Econ 340: Financial Markets and Institutions
Final Exam, Spring 2007
Bonham

Answer the following essay questions in three to four blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

Essay Questions:

1. Asymmetric Information, and Financial Crises (40 points)
   Consider the case of a developing economy with a recently privatized banking sector.

   i. Explain how a weakened banking sector (extremely low bank capital), rising foreign interest rates (The Federal Reserve has raised interest rates 17 times from a low of 1% in June 2003 to 5.25% in June 2006.), and Asymetric Information can contribute to the onset of both a currency and financial crisis.

   ii . What features of a developing economy financial market make it more difficult for the country's central bank to protect their currency?

   iii. Once a currency crisis occurs, explain the three different channels by which a devaluation increases asymetric information and leads to a financial crisis.

   iv. Once a crisis occurs, what action should a lender of last resort take?

2. Equity Risk and Return (20 points)

   Discuss the following:

   (a) Which type of risk can be eliminated by diversifying your portfolio? Which type of risk remains after a portfolio is diversified? Do investors receive compensation for all types of risk?

   (b) Write down an equation representing the expected return on an individual security, and explain how the market's price of risk affects the expected return on the security.

   (c) Suppose that Microsoft has a $\beta = 1.5$, and the return on 1-year Treasury bills is 6%. If the market return is expected to be 10% this year, what do you expect the return on Microsoft to be? Why?

   turn page for MC

Multiple Choice (40 points —*2 points each*).
Circle One answer, but note that some questions may have more than one correct answer.

1. Determine which of the following scenarios is true:
   (1) Historically in the U.S. interest rates on three-month Treasury bills on average are higher than interest rates on Treasury bonds.

   (2) Historically in the U.S. interest rates on Treasury bonds on average are lower than interest rates on corporate Baa bonds.

   (a) (1) is true, (2) is false.
   (b) Both are true.
   (c) (1) is false, (2) is true.
   (d) Both are false.

2. Which of the following are true concerning the distinction between interest rates and return?

   (a) The return can be expressed as the sum of the current yield and the rate of capital gains.
   (b) The rate of return on a bond will not necessarily equal the interest rate on that bond.
   (c) The rate of return will be greater than the interest rate when the price of the bond rises between time t and time t+1.
   (d) All of the above are true.
   (e) Only (a) and (b) of the above are true.

3. Determine whether the below statements are true or false. I. Bond prices are positively related to interest rates. II. The greater a bond's duration, the greater its interest-rate risk.

   (a) Both are true.
   (b) I is true, II false.
   (c) I is false, II true.
   (d) Both are false.

4. If you expect the inflation rate to be 4 percent over the next year and a one-year bond has a yield to maturity of 4 percent, then the real interest rate on this bond is

   (a) -2 percent.
   (b) -1 percent.
   (c) -12 percent.
   (d) 2 percent. (e) none of the above.

5. A bond investor faces reinvestment risk if his or her holding period is

   (a) shorter than the maturity of the bond.
   (b) identical to the maturity of the bond.
   (c) longer than the maturity of the bond.
   (d) none of the above.

6. When people expect interest rates to fall in the future, the _____ curve for bonds shifts to the _____.

   (a) demand; right
   (b) supply; left
   (c) supply; right
   (d) demand; left

7. A decrease in the expected rate of inflation will _____ the expected return on bonds relative to that on _____ assets.

   (a) reduce; financial
   (b) reduce; real
   (c) raise; financial
   (d) raise; real

8. Commercial paper is issued by

   (a) money market mutual funds.
   (b) small businesses.
   (c) commercial banks.
   (d) corporations.

9. Technical analysis applied to foreign exchange markets is based on the idea that

   (a) future changes in exchange rates should be zero.
   (b) trends and regular cycles in exchange rates should allow profitable trading opportunities.
   (c) use of public information about exchange rates will not allow profitable trading opportunities.
   (d) expected future changes in exchange rates should be zero.

turn the page

10. According to the market segmentation theory of the term structure,

    (a) the interest rate for each maturity bond is determined by supply and demand for that maturity bond.

    (b) investors' strong preferences for short-term bonds relative to long-term bonds explains why yield curves typically slope upward.

    (c) bonds of one maturity are close substitutes for bonds of other maturities; therefore, interest rates on bonds of different maturities move together over time.

    (d) all of the above.

    (e) only (a) and (b) of the above.

11. If the interest rate on euro-denominated deposits is 15 percent and it is 13 percent on dollar deposits, and if the euro is expected to appreciate at a 4 percent rate, for Francois the Foreigner the expected rate of return on dollar deposits is

    (a) 9%.

    (b) 11%.

    (c) 17%.

    (d) 19%.

    (e) 15%

    (f) none of the above.

12. Which of the following statements about Treasury bonds is true?

    (a) The government faces interest-rate risk since its interest costs will be higher if market interest rates fall.

    (b) Investors face interest-rate risk since their returns will be lower if market interest rates fall.

    (c) Investors face interest-rate risk since their returns will be lower if market interest rates rise.

    (d) The government faces interest-rate risk since its interest costs will be higher if market interest rates rise.

13. Corporate bond issuers generally have the right to buy bonds back before they mature. Bonds subject to this provision are called _____ bonds.

    (a) registered

    (b) unsecured

    (c) sinking

    (d) callable

    (e) convertible

14. Which of the following are reported as assets on a bank's balance sheet?

    (a) bank capital
    (b) loans
    (c) borrowings
    (d) only (a) and (b) of the above

15. Bank capital

    (a) provides a cushion against a drop in the value of assets.
    (b) serves to reassure uninsured depositors that the bank is sound.
    (c) serves to reassure bank regulators that the bank is not likely to fail due to a few bad loans.
    (d) does each of the above.
    (e) does only (a) and (b) of the above.

16. If a bank has more rate-sensitive assets than liabilities, then

    (a) a rise in interest rates will raise income.
    (b) a fall in interest rates will raise income.
    (c) a fall in interest rates will lower income.
    (d) none of the above is true.

17. Using the Gordon growth model, if a stock's next dividend is expected to be $2.0, the discount rate is estimated to be 8 percent, and dividends are projected to increase at 4 percent per year indefinitely, then the stock should sell for

    (a) $6.10
    (b) $31.25
    (c) $22.73
    (d) $50.00
    (e) $83.33

18. Evidence from studies of the performance of mutual funds supports the efficient market hypothesis because funds that do _____ in the first period _____ the market in the second.

    (a) well; do not beat
    (b) poorly; beat
    (c) well; also beat
    (d) poorly; do not beat

turn the page

19. A decrease in the domestic interest rate shifts the expected return schedule for _____ deposits to the _____ and causes the domestic currency to _____.

    (a) foreign; right; appreciate
    (b) domestic; left; depreciate
    (c) foreign; left; depreciate
    (d) domestic; right; appreciate

20. Which of the following supports the efficient market hypothesis?

    (a) Fluctuations in stocks' prices are larger than fluctuations in their fundamental values.
    (b) Stock prices continue to rise for some time following unexpectedly high profits.
    (c) Stock prices rise predictably from December to January.
    (d) All of the above.
    (e) None of the above.

