

Econ 121
Money and Banking
Instructor: Chao Wei

Midterm - I

Provide a brief and concise answer to each question. Clearly label each answer. There are 50 points on the exam.

1. (10 points) Predict the effect on the interest rate of the following events using EITHER the bond supply and demand analysis OR liquidity preference framework.
 - (a) Federal deficit spending is sharply reduced under Bush administration's new initiative.
 - (b) The public suddenly expects a large increase in stock prices.
 - (c) A decrease in expected inflation.
2. (6 points) Suppose the yield on 6 month corporate bond for a BAA-rated corporation rises relative to the yield on a 6 month Treasury bill. Provide an explanation for why the spread is increasing and what it might signify for the macro economy.
3. (6 points) Compute the interest rates.
 - (a) What is the yield to maturity on a \$1,000 face value discount bond maturing in 1 year and selling for a price of \$800?
 - (b) Determine the current yield on a \$10,000 face value, 10% coupon bond selling for \$8000.
 - (c) What is the yield on a discount basis on a \$1,000 face value discount bond maturing in 6 months (182 days) and selling for a price of \$950?
4. (8 points) Describe the response over time of the interest rate to an unexpected increase in the growth rate of the money supply when the liquidity effect is large and expected inflation is slow to adjust.

5. (6 points) An important way in which the Federal Reserve decreases the money supply is by selling bonds to the public. Using a supply and demand analysis for bond, show what effect this action has on interest rates. Is your answer consistent with what you would expect to find with the liquidity preference framework? Explain.
6. (8 points) Data observation shows that the yield curve is likely to be upward sloping at the start of expansion. Explain these observations using both the bond supply and demand analysis and expectation hypothesis theory.
7. (6 points) Compute the rate of returns. (Hint: Calculate the initial price and end-of-period price first, then calculate the return.)
 - (a) For a consol with a yearly payment of \$100, calculate the return for the year if its yield to maturity at the beginning of the year is 10% and at the end of the year the interest rate unexpectedly rises to 20%.
 - (b) For a 10% coupon bond, with a \$1,000 face value, selling at par with 2 years to maturity, calculate the return for the year if its yield to maturity at the beginning of the year is 10% and at the end of the year the interest rate unexpectedly rises to 20%.
 - (c) What explains the differences between the rate of returns in (a) and (b).