

Session 3: Understanding Risk I: The risk in bonds

Test

1. Assume that you buy a default free government bond with a coupon rate of 2% and a maturity of 20 years, at face value. Assuming that interest rates increase to 3% over the course of the year following your purchase. What will your return on the government bond be for that year?
 - a. 2%. It is default free.
 - b. 3%, since that it is the new interest rate
 - c. More than 3%, since interest rates went up
 - d. Less than 2%, since interest rates went up

Computational bonus: Assuming that coupons are paid annually, compute the annual return on the bond for the year you held it.

2. The duration of a bond measures its interest rate sensitivity, with higher duration reflecting more sensitivity to interest rate changes. Which of the following bonds has the lowest duration?
 - a. A 10-year, 5% coupon bond
 - b. A 20-year, 5% coupon bond
 - c. A 10-year, 2% coupon bond
 - d. A 20-year, 2% coupon bond

Computational bonus: Estimate the duration of the bond with the lowest and highest durations on this list.

3. You are considering investing in a BBB-rated corporate bond with a 10-year maturity and a 5% coupon rate (with annual coupons). Assuming that the bond rating is appropriate given the default risk of the company, that the risk free rate is 3% and the default spread for BBB rated corporate bonds is 2.5%, which of the following would you expect to see as the price of the bond?
 - a. The bond should trade at face value
 - b. The bond should trade at a premium over face value
 - c. The bond should trade at a discount on face value
 - d. Impossible to tell without more information

Computational bonus: Estimate the price of this corporate bond.

4. Ratings agencies assign bond ratings to companies, with the ratings usually ranging from AAA(Aaa) for the safest companies to D for companies in default. What are the inputs into these ratings?
 - a. The volatility in a company's earnings
 - b. The amount of debt that the company carries
 - c. The interest payments on that debt
 - d. The level of a company's earnings
 - e. All of the above