可用計算機

1. Please explain the following terms (20%):
   - Risk structure of interest rate
   - Capital adequacy management
   - Monetizing the debt
   - Off-balance-sheet activities

2. (a) Discuss the sources of bank risk exposure (10%)
   (b) Discuss the interrelationships among the different sources of bank risk exposure (5%)

3. “In a world without information and transaction costs, financial intermediaries would not exist.” Please comment this statement (10%)

4. Graphically and verbally explain what will happen to interest rates if
   (a) a sudden increase in people’s expectations (5%)
   (b) the public suddenly expects a large increase in stock prices (5%)
   (c) price in the bond market become more volatile. (5%)

5. Please describe three criticisms of using the duration model to immunize a financial institution’s portfolio (10%)

6. The following is a simplified balance sheet of a financial institution (all items are reported in book values):
   Loans = $1,000
   Deposits = $800
   Equity (Net Worth) = $200
   The average maturity of loans is four years; that of deposits is two years.
   (a) What is the effect on net worth if interest rates on loans and deposits increase to 8 percent? Treat both loans and deposits as zero-coupon instruments (5%)
   (b) How much should interest rates on deposits increase in order for net worth to
become negative (5%)?
(c) What actions could you take to reduce the bank’s interest-rate risk (5%)?

7. Suppose that a bank has $30 million of fixed-rate assets, $60 million of rate-sensitive assets, $50 million of fixed-rate liabilities, and $40 million of rate-sensitive liabilities.
   (a) Conduct a gap analysis for the bank, and show what will happen to bank profits if interest rates rise by 4 percentages (10%)
   (b) What actions could you take to reduce the bank’s interest-rate risk (5%)?