

Homework 4  
Economics 301

Dividend Problem: For the questions below, assume that the asset in question is a bond with a two year maturity which will pay \$100 at the end of the first year and \$100 at the end of the second year. Calculate your answers to the nearest cent.

- 1) Assume that the current interest rate is 5.25% and that it is expected to rise to 5.5% next year. Additionally assume that agents do not care about risk. What is the price today of this two-year bond?
- 2) Calculate the yield to maturity and graph the yield curve. Is the slope positive or negative? Explain why.
- 3) Calculate the price of the bond if the Fed raises the current interest rate to 5.5% and the rate is expected to remain there for the coming year. Does the increase in the interest rate increase or decrease the price of the bond?
- 4) Return to the assumptions in 1) about interest rates over time, but now assume that agents do care about risk. In fact they want a risk premium of 1%. Recalculate the price of the bond and explain how risk affects it.
- 5) Calculate the yield to maturity under the new assumption about risk and graph the yield curve. How does the slope compare to the slope of your original yield curve?

Chapter 9, Analytical Problems 1,2,3