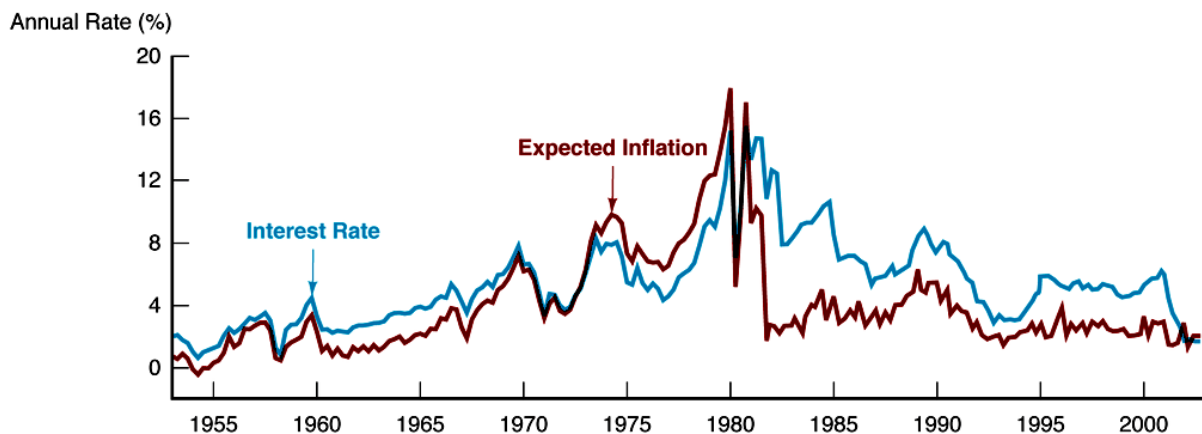


## Part II: Study Questions

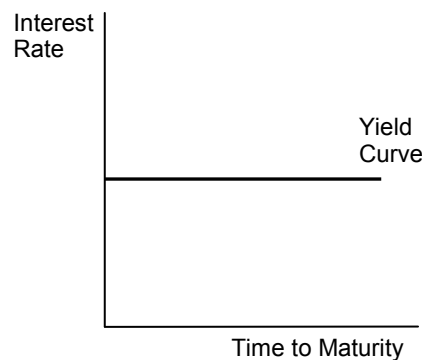
- (1) The financial system serves six basic functions. For each of the six functions, explain how the financial system is capable performing that function.
- (2) What is a financial intermediary? What functions do they serve?
- (3) Define yield to maturity in general. Be as formal as possible.
- (4) Use the definition you gave in (3) to derive the yield to maturity formula for a one period, non-negotiable discount bond. (Please show all work.)
- (5) Derive Fisher's Equation for real interest rates.
- (6) Explain the Fisher Effect using the loanable funds framework as we did in class. (Be sure to label completely).
- (7) Dose the figure below support the Fisher effect? Explain.



- (8) Show that if there are only two assets, money and bonds, and if money pays no interest and that bonds pay an interest rate equal to  $i$ , then the loanable funds framework is equivalent to the liquidity preference framework. (hint: show that the bonds market clears if and only if the money market clears.)
- (9) Using graphs as we did in class, describe the dynamic effects of an increase in the money supply on interest rates. Be sure to label the liquidity, expected inflation and price level effects. (Hint: remember that there are three cases to examine.)

## ECON 600: Money and Banking

- (10) Any good theory explaining the term structure of interest rate must explain the following three empirical facts:
- interest rates on bonds of different maturities move together over time;
  - when short-term interest rates are low, yield curves are more likely to slope upwards, and when short-term interest rates are high, yield curves are more likely to slope downwards;
  - yield curve normally slope upwards.
- Three theories have been put forward to explain the term structure of interest rates: (1) the expectations theory, (2) the segmented market theory and (3) the liquidity premium theory. Explain the basic assumption each theory makes about bonds of different maturities.
  - Neither the expectations theory nor the segmented market theory can completely explain the term structure of interest rates. Explain how the liquidity premium theory combines the other two theories to explain all three empirical facts.
- (11) To answer this question refer to the following figure:



- Suppose *the expectations theory* of the term structure of interest rate explains how the interest rates of bonds different maturities are determined.
  - Explain the basic assumption made about bonds of different maturities.
  - Explain what the above figure implies about expectations of future short term interests rates.
- Now suppose *the liquidity premium theory* of the term structure of interest rate explains how the interest rates of bonds different maturities are determined.
  - Explain the basic assumption made about bonds of different maturities.
  - Explain what the above figure implies about expectations of future short term interests rates.

## ECON 600: Money and Banking

(12) Recall from chapter 4 the formula for the rate of return from holding a security:

$$R = \frac{P_{t+1} - P_t + C}{P_t}$$

- a. State and explain the theory of rational expectations.
- b. The efficient market hypothesis is simply an application of the theory of rational expectations to the pricing of securities. Show that, in an efficient market, a security's expected return equals its equilibrium return (hint: use the theory of rational expectations to find the expected return from holding a security and explain why the expected return should equal the equilibrium return).