature in 6 months and 1 year have semi-annual compounded yields to maturity of 3.2% and 3.8%, respectively. In addition, a principal STRIP that matures in 1 year has a semi-annual compounded yield to maturity of 3.7%. What is the no-arbitrage price of a coupon bond that has a remaining time to maturity of exactly 1 year, a face value of $100, and pays semi-annual coupons at an annual coupon rate of 4%?

State your answer in dollars to 2 decimal places (nearest cent), e.g., 98.74 .

100.29

Question 5

1 pts

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

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Is this real interest useful? If yes, in what occcasion?

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