Econ 340: Financial Markets & Institutions
Midterm Exam March 5, 2007

Essay (35 minutes): ***60 points***

1. In 2005 and 2006, the U.S. inflation rate averaged 3.3%, a rate or inflation not seen since the early 1990s. Yet over the past few months, there have been signs that inflationary pressures may be easing. Suppose that bond traders now expect inflation to fall to 2.5% in 2007 and to fall further to 2% in both 2008 and 2009.

   (a) *(30 points)* Using the theory of asset demand, explain the impact of a decline in expected inflation on the demand for commercial paper. What effect would a decline in expected inflation have on the supply of commercial paper? Using a graph of the supply and demand for commerical paper, illustrate and fully explain the effect on commercial paper yields if bond traders expect a decline in the inflation rate in 2007.

   (b) *(30 points)* Given your answer above, what do you expect to happen to the yields on treasury bills? Why? Write down an equation that represents the *liquidity premium theory* of the term-structure of interest rates. Given that bond traders expect inflation will fall even further in 2008-09, draw and explain the shape of today's yield curve (for 1 - 3 year notes).

Multiple Choice (20 minutes): ***40 points: 2 points each***

1. The interest rate on municipal bonds falls relative to the interest rate on Treasury securities when

   (a) corporate bonds become less risky.
   (b) income tax rates increase.
   (c) there is a major default in the municipal bond market.
   (d) municipal bonds become less widely traded.
   (e) none of the above occur.

2. Which of the following involves indirect finance?

   (a) You make a deposit in a bank account.
   (b) You make a loan to your neighbor.
   (c) A corporation buys shares of common stock issued by another corporation.
   (d) You buy a U.S. Treasury bill from the U.S. Treasury.

3. A bond that is bought at a price below its face value and the face value is repaid at a maturity date is called a

   (a) coupon bond.
   (b) discount bond.
   (c) simple loan.
   (d) fixed-payment loan.

turn the page . . .

4. Adverse selection is a problem associated with equity and debt contracts arising from

   (a) the lenders relative lack of information about the borrowers potential returns and risks of his investment activities.
   (b) the lenders ability to legally require sufficient collateral to cover a 100 percent loss if the borrower defaults.
   (c) the borrowers lack of incentive to seek a loan for highly risky investments.
   (d) none of the above.

5. Which of the following are true concerning the distinction between interest rates and return?

   (a) The rate of return on a bond will necessarily equal the interest rate on that bond.
   (b) The return can be expressed as the sum of the current yield and the rate of capital gains.
   (c) The rate of return will be greater than the interest rate when the price of the bond falls between time t and t+1.
   (d) none of the above.
   (e) Both (a) and (b).

6. Which of the following $1,000 face value securities has the highest yield to maturity?

   (a) A 5 percent coupon bond selling for $1,000
   (b) A 10 percent coupon bond selling for $1,000
   (c) A 15 percent coupon bond selling for $1,100
   (d) A 15 percent coupon bond selling for $900

7. With an interest rate of 4 percent, the present value of a security that makes two payments, one for $1,100 next year and another for $1,460 four years from now is approximately

   (a) $1,200.
   (b) $2,300.
   (c) $3,000.
   (d) $1,900.

8. Determine whether the below statements are true or false. I. Prices and returns for short-term bonds are less volatile than those for long-term bonds. II. The prices of longer-maturity bonds respond more dramatically to changes in interest rates.

   (a) I is true, II false.
   (b) Both are false.
   (c) Both are true.
   (d) I is false, II true.

9. A bond investor faces reinvestment risk if his or her holding period is

   (a) shorter than the maturity of the bond.
   (b) identical to the maturity of the bond.
   (c) longer than the maturity of the bond.
   (d) none of the above.

turn the page . . .

10. If the interest rate on euro-denominated deposits is 11 percent and it is 8 percent on dollar deposits, and if the euro is expected to depreciate at a 4 percent rate, for Francois the Foreigner the expected rate of return on dollar deposits is

    (a) 8%.
    (b) 11%.
    (c) 20%.
    (d) 16%.
    (e) 12%

11. If the inflation rate in the United States is higher than that in Europe, then, in the long run,

    (a) the euro should appreciate relative to the dollar.
    (b) the euro should depreciate relative to the dollar.
    (c) the dollar should depreciate relative to the euro.
    (d) both (a) and (c) will occur.
    (e) it is not clear whether the dollar should appreciate or depreciate relative to the euro

12. The theory of purchasing power parity cannot fully explain exchange rate movements because

    (a) not all goods are identical in different countries.
    (b) monetary policy differs across countries.
    (c) some goods are not traded between countries.
    (d) of both (A) and (C) of the above.
    (e) of both (B) and (C) of the above.

13. Government budget deficits shift the bond _____ curve to the _____.

    (a) supply; left
    (b) demand; left
    (c) supply; right
    (d) demand; right

14. An increase in default risk on corporate bonds _____ the demand for these bonds and _____ the demand for default-free bonds.

    (a) moderately lowers; does not change
    (b) lowers; increases
    (c) increases; lowers
    (d) does not change; greatly increases

turn the page ...

15. If you expect the inflation rate to be 2 percent over the next year and a one-year bond has a yield to maturity of 5 percent, then the real interest rate on this bond is

    (a) 7 percent.
    (b) -7 percent.
    (c) 3 percent.
    (d) -3 percent.

16. Money market instruments

    (a) are usually sold in large denominations.
    (b) have low default risk.
    (c) mature in one year or less.
    (d) are characterized by all of the above.
    (e) are characterized by only (A) and (B) of the above.

17. A decrease in the domestic interest rate shifts the expected return schedule for _____ deposits to the _____ and causes the domestic currency to _____.

    (a) foreign; right; appreciate
    (b) domestic; left; depreciate
    (c) foreign; left; depreciate
    (d) domestic; right; appreciate

18. According to the interest parity condition, the domestic interest rate is equal to the foreign interest rate

    (a) plus the expected appreciation of the domestic currency.
    (b) minus the expected appreciation of the domestic currency.
    (c) less the expected depreciation of the domestic currency weighted by the domestic interest rate.
    (d) minus the expected depreciation of the domestic currency.

19. Which of the following is not a characteristic of Treasury bills?

    (a) They have low interest-rate risk.
    (b) The interest they pay is based on a coupon rate announced weekly by the Treasury.
    (c) The market for them is deep and liquid.
    (d) They have zero default risk.

20. Suppose the interest rate on a taxable corporate bond is 8% and the marginal tax rate is 30%. What is the equivalent tax-free interest rate on this bond?

    (a) 12.0%
    (b) 7.5%
    (c) 2.5%
    (d) 5.6%

Econ 340: Financial Markets and Institutions
Final Exam, Fall 2006
Bonham

Answer the following essay questions in two to three blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

Essay Questions:

1. Interest Parity, Asymmetric Information, and Financial Crises (45 points, 45 minutes)

   (a) (20 minutes/points) The Federal Reserve has raised interest rates 17 times from a low of 1% in June 2003 to 5.25% in June 2006. Using a model of interest parity, explain how an increase in the interest rates paid on dollar deposits may lead other central banks to raise their interest rates to protect their currencies.

