Name: _____

Korea University
IIE 301 - Money & Banking
Summer 2005

Final Exam key

This exam is closed book and closed notes, though you may use a calculator. **Write your name on each sheet of this exam!** Read all questions carefully before answering. Answer in the space provided, using any (clearly labeled) graphs you think are appropriate. Keep your answers concise and to the point. Points will be deducted for answers which are correct, but irrelevant to the question.

Section I (short answers, 4 points each)

1. What is the implicit annualized yield to maturity on a $100,000 T-bill that comes due in 3 years and which sells for a price today of $92,000? Show your reasoning.

$i = (\frac{100,000}{92,000})^{1/3} - 1 = .0282 = 2.82\%$

2. List the three important stylized facts about the behavior of interest rates in relation to the yield curve.

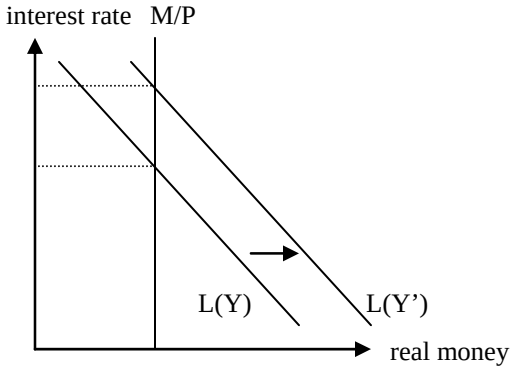
A) Interest rates of all maturities rise and fall together
B) Low short term rates are associated with a steep yield curve,
High short term rates are associated with a flat or inverted yield curve
C) The yield curve usually slopes upward

3. Suppose the reserve requirement is 5% and that banks desire to hold 1% excess reserves. Further assume that the general public wishes to hold 50% of its money in the form of currency. What is the long-run money multiplier? Show your reasoning.

$c = 50\%/50\% = 1$

$mm = (1+c)/(rr+er+c) = (1+1)/(.05+.01+1) = 2/1.06 = 1.887$

4. Use the following graph to illustrate the effects of an increase in output on the money market. Explain your answer.



An increase in output raises income and households demand more money to buy consumption goods. This shifts the demand for real balances curve, L, to the right. The equilibrium interest rate rises.

5. According to expectations theory, if today's 2-year bond interest rate is 5% and today's one-year bond interest rate is 4%, what is the expected interest rate on next year's one-year bonds? Show your reasoning.

$(1+i_t^1)(1+i_{t+1}^1) = (1+i_t^2)^2$ **or** $i_t^1 + i_{t+1}^1 = 2i_t^2$

$i_{t+1}^1 = 2i_t^2 - i_t^1 = 2(5\%) - 4\% = 10\% - 4\% = 6\%$

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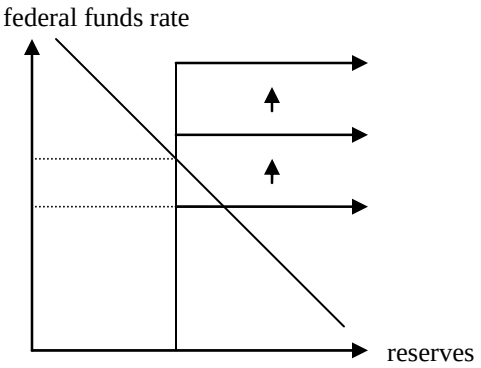
6. Use the following graph to illustrate the effects of an increase in the discount rate on the federal funds market. Explain your answer.

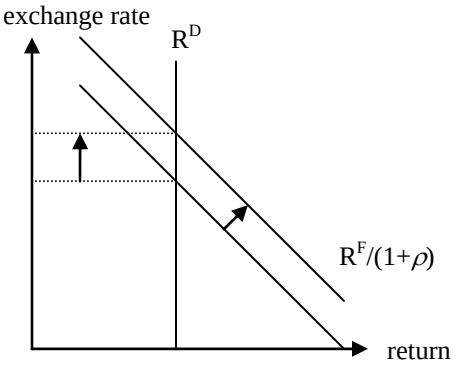


The discount rate determines the flat portion of the supply curve for federal funds. Raising it, shifts the flat portion higher. If any funds were being borrowed they will no longer be. Most likely, there was no borrowing, and the change has no effect on the federal funds rate.

7. Suppose the nominal one-year interest rate in the U.S. is 5% and the nominal one-year interest rate in Korea is 4%. If the current exchange rate is 1000 ₩ / $, what does the uncovered interest rate parity hypothesis imply the expected exchange rate one year from now is? Show your reasoning.

$1+i=(1+i^*)E\{e'\}/e$, **so** $E\{e'\}=e(1+i)/(1+i^*)=1000*(1.04)/(1.05)=990.48$

8. Use the following graph to illustrate the short-run effects of an increase in the expected future exchange rate on the exchange rate today. Explain your answer.



When the expected future exchange rate rises, the expected (uncovered) return on foreign investments, R^F, also rises. This shifts the R^F curve to the right. In equilibrium the exchange rate today must rise proportionally.

Section II (multiple choice, 2 points each)

9. A ***tradable*** security which pays a single fixed amount on the maturity date is called…
a. a simple bond
b. a coupon bond
c. a fixed payment loan
d. a simple loan
e. none of the above

10. If the nominal interest rate is 6% and the desired real interest rate is 4%, the expected rate of inflation must be…
a. 10%
b. 4%
c. 2%
d. it is impossible to tell with the given information
e. none of the above

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11. A liquidity premium is the difference between…
a. the difference between the price of a bond and the price of a perfectly liquid bond
b. the price and the face-value of a bond
c. the present-value and the face-value of a bond
d. the price and the intrinsic value of a bond
e. none of the above

12. Which of the following central banks has the most independence?
a. the Bank of England
b. the European Central Bank
c. the United States Federal Reserve
d. the Bank of Korea
e. all of the above are equally independent

13. Which of the following is ***NOT*** a possible tool of monetary policy?
a. the reserve requirement
b. the discount rate
c. the federal funds or interbank rate
d. open market operations
e. ALL of the above are tools of monetary policy

14. NAIRU stands for…
a. non-accelerating inflation rate of unemployment
b. natural aggregate inflation rate of unemployment
c. natural aggregate interest rate of unemployment
d. normal asset integration rate of unemployment
e. none of the above

15. Purchasing Power Parity says that…
a. the prices of all goods measured in any currency are the same regardless of the country in which they are sold.
b. the amount of real money is the same for all households in all countries
c. the price of a typical US basket of goods is the same as the price of a typical Korean basket of goods
d. the value of a specific basket of goods measured in a specific currency is the same regardless of the country in which the basket is purchased
e. none of the above

16. The price of foreign currency set today, but to be traded at some future date is called…
a. the spot exchange rate
b. the forward exchange rate
c. the future spot exchange rate
d. the futures exchange rate
e none of the above

17. The largest volume of trade in foreign currencies occurs in which of the following markets
a. London
b. Hong Kong
c. New York
d. Tokyo
e. all of the above have approximately the same volume of trade

18. Which of the following is NOT a commonly stated goal of central banks?
a. High employment
b. Price stability
c. Financial market stability
d. Foreign exchange stability
e. ALL of the above are commonly stated goals