

OLLSCOIL NA hÉIREANN, GAILLIMH  
NATIONAL UNIVERSITY OF IRELAND, GALWAY

SEMESTER 1, 2000/01

ECONOMICS OF FINANCIAL MARKETS (EC 362)

3<sup>rd</sup> Arts, 3<sup>rd</sup> Commerce, 3<sup>rd</sup> Financial Mathematics and Economics and Visiting  
Students

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Dr. S. Fountas

Time allowed: **TWO** hours

Please answer any **SIX** questions from Part A and any **TWO** questions from Part B.  
Each question of Part A is worth 5 points and each question of Part B is worth 15  
points.

**PART A**

1. Explain the meaning of the forward exchange rate and provide an example of the use of the forward foreign exchange market for the purpose of hedging foreign exchange risk.
2. US government bond rates have exceeded the interest rates on municipal bonds with the same maturity over the last 40 years. Provide an explanation.
3. Explain how the expectations hypothesis of the term structure of interest rates can justify the comovement that exists between short term and long-term interest rates.
4. Derive the algebraic expression for the capital market line and show which points on the line are consistent with risk-free borrowing and risk-free lending.
5. Consider the following two bonds: (i) a 1-year US Treasury bond with a yield to maturity of 9% and (ii) a 1-year US Treasury bill with a yield on a discount basis of 8.9%. Which bond you would rather own ? Explain.
6. Explain briefly the meaning of the following:
  - (a) Foreign exchange risk
  - (b) Interest rate risk
  - (c) Federal Funds Market
  - (d) Eurosterling deposit
7. Explain the effect of each of the following on bond interest rates:
  - (a) An increase in the brokerage commission on bonds.
  - (b) A decrease in expected inflation.

8. Explain the so-called dealer equilibrium in the market for a security and discuss the factors that affect the size of the bid-ask spread.

### **PART B**

1. (a) Assume an unanticipated decline in the rate of money supply growth. Explain the short run and long run effects on the level of short-term interest rates. Can you predict whether the new level of short-term interest rates will be higher or lower? How will long-term interest rates be affected in the short run?
- (b) Would the impact on short-term interest rates differ if the decline in the rate of money supply growth were anticipated?
2. Explain graphically and verbally how each of the following factors can account for a larger slope of the yield curve:
  - (a) A change in monetary policy.
  - (b) A supply side shock.
  - (c) A change in the future size of the budget deficit.
  - (d) A change in the relative supply of assets with different maturities.
  - (e) A change in the term premium on long-term bonds.
3. Explain how moral hazard and adverse selection can justify the following two facts:
  - (i) In the US, the share of marketable securities in external finance is only 33%.
  - (ii) In the US and many industrialized countries, bank loans have the largest share in external finance.
4. Suppose that assets A and B have expected rates of return of 15% and 20% per annum, respectively, and an identical standard deviation of 10% per annum. The correlation coefficient between their returns is 1.
  - (a) Find the expected rate of return and the standard deviation of return on a portfolio p composed of a fraction x of asset A and a fraction (1-x) of asset B. Does diversification between assets A and B pay? Explain.
  - (b) Plot the combinations of standard deviation and expected return that lie in the feasible and efficient sets of portfolios p. Explain.
  - (c) Suppose that the risk-free interest rate is 5% per annum. Plot the combinations of risk and return that an investor facing identical borrowing and lending rates can obtain by holding portfolio p and borrowing or lending. Write down the equation for the capital market line. Show the equilibria for a very risk-averse investor and a moderately risk-averse investor.