   (b) (25 minutes/points) Consider the case of a developing economy with a recently privatized banking sector. Explain how a weakened banking sector (extremely low bank capital), rising foreign interest rates, and Asymetric Information can contribute to the onset of both a currency and financial crisis. What features of a developing economy financial market make it more difficult for the country's central bank to protect their currency?

2. Equity Risk and Return (25 points, 25 minutes)

   Discuss the following:

   (a) How is total risk of an individual stock measured? What two types of risk make up total risk?

   (b) Which type of risk can be eliminated by diversifying your portfolio? Which type of risk remains after a portfolio is diversified? Do investors receive compensation for all types of risk?

   (c) Write down an equation representing the expected return on an individual security, and explain how the market's price of risk affects the expected return on the security.

   (d) Suppose you manage a 10 million dollar stock portfolio that moves one-for-one with S&P 500 stock market index. If you are concerned that the FED's interest rate hikes may continue and lead to a drop in your portfolio, explain how you would hedge your portfolio. How would your answer differ if you only wanted to hedge part of the portfolio?

turn page for MC

Multiple Choice (30 points —*1 point each*).
Circle One answer, but note that some questions may have more than one correct answer.

1. A rise in interest rates _____ the cost to financial institutions of acquiring funds and _____ the income they earn on assets.

   (a) lowers; raises
   (b) lowers; lowers
   (c) raises; lowers
   (d) raises; raises

2. When potential borrowers know more than lenders about the future prospects of a project to be undertaken with borrowed funds, the lender faces the problem of

   (a) default risk.
   (b) asymmetric information.
   (c) free-riding.
   (d) moral hazard.

3. A bond that is bought at a price below its face value and the face value is repaid at a maturity date is called a

   (a) coupon bond.
   (b) discount bond.
   (c) simple loan.
   (d) fixed-payment loan.

4. Which of the following are true concerning the distinction between interest rates and return?

   (a) The rate of return on a bond will not necessarily equal the interest rate on that bond.
   (b) The return can be expressed as the sum of the current yield and the rate of capital gains.
   (c) The rate of return will be greater than the interest rate when the price of the bond falls between time t and time t+1.
   (d) All of the above are true.
   (e) Only (a) and (b) of the above are true.

5. Determine whether the below statements are true or false. I. Bond prices are inversely related to interest rates. II. The smaller a bond's duration, the greater its interest-rate risk.

   (a) Both are true.
   (b) I is true, II false.
   (c) I is false, II true.
   (d) Both are false.

turn the page

6. If you expect the inflation rate to be 5 percent over the next year and a one-year bond has a yield to maturity of 4 percent, then the real interest rate on this bond is

   (a) -2 percent.
   (b) -1 percent.
   (c) -12 percent.
   (d) 2 percent.
   (e) none of the above

7. A bond investor faces reinvestment risk if his or her holding period is

   (a) shorter than the maturity of the bond.
   (b) identical to the maturity of the bond.
   (c) longer than the maturity of the bond.
   (d) none of the above.

8. When people expect interest rates to rise in the future, the _____ curve for bonds shifts to the _____.

   (a) demand; right
   (b) supply; left
   (c) supply; right
   (d) demand; left

9. An increase in the expected rate of inflation will _____ the expected return on bonds relative to that on _____ assets.

   (a) reduce; financial
   (b) reduce; real
   (c) raise; financial
   (d) raise; real

10. Government budget deficits shift the bond _____ curve to the _____.

    (a) supply; left
    (b) demand; left
    (c) supply; right
    (d) demand; right

11. An increase in default risk on corporate bonds _____ the demand for these bonds and _____ the demand for default-free bonds.

    (a) moderately lowers; does not change
    (b) lowers; increases
    (c) increases; lowers
    (d) does not change; greatly increases

turn the page

12. If the expected path of one-year interest rates over the next four years is 6 percent, 3 percent, 2 percent, and 1 percent, then the pure expectations theory predicts that today's interest rate on the four-year bond is

    (a) 2 percent.
    (b) 5 percent.
    (c) 4 percent.
    (d) 1 percent.
    (e) 3 percent.

13. A bond's annual interest payment expressed as a percentage of its market price is the bond's

    (a) coupon rate.
    (b) current yield.
    (c) discount rate.
    (d) yield to maturity.

14. Treasury inflation-indexed bonds reduce investors' inflation risk by increasing the bond's _____ when the consumer price index rises.

    (a) term to maturity
    (b) interest rate
    (c) principal
    (d) none of the above

15. Suppose the interest rate on a taxable corporate bond is 10% and the marginal tax rate is 15%. What is the equivalent tax-free interest rate on this bond?

    (a) 2.5%
    (b) 7.5%
    (c) 9.25%
    (d) 8.5%

16. Corporate bond issuers generally have the right to buy bonds back before they mature. Bonds subject to this provision are called _____ bonds.

    (a) registered
    (b) unsecured
    (c) sinking
    (d) callable
    (e) convertible

turn the page

17. Which of the following are reported as assets on a bank's balance sheet?

    (a) bank capital
    (b) loans
    (c) borrowings
    (d) only (a) and (b) of the above

18. Which of the following are reported as liabilities on a bank's balance sheet?

    (a) securities
    (b) nontransaction deposits
    (c) loans
    (d) reserves and cash items

19. Bank capital

    (a) provides a cushion against a drop in the value of assets.
    (b) serves to reassure uninsured depositors that the bank is sound.
    (c) serves to reassure bank regulators that the bank is not likely to fail due to a few bad loans.
    (d) does each of the above.
    (e) does only (a) and (b) of the above.

20. If a bank has less rate-sensitive assets than liabilities, then

    (a) a rise in interest rates will raise income.
    (b) a fall in interest rates will raise income.
    (c) a fall in interest rates will lower income.
    (d) none of the above is true.

21. Suppose a bank has assets of $200 million, liabilities of $140 million, and a duration gap of 1.50. If interest rates rise from 10 percent to 5 percent, then

    (a) net interest income will fall by $6.8 million.
    (b) net interest income will rise by $6.8 million.
    (c) the market value of net worth will fall by $13.6 million.
    (d) the market value of net worth will rise by $13.6 million.

22. Which of the following is not a financial derivative?

    (a) options
    (b) forward contract
    (c) futures contract
    (d) interest-rate swap
    (e) treasury bill

turn the page

23. If at expiration a futures contract has a price of 90 while the underlying asset has a price of 89, then arbitrageurs would take _____ futures positions and _____ the underlying asset.

    (a) short; sell
    (b) long; buy
    (c) short; buy
    (d) long; sell

24. If you sell **2** futures contract on the S&P 500 Index at a price of 420 and the index falls to 400, then

    (a) you will lose $10,000.
    (b) you will lose $5000.
    (c) you will lose $200.
    (d) you will gain $10,000.
    (e) you will gain $20.
    (f) you will gain $5000.

