

Name: _____

Korea University
IIE 301 - Money & Banking
Summer 2006

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 no-coupon \$100,000 T-bond that comes due in 5 years and which sells for a price today of \$90,000? Express in % to 2 decimal places (i.e. 1.23%). Show your reasoning.

$$i = (100,000/90,000)^{1/5} - 1 = 2.13\%$$

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 2% and that banks desire to hold 1% excess reserves. Further assume that the general public wishes to hold 40% of its money in the form of currency. What is the long-run money multiplier? Show your reasoning. Round to 2 decimal points.

$$cr = 40\%/60\% = .6667$$

$$mm = (1+cr)/(cr+rr+er) = 1.6667/ (.6667+.02+.01) = 1.6667/.6967 = 2.39$$

4. What were the two major periods of fixed exchange rates in the past 200 years? Give the names of the periods/systems and the years they were in effect.

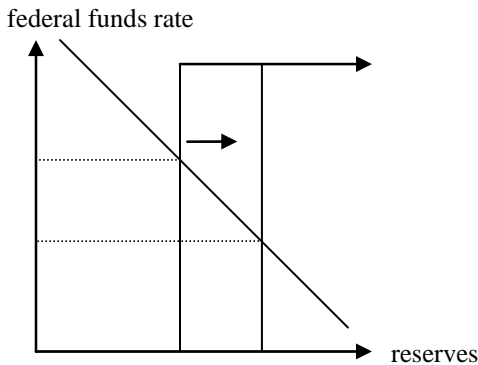
- A) **Classical Gold Standard 1871 – 1913**
- B) **Bretton Woods System 1945 – 1971 or 1973**

5. List three common long-run goals of a central bank or monetary authority.

High Employment
Economic Growth
Price Stability
Interest Rate Stability
Financial Market Stability
Foreign Exchange Market Stability

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6. Use the following graph to illustrate the effects of an open market purchase of bonds by the central bank on the federal funds market. Explain your answer.



An open market purchase of bonds increases the amount of non-borrowed reserves as the central bank accepts bonds from banks and creates reserve deposits to pay for them.

The vertical portion of the supply curve shifts out, since it represents non-borrowed reserves.

7. Suppose the nominal one-year interest rate in the U.S. is 5.5% and the nominal one-year interest rate in Korea is 4.5%. If the current exchange rate is 975 ₩ / \$, what does the uncovered interest rate parity hypothesis imply the expected exchange rate one year from now is? Show your reasoning. Round to the nearest won, no decimals.

Covered interest rate parity says $(1+i) = (1+i)(f/s)$
 $1.045 = 1.055 (f/975)$
 $f = (1.045/1.055) 975 = 966 \text{ ₩} / \$$

8. Suppose we observe the following data:

Currency in Bank Vaults	\$ 40 million
Currency in Circulation	\$200 million
Demand Deposits and other Checkable Deposits	\$300 million
Deposits of Commercial Banks in the Central Banking System	\$100 million
Short-term Time Deposits	\$500 million
Traveler's Checks	\$ 10 million

What is the value of the monetary base (M0)? = $40+200+100 = \$340 \text{ million}$

What is the value of M1? = $200+300+10 = \$510 \text{ million}$

Section II (multiple choice, 2 points each)

9. A contract where the borrower pays a fixed amount every period for a specified number of periods 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%, then the expected rate of inflation must be 2%. This is an illustration of:

- a. **The Fisher Equation**
- b. Covered Interest Rate Parity
- c. Uncovered Interest Rate Parity
- d. Purchasing Power Parity
- e. none of the above

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11. The number of regional federal reserve banks in the US Federal Reserve System is:
 - a. 1
 - b. 4
 - c. 12**
 - d. 15
 - 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 good operating target for monetary policy?
 - a. the amount of non-borrowed reserves
 - b. the discount rate (is a policy tool and there is no need to target it)**
 - c. the federal funds or interbank rate
 - d. the amount of borrowed reserves
 - e. ALL of the above are good operating targets

14. Excess reserves of commercial banks...
 - a. are always zero
 - b. are usually small, but not zero**
 - c. are almost as big as required reserves
 - d. are several times bigger than required reserves
 - e. "Excess reserves" is a term Dr. Phillips made up just for this exam and is not used in banking or finance.

15. The discount yield is...
 - a. is the same as yield to maturity (YTM)
 - b. is an approximation of YTM used only for short-term zero-coupon bonds**
 - c. is an approximation of YTM used only for long-term coupon bonds
 - d. is an approximation of YTM used only for long-term zero-coupon bonds
 - e. is none of the above

16. The price of foreign currency (in domestic currency units) set today, but to be traded at some future date is called...
 - a. the spot exchange rate
 - b. the annualized forward premium
 - c. the future spot exchange rate
 - d. the futures exchange rate
 - e. none of the above (it is the forward exchange rate)**

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

18. Last Friday, July 28th, Dr. Phillips ...
 - a. complained that he was sick with a cold
 - b. dismissed class and did not lecture
 - c. handed out a review sheet for the final exam
 - d. showed a funny movie with a monkey and a racing car.
 - e. did none of the above**