25. Using the Gordon growth model, if a stock's next dividend is expected to be $2.0, the discount rate is estimated to be 8 percent, and dividends are projected to increase at 4 percent per year indefinitely, then the stock should sell for

    (a) $6.10
    (b) $31.25
    (c) $22.73
    (d) $50.00
    (e) $83.33

26. When comparing stocks and bonds, investors find stocks attractive because

    (a) there is potential for greater gains investing in stock than there is investing in bonds.
    (b) stockholders have a higher priority than bondholders when a firm is in trouble.
    (c) firms are legally required to pay dividends on stock each year.
    (d) returns are less volatile on stocks than on bonds.

27. In an efficient financial market

    (a) all relevant information must be publicly available.
    (b) unexploited profit opportunities must be zero on average.
    (c) everyone must be well informed about a security's fundamentals.
    (d) there will be no profit opportunities to exploit.

turn the page

28. Dividing a bank's net income by its capital gives the bank's

    (a) net interest margin.
    (b) equity multiplier.
    (c) return on assets.
    (d) return on equity.

29. A U.S. company which exports to Germany can hedge the foreign exchange risk by

    (a) taking a short position in futures contracts on dollars.
    (b) taking a short position in futures contracts on euros.
    (c) both of the above.
    (d) none of the above.

30. The theory of PPP suggests that if one country's price level falls relative to another's, its currency should

    (a) float.
    (b) depreciate.
    (c) appreciate.
    (d) do none of the above.

Econ 340: Financial Markets & Institutions
Midterm Exam October 17, 2006

Essay (50 minutes): *50 points*

1. In late 2005 and through the first half of 2006, the U.S. inflation rate averaged betwen 3.5 and 4.5%, rates not seen since the early 1990s. Yet over the past few months, there have been signs that inflationary pressures may be easing. Suppose that bond traders now expect inflation to fall below 4% in 2007 and to fall further to 3% in 2008.

   (a) *(20 points)* Using the theory of asset demand, explain the impact of a decline in expected inflation on the demand for commercial paper. What effect would a decline in expected inflation have on the supply of commercial paper? Using a graph of the supply and demand for commerical paper, illustrate and fully explain the effect on commercial paper yields if bond traders expect a decline in the inflation rate in 2007.

   (b) *(30 points)* Given your answer above, what do you expect to happen to the yields on treasury bills? Why? Write down an equation that represents the *liquidity premium theory* of the term-structure of interest rates. Explain the intuition behind your model. Given that bond traders expect inflation will fall even further in 2008, draw and explain the shape of today's yield curve (for 3mth - 2 year notes).

Multiple Choice (20 minutes): *50 points: 2 points each*

1. Determine which of the following scenarios is true:
   I. Historically in the U.S. interest rates on three-month Treasury bills on average are higher than interest rates on Treasury bonds.

   II. Historically in the U.S. interest rates on Treasury bonds on average are lower than interest rates on corporate Baa bonds.

   (a) (I.) is true, (II.) is false.
   (b) Both are true.
   (c) (I.) is false, (II.) is true.
   (d) Both are false.

2. Which of the following involves indirect finance?

   (a) You make a deposit in a bank account.
   (b) You make a loan to your neighbor.
   (c) A corporation buys shares of common stock issued by another corporation.
   (d) You buy a U.S. Treasury bill from the U.S. Treasury.

3. Commercial banks face the moral hazard problem because

   (a) borrowers who are high risk will most aggressively seek to borrow funds.
   (b) borrowers who face income shortfalls may default on loans.
   (c) borrowers may turn to financial markets to get funds for high-risk projects.
   (d) borrowers may take on more risk after getting a loan.

turn the page . . .

4. Which of the following is no longer used to ensure the soundness of financial intermediaries?

   (a) restrictions on interest rates
   (b) restrictions on assets and activities
   (c) restrictions on entry
   (d) deposit insurance

5. A bond that is bought at a price below its face value and the face value is repaid at a maturity date is called a

   (a) coupon bond.
   (b) discount bond.
   (c) simple loan.
   (d) fixed-payment loan.

6. Adverse selection is a problem associated with equity and debt contracts arising from

   (a) the lenders relative lack of information about the borrowers potential returns and risks of his investment activities.
   (b) the lenders ability to legally require sufficient collateral to cover a 100 percent loss if the borrower defaults.
   (c) the borrowers lack of incentive to seek a loan for highly risky investments.
   (d) none of the above.

7. The interest rate on municipal bonds falls relative to the interest rate on Treasury securities when

   (a) corporate bonds become riskier.
   (b) income tax rates are raised.
   (c) there is a major default in the municipal bond market.
   (d) municipal bonds become less widely traded.
   (e) none of the above occur.

8. Which of the following are true concerning the distinction between interest rates and return?

   (a) The rate of return on a bond will necessarily equal the interest rate on that bond.
   (b) The return can be expressed as the sum of the current yield and the rate of capital gains.
   (c) The rate of return will be greater than the interest rate when the price of the bond falls between time t and t+1.
   (d) none of the above.
   (e) Both (a) and (b).

turn the page . . .

9. Which of the following $1,000 face value securities has the highest yield to maturity?

   (a) A 5 percent coupon bond selling for $1,000
   (b) A 10 percent coupon bond selling for $1,000
   (c) A 15 percent coupon bond selling for $1,100
   (d) A 15 percent coupon bond selling for $900

10. With an interest rate of 6 percent, the present value of a security that pays $1,100 next year and $1,460 four years from now is approximately

    (a) $1,200.
    (b) $2,960.
    (c) $3,000.
    (d) $2,200.

11. Determine whether the below statements are true or false. I. Prices and returns for short-term bonds are less volatile than those for long-term bonds. II. The prices of longer-maturity bonds respond more dramatically to changes in interest rates.

    (a) I is true, II false.
    (b) Both are false.
    (c) Both are true.
    (d) I is false, II true.

12. A bond investor faces reinvestment risk if his or her holding period is

    (a) shorter than the maturity of the bond.
    (b) identical to the maturity of the bond.
    (c) longer than the maturity of the bond.
    (d) none of the above.

13. Stock A has an expected return of 15% with a standard deviation of returns of 10%. Stock B has an expected return of 15% with a standard deviation of returns of 5%. Most investors are _____, which means they would prefer to invest in _____.

    (a) risk averse; Stock B
    (b) risk averse; Stock A
    (c) risk lovers; Stock A
    (d) risk lovers; Stock B

14. If the interest rate on euro-denominated deposits is 13 percent and it is 15 percent on dollar deposits, and if the euro is expected to appreciate at a 4 percent rate, for Francois the Foreigner the expected rate of return on dollar deposits is

    (a) 9%.
    (b) 11%.
    (c) 17%.
    (d) 19%.
    (e) 15%

turn the page . . .

15. According to the market segmentation theory of the term structure,

    (a) the interest rate for bonds of one maturity is determined by supply and demand for bonds of that maturity.
    (b) bonds of one maturity are not substitutes for bonds of other maturities; therefore, interest rates on bonds of different maturities do not move together over time.
    (c) investors strong preference for short-term relative to long-term bonds explains why yield curves typically slope downward.
    (d) only (A) and (B) of the above.

16. The theory of purchasing power parity cannot fully explain exchange rate movements because

    (a) not all goods are identical in different countries.
    (b) monetary policy differs across countries.
    (c) some goods are not traded between countries.
    (d) of both (A) and (C) of the above.
    (e) of both (B) and (C) of the above.

17. During a business cycle expansion, the supply of bonds shifts to the _____ as businesses perceive more profitable investment opportunities, while the demand for bonds shifts to the _____ as a result of the increase in wealth generated by the economic expansion.

    (a) left; left
    (b) right; left
    (c) left; right
    (d) right; right

18. Government budget deficits shift the bond _____ curve to the _____.

    (a) supply; left
    (b) demand; left
    (c) supply; right
    (d) demand; right

19. An increase in default risk on corporate bonds _____ the demand for these bonds and _____ the demand for default-free bonds.

    (a) moderately lowers; does not change
    (b) lowers; increases
    (c) increases; lowers
    (d) does not change; greatly increases

turn the page . . .

20. When the price of a bond is _____ the equilibrium price, there is an excess demand of bonds and the price will _____

    (a) above; rise.
    (b) above; fall.
    (c) below; fall.
    (d) below; rise.

21. Money market instruments

    (a) are usually sold in large denominations.
    (b) have low default risk.
    (c) mature in one year or less.
    (d) are characterized by all of the above.
    (e) are characterized by only (A) and (B) of the above.

22. A decrease in the domestic interest rate shifts the expected return schedule for _____ deposits to the _____ and causes the domestic currency to _____.

    (a) foreign; right; appreciate
    (b) domestic; left; depreciate
    (c) foreign; left; depreciate
    (d) domestic; right; appreciate

23. The theory of PPP suggests that if one country's price level falls relative to another's, its currency should

    (a) float.
    (b) depreciate.
    (c) appreciate.
    (d) do none of the above.

24. According to the interest parity condition, the domestic interest rate is equal to the foreign interest rate

    (a) plus the expected appreciation of the domestic currency.
    (b) minus the expected appreciation of the domestic currency.
    (c) less the expected depreciation of the domestic currency weighted by the domestic interest rate.
    (d) minus the expected depreciation of the domestic currency.

25. Treasury inflation-indexed bonds reduce investors' inflation risk by increasing the bond's _____ when the consumer price index rises.

    (a) term to maturity
    (b) interest rate
    (c) principal
    (d) none of the above

Econ 340: Financial Markets and Institutions
Final Exam, Spring 2006
Bonham

Answer the following essay questions in two to three blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

Essay Questions:

1. Interest Parity, Asymmetric Information, and Financial Crises (40 points, 45 minutes)

   (a) (15 points) The Federal Reserve has raised interest rates 16 times since June 2004. Explain how an increase in the interest rates paid on dollar deposits may lead other central banks to raise their interest rates to protect their currencies.

   (b) (25 points) Consider the case of a developing economy with a recently privatized banking sector. Explain how a weakened banking sector (extremely low bank capital), rising foreign interest rates, and Asymetric Information can contribute to the onset of both a currency and financial crisis.

2. Equity Risk and Return (20 points, 10 minutes)

   Discuss the following:

   (a) How is total risk of an individual stock measured? What two types of risk make up total risk?

   (b) Which type of risk can be eliminated by diversifying your portfolio? Which type of risk remains after a portfolio is diversified?

   (c) Do investors receive compensation for all types of risk?

   (d) Write down an equation representing the expected return on an individual security, and explain how the market's price of risk affects the expected return on the security.

   turn page for MC

Multiple Choice (40 points —*1 point each*).
Circle One answer, but note that some questions may have more than one correct answer.

1. Determine which of the following scenarios is true:
   (a) Historically in the U.S. interest rates on three-month Treasury bills on average are higher than interest rates on Treasury bonds.
   (b) Historically in the U.S. interest rates on Treasury bonds on average are lower than interest rates on corporate Baa bonds.
   (c) (a) is true, (b) is false.
   (d) Both are true.
   (e) (a) is false, (b) is true.
   (f) Both are false.

2. A rise in interest rates _____ the cost to financial institutions of acquiring funds and _____ the income they earn on assets.
   (a) lowers; raises
   (b) lowers; lowers
   (c) raises; lowers
   (d) raises; raises

3. When potential borrowers know more than lenders about the future prospects of a project to be undertaken with borrowed funds, the lender faces the problem of
   (a) default risk.
   (b) asymmetric information.
   (c) free-riding.
   (d) moral hazard.

4. Which of the following is no longer used to ensure the soundness of financial intermediaries?
   (a) restrictions on interest rates
   (b) restrictions on assets and activities
   (c) restrictions on entry
   (d) deposit insurance

5. A bond that is bought at a price below its face value and the face value is repaid at a maturity date is called a
   (a) coupon bond.
   (b) discount bond.
   (c) simple loan.
   (d) fixed-payment loan.

turn the page

6. Which of the following are true concerning the distinction between interest rates and return?

   (a) The rate of return on a bond will not necessarily equal the interest rate on that bond.
   (b) The return can be expressed as the sum of the current yield and the rate of capital gains.
   (c) The rate of return will be greater than the interest rate when the price of the bond falls between time t and time t+1.
   (d) All of the above are true.
   (e) Only (a) and (b) of the above are true.

7. Which of the following $1,000 face-value securities has the highest yield to maturity?

   (a) 5 percent coupon bond with a price of $1,200
   (b) 5 percent coupon bond with a price of $1,100
   (c) 5 percent coupon bond with a price of $1,000
   (d) 5 percent coupon bond with a price of $800
   (e) 5 percent coupon bond with a price of $900

8. Determine whether the below statements are true or false. I. Bond prices are inversely related to interest rates. II. The smaller a bond's duration, the greater its interest-rate risk.

   (a) Both are true.
   (b) I is true, II false.
   (c) I is false, II true.
   (d) Both are false.

9. If you expect the inflation rate to be 5 percent over the next year and a one-year bond has a yield to maturity of 7 percent, then the real interest rate on this bond is

   (a) -2 percent.
   (b) 2 percent.
   (c) -12 percent.
   (d) 12 percent.

10. A bond investor faces reinvestment risk if his or her holding period is

   (a) shorter than the maturity of the bond.
   (b) identical to the maturity of the bond.
   (c) longer than the maturity of the bond.
   (d) none of the above.

turn the page

11. When people expect interest rates to rise in the future, the _____ curve for bonds shifts to the _____.

    (a) demand; right
    (b) supply; left
    (c) supply; right
    (d) demand; left

12. An increase in the expected rate of inflation will _____ the expected return on bonds relative to that on _____ assets.

    (a) reduce; financial
    (b) reduce; real
    (c) raise; financial
    (d) raise; real

13. Government budget deficits shift the bond _____ curve to the _____.

    (a) supply; left
    (b) demand; left
    (c) supply; right
    (d) demand; right

14. An increase in default risk on corporate bonds _____ the demand for these bonds and _____ the demand for default-free bonds.

    (a) moderately lowers; does not change
    (b) lowers; increases
    (c) increases; lowers
    (d) does not change; greatly increases

15. The interest rate on municipal bonds falls relative to the interest rate on Treasury securities when

    (a) corporate bonds become riskier.
    (b) income tax rates are raised.
    (c) there is a major default in the municipal bond market.
    (d) municipal bonds become less widely traded.
    (e) none of the above occur.

turn the page

16. If the expected path of one-year interest rates over the next four years is 5 percent, 4 percent, 2 percent, and 1 percent, then the pure expectations theory predicts that today's interest rate on the four-year bond is

    (a) 2 percent.
    (b) 5 percent.
    (c) 4 percent.
    (d) 1 percent.
    (e) 3 percent.

17. According to the liquidity premium theory of the term structure, a flat yield curve indicates that short-term interest rates are expected to

    (a) remain unchanged in the future.
    (b) decline sharply in the future.
    (c) decline moderately in the future.
    (d) rise in the future.

18. If the interest rate on euro-denominated deposits is 13 percent and it is 15 percent on dollar deposits, and if the euro is expected to appreciate at a 4 percent rate, for Francois the Foreigner the expected rate of return on dollar deposits is

    (a) 9%.
    (b) 11%.
    (c) 17%.
    (d) 19%.
    (e) 15%

19. Which of the following is not a characteristic of Treasury bills?

    (a) The interest they pay is based on a coupon rate announced weekly by the Treasury.
    (b) They have low interest-rate risk.
    (c) They have zero default risk.
    (d) The market for them is deep and liquid.

20. A bond's annual interest payment expressed as a percentage of its market price is the bond's

    (a) coupon rate.
    (b) current yield.
    (c) discount rate.
    (d) yield to maturity.

turn the page

21. Treasury inflation-indexed bonds reduce investors' inflation risk by increasing the bond's _____ when the consumer price index rises.

    (a) term to maturity
    (b) interest rate
    (c) principal
    (d) none of the above

22. Suppose the interest rate on a taxable corporate bond is 10% and the marginal tax rate is 25%. What is the equivalent tax-free interest rate on this bond?

    (a) 2.5%
    (b) 7.5%
    (c) 9.25%
    (d) 12.5%

23. Corporate bond issuers generally have the right to buy bonds back before they mature. Bonds subject to this provision are called _____ bonds.

    (a) registered
    (b) unsecured
    (c) sinking
    (d) callable
    (e) convertible

24. Which of the following are reported as assets on a bank's balance sheet?

    (a) bank capital
    (b) loans
    (c) borrowings
    (d) only (a) and (b) of the above

25. Which of the following are reported as liabilities on a bank's balance sheet?

    (a) securities
    (b) nontransaction deposits
    (c) loans
    (d) reserves and cash items

turn the page

26. Bank capital

    (a) provides a cushion against a drop in the value of assets.
    (b) serves to reassure uninsured depositors that the bank is sound.
    (c) serves to reassure bank regulators that the bank is not likely to fail due to a few bad loans.
    (d) does each of the above.
    (e) does only (a) and (b) of the above.

27. If a bank has less rate-sensitive assets than liabilities, then

    (a) a rise in interest rates will raise income.
    (b) a fall in interest rates will raise income.
    (c) a fall in interest rates will lower income.
    (d) none of the above is true.

28. Suppose a bank has assets of $200 million, liabilities of $140 million, and a duration gap of 1.50. If interest rates rise from 10 percent to 5 percent, then

    (a) net interest income will fall by $6.8 million.
    (b) net interest income will rise by $6.8 million.
    (c) the market value of net worth will fall by $13.6 million.
    (d) the market value of net worth will rise by $13.6 million.

29. Which of the following is not a financial derivative?

    (a) options
    (b) forward contract
    (c) futures contract
    (d) interest-rate swap
    (e) Treasury bond

30. If at expiration a futures contract has a price of 98 while the underlying asset has a price of 99, then arbitrageurs would take _____ futures positions and _____ the underlying asset.

    (a) short; sell
    (b) long; buy
    (c) short; buy
    (d) long; sell

turn the page

31. If you sell a futures contract on the S&P 500 Index at a price of 430 and the index falls to 400, then

    (a) you will lose $10,500.
    (b) you will lose $7,500.
    (c) you will gain $7,500.
    (d) you will gain $30.

32. You paid $1000 for a call option on 100 shares of Apple stock at $120 per share. At expiration Apple stock is at $125.

    (a) Your net profit is $500.
    (b) Your net loss is $500.
    (c) Your net profit is $2500.
    (d) Your net loss is $2000.

33. Using the Gordon growth model, if a stock's next dividend is expected to be $2.0, the discount rate is estimated to be 8 percent, and dividends are projected to increase at 4 percent per year indefinitely, then the stock should sell for

    (a) $6.10
    (b) $31.25
    (c) $22.73
    (d) $50.00
    (e) $83.33

34. When comparing stocks and bonds, investors find stocks attractive because

    (a) there is potential for greater gains investing in stock than there is investing in bonds.
    (b) stockholders have a higher priority than bondholders when a firm is in trouble.
    (c) firms are legally required to pay dividends on stock each year.
    (d) returns are less volatile on stocks than on bonds.

35. According to the interest parity condition, the domestic interest rate is equal to the foreign interest rate

    (a) plus the expected appreciation of the domestic currency.
    (b) minus the expected appreciation of the domestic currency.
    (c) less the expected depreciation of the domestic currency weighted by the domestic interest rate.
    (d) minus the expected depreciation of the domestic currency.

turn the page

36. In an efficient financial market

    (a) all relevant information must be publicly available.
    (b) unexploited profit opportunities must be zero on average.
    (c) everyone must be well informed about a security's fundamentals.
    (d) there will be no profit opportunities to exploit.

37. Dividing a bank's net income by its capital gives the bank's

    (a) net interest margin.
    (b) equity multiplier.
    (c) return on assets.
    (d) return on equity.

38. A U.S. company which exports to Germany can hedge the foreign exchange risk by

    (a) taking a short position in futures contracts on dollars.
    (b) taking a short position in futures contracts on euros.
    (c) both of the above.
    (d) none of the above.

39. A decrease in the domestic interest rate shifts the expected return schedule for _____ deposits to the _____ and causes the domestic currency to _____.

    (a) foreign; right; appreciate
    (b) domestic; left; depreciate
    (c) foreign; left; depreciate
    (d) domestic; right; appreciate

40. The theory of PPP suggests that if one country's price level falls relative to another's, its currency should

    (a) float.
    (b) depreciate.
    (c) appreciate.
    (d) do none of the above.

Econ 340: Financial Markets & Institutions
Midterm Exam March 3, 2006

Essay (30 minutes): ***40 points***

1. In 2004 the U.S. central bank began raising its target for the fed funds rate in an effort to push up interest rates and reduce inflationary pressures. The expectation that inflation would be increasing over the next serveral years proved to be accurate.

   (a) *(20 points)* If the Federal Reserve conducts monetary policy by buying and selling U.S. t-bills, using a supply and demand for t-bills model, illustrate and **explain** the role of tight monetary policy on treasury bill yields in 2004, 2005 and 2006. (assume the the Fed continues to tighten monetary policy each year in the face of rising inflationary expectations).

   (b) *(20 points)* Write down an equation representing the short run equilibrium in foreign currency markets. **explain** the intuition behind your model. Given your answer to part (a), and assuming everything else remains unchanged. Illustrate and explain the impact of an increase in expected inflation on the spot exchange rate.

Multiple Choice (20 minutes): ***2 points each***

1. Adverse selection is a problem associated with equity and debt contracts arising from

   (a) the lenders relative lack of information about the borrowers potential returns and risks of his investment activities.

   (b) the lenders ability to legally require sufficient collateral to cover a 100 percent loss if the borrower defaults.

   (c) the borrowers lack of incentive to seek a loan for highly risky investments.

   (d) none of the above.

2. When Americans or foreigners expect the return on dollar deposits to be high relative to the return on foreign deposits, there is a _____ demand for dollar deposits and a correspondingly _____ demand for foreign deposits.

   (a) higher; higher

   (b) higher; lower

   (c) lower; higher

   (d) lower; lower

3. A bond denominated in Japanese yen and sold in the United States is known as a

   (a) foreign bond.
   (b) eurobond.
   (c) yenbond.
   (d) international bond.

4. During business cycle expansions when income and wealth are rising, the demand for bonds _____ and the demand curve shifts to the _____

   (a) falls; right.
   (b) falls; left.
   (c) rises; right.
   (d) rises; left.

5. An increase in the expected rate of inflation will _____ the expected return on bonds relative to that on _____ assets, and shift the _____ curve to the left.

   (a) reduce; financial; demand
   (b) reduce; real; demand
   (c) raise; financial; supply
   (d) raise; real; supply

6. Financial markets improve economic welfare because

   (a) they allow funds to move from those without productive investment opportunities to those who have such opportunities.
   (b) they allow consumers to time their purchases better.
   (c) they weed out inefficient firms.
   (d) they do all of the above.
   (e) they do (A) and (B) of the above.

7. When bonds become less widely traded, and as a consequence the market becomes less liquid, the demand curve for bonds shifts to the _____ and the interest rate _____

   (a) right; rises.
   (b) right; falls.
   (c) left; falls.
   (d) left; rises.

8. The theory of purchasing power parity cannot fully explain exchange rate movements because

   (a) not all goods are identical in different countries.
   (b) monetary policy differs across countries.
   (c) some goods are not traded between countries.
   (d) of both (A) and (C) of the above.
   (e) of both (B) and (C) of the above.

9. Which of the following are generally true of all bonds?

   (a) The longer a bonds maturity, the lower is the rate of return that occurs as a result of the increase in an interest rate.
   (b) Even though a bond has a substantial initial interest rate, its return can turn out to be negative if interest rates rise.
   (c) Prices and returns for long-term bonds are more volatile than those for shorter-term bonds.
   (d) All of the above are true.
   (e) Only (A) and (B) of the above are true.

10. Financial intermediaries can substantially reduce transaction costs per dollar of transactions because their large size allows them to take advantage of

   (a) poorly informed consumers.
   (b) standardization.
   (c) economies of scale.
   (d) their market power.

11. With an interest rate of 10 percent, the present value of a security that pays $1,100 next year and $1,460 four years from now is approximately

   (a) $1,000.
   (b) $2,560.
   (c) $3,000.
   (d) $2,000.

12. Financial markets have the basic function of

   (a) bringing together people with funds to lend and people who want to borrow funds.
   (b) assuring that the swings in the business cycle are less pronounced.

(c) assuring that governments need never resort to printing money.

(d) both (A) and (B) of the above.

(e) both (B) and (C) of the above.

13. According to the market segmentation theory of the term structure,

    (a) the interest rate for bonds of one maturity is determined by supply and demand for bonds of that maturity.

    (b) bonds of one maturity are not substitutes for bonds of other maturities; therefore, interest rates on bonds of different maturities do not move together over time.

    (c) investors strong preference for short-term relative to long-term bonds explains why yield curves typically slope downward.

    (d) only (A) and (B) of the above.

14. The interest rate that equates the present value of payments received from a debt instrument with its market price today is the

    (a) simple interest rate.

    (b) discount rate.

    (c) yield to maturity.

    (d) real interest rate.

15. If the expected path of one-year interest rates over the next five years is 1 percent, 2 percent, 3 percent, 4 percent, and 5 percent, the pure expectations theory predicts that the bond with the highest interest rate today is the one with a maturity of

    (a) one year.

    (b) two years.

    (c) three years.

    (d) four years.

    (e) five years.

16. Federal funds

    (a) are short-term funds transferred between financial institutions, usually for a period of one day.

    (b) actually have nothing to do with the federal government.

    (c) provide banks with an immediate infusion of reserves should they be short.

    (d) are all of the above.

    (e) are only (A) and (B) of the above.

17. Which of the following $1,000 face value securities has the highest yield to maturity?

    (a) A 5 percent coupon bond selling for $1,000

    (b) A 10 percent coupon bond selling for $1,000

    (c) A 15 percent coupon bond selling for $1,000

    (d) A 15 percent coupon bond selling for $900

18. (I) If a corporation suffers big losses, the demand for its bonds will rise because of the higher interest rates the firm must pay. (II) The spread between the interest rates on bonds with default risk and default-free bonds is called the risk premium.

    (a) (I) is true, (II) false.
    (b) (I) is false, (II) true.
    (c) Both are true.
    (d) Both are false.

19. Successful financial intermediaries have higher earnings on their investments because they are better equipped than individuals to screen out good from bad risks, thereby reducing losses due to

    (a) moral hazard.
    (b) adverse selection.
    (c) bad luck.
    (d) financial panics.

20. The yield to maturity for a one-year discount bond equals

    (a) the increase in price over the year, divided by the initial price.
    (b) the increase in price over the year, divided by the face value.
    (c) the increase in price over the year, divided by the interest rate.
    (d) none of the above.

21. Money market mutual funds

    (a) are funds that aggregate money from a group of small investors and invest it in money market instruments.
    (b) have grown enormously popular since their inception in the early 1970s.
    (c) received a flood of funds in the early 1980s as depositors withdrew their funds from banks which were restricted from paying more than 5.25percent in interest on savings accounts.
    (d) all of the above.
    (e) only (A) and (B) of the above.

22. Bonds that are sold in a foreign country and are denominated in a currency other than that of the country in which they are sold are known as

    (a) foreign bonds.
    (b) Eurobonds.
    (c) Eurocurrencies.
    (d) Eurodollars.

23. When yield curves are steeply upward-sloping,

    (a) long-term interest rates are above short-term interest rates.
    (b) short-term interest rates are above long-term interest rates.
    (c) short-term interest rates are about the same as long-term interest rates.
    (d) medium-term interest rates are above both short-term and long-term interest rates.
    (e) medium-term interest rates are below both short-term and long-term interest rates.

24. The theory of purchasing power parity states that exchange rates between any two currencies will adjust to reflect changes in

    (a) the trade balances of the two countries.
    (b) the current account balances of the two countries.
    (c) fiscal policies of the two countries.
    (d) the price levels of the two countries.

25. When the exchange rate for the euro changes from \$0.80 to \$1.00 then, holding everything else constant,

    (a) the euro has appreciated and German cars sold in the United States become more expensive.
    (b) the euro has appreciated and German cars sold in the United States become less expensive.
    (c) the euro has depreciated and American wheat sold in Germany becomes more expensive.
    (d) the euro has depreciated and American wheat sold in Germany becomes less expensive.

26. Which of the following are true concerning the distinction between interest rates and return?

    (a) The rate of return on a bond will not necessarily equal the interest rate on that bond.
    (b) The return can be expressed as the sum of the current yield and the rate of capital gains.

27. When inflation rose in the late 1970s,

    (a) consumers moved money out of money market mutual funds because their returns did not keep pace with inflation.
    (b) banks solidified their advantage over money markets by offering higher deposit rates.

(c) brokerage houses introduced highly popular money market mutual funds drawing significant amounts of money out of bank deposits.

(d) consumers were unable to take advantage of higher rates in money markets because of the requirement of large transaction sizes.

28. Suppose that you purchase a 91-day Treasury bill for $9,850 that is worth $10,000 when it matures. The securitys annualized yield if held to maturity is about

    (a) 4.5 percent.

    (b) 5 percent.

    (c) 6 percent.

    (d) 7 percent.

29. If the interest rate on dollar deposits is 10 percent, and the dollar is expected to appreciate by 7 percent over the coming year, the expected return on dollar deposits in terms of the foreign currency is

    (a) 3 percent.

    (b) 10 percent.

    (c) 13.5 percent.

    (d) 17 percent.

    (e) 24 percent.

30. Government budget surpluses shift the bond _____ curve to the _____.

    (a) supply; left

    (b) demand; left

    (c) supply; right

    (d) demand; right

Econ 340: Financial Markets & Institutions
Midterm Exam Oct. 11, 2005

Essay (35 minutes): ***40 points***

Nine out of ten of the U.S. recessions since World War II were preceded by a spike in oil prices. At the same time, oil price spikes tend to cause temporary short term jumps in inflation.

At the end of September, a barrel of light crude sold for almost $70 compared to a price near $30 a barrel in January of 2004. To answer the following questions, assume that bond traders expect inflation to rise from 3 percent in 2005 (history) to 5 percent in both 2006 and 2007 (expected inflation). Also, traders expect the U.S. economy to enter a recession in 2007. Assume that prior to the recent run up in oil prices, bond traders had expected inflation to remain stable in 2006-2007 at 3 percent.

a) *(10 points)* Using a model of the supply and demand for 1 year t-bills, illustrate and **explain** the impact of an increase in expected inflation. Explain what your results imply for changes in the yield on 1 year t-bills in 2006 and 2007.

b) *(10 points)* Using a model of the supply and demand for 1 year t-bills, illustrate and **explain** the impact of a recession (a business cycle contraction). If bond traders expect that this recession will occur in 2007, what do they expect to happen to yields on one-year t-bills in 2007.

c) *(20 points)* Write down an equation representing the liquidity premium theory of the term structure of interest rates. Based on this theory, **explain** how the yields on short term and medium term government bonds are related. Based on your answer to parts (a-b) above, **draw** and **explain** a yield curve that represents the relationship between short and medium term bonds.

Multiple Choice (40 minutes): ***2 points each***

1. Determine which of the following scenarios is true:

   I. Historically in the U.S. interest rates on three-month Treasury bills on average are higher than interest rates on Treasury bonds.

   II. Historically in the U.S. interest rates on Treasury bonds on average are lower than

interest rates on corporate Baa bonds.

a. I is true, II is false.

b. Both are true.

c. I is false, II is true.

d. Both are false.

2. A rise in interest rates ___ the cost to financial institutions of acquiring funds and ___ the income they earn on assets.

a. lowers; raises

b. lowers; lowers

c. raises; lowers

d. raises; raises

3. Everything else constant, a stronger dollar will mean that

a. French cheese becomes more expensive.

b. vacationing in the United States becomes less expensive.

c. vacationing in England becomes less expensive.

d. Japanese cars become more expensive.

4. A bond denominated in Japanese yen and sold in the United States is known as a

a. foreign bond.

b. eurobond.

c. yenbond.

d. international bond.

5. When borrowers know more than lenders about the future prospects of a project to be undertaken with borrowed funds, the lender faces the problem of

a. default risk.

b. asymmetric information.

c. free-riding.

d. moral hazard.

6. Which of the following is no longer used to ensure the soundness of financial intermediaries?
   a. restrictions on interest rates

   b. restrictions on assets and activities

   c. restrictions on entry

   d. deposit insurance

7. A bond that is bought at a price below its face value and the face value is repaid at a maturity date is called a

   a. coupon bond.

   b. discount bond.

   c. simple loan.

   d. fixed-payment loan.

8. Which of the following are true concerning the distinction between interest rates and return?
   a. The rate of return on a bond will not necessarily equal the interest rate on that bond.

   b. The return can be expressed as the sum of the current yield and the rate of capital gains.

   c. The rate of return will be greater than the interest rate when the price of the bond falls between time t and time t+1.

   d. All of the above are true.

   e. Only (a) and (b) of the above are true.

9. Which of the following $1,000 face-value securities has the highest yield to maturity?
   a. 5 percent coupon bond with a price of $1,200
   b. 5 percent coupon bond with a price of $1,100
   c. 5 percent coupon bond with a price of $1,000
   d. 5 percent coupon bond with a price of $800
   e. 5 percent coupon bond with a price of $900

10. Determine whether the below statements are true or false.

    I. Bond prices are inversely related to interest rates.

    II. The smaller a bond's duration, the greater its interest-rate risk.

    a. Both are true.
    b. I is true, II false.
    c. I is false, II true.
    d. Both are false.

11. If you expect the inflation rate to be 5 percent over the next year and a one-year bond has a yield to maturity of 7 percent, then the real interest rate on this bond is
    a. 2 percent.
    b. -2 percent.
    c. -12 percent.
    d. 12 percent.

12. Stock A has an expected return of 15% with a standard deviation of returns of 10%. Stock B has an expected return of 15% with a standard deviation of returns of 5%. Most investors are ___, which means they would prefer to invest in ___.
    a. risk averse; Stock B
    b. risk averse; Stock A
    c. risk lovers; Stock A

d. risk lovers; Stock B

13. When people expect interest rates to rise in the future, the ___ curve for bonds shifts to the ___.

    a. demand; right

    b. supply; left

    c. supply; right

    d. demand; left

14. Government budget surpluses shift the bond ___ curve to the ___.

    a. supply; left

    b. demand; left

    c. supply; right

    d. demand; right

15. Liquidity refers to

    a. the stability of an asset's expected return.

    b. the size of an asset's expected return.

    c. the ease with which an asset can be turned into cash.

    d. the amount of wealth a person has to invest.

16. The risk premium is

    a. the interest rate on municipal bonds minus the interest rate on treasury bonds.

    b. the interest rate on corporate bonds minus the interest rate on treasury bonds.

    c. the interest rate on treasury bonds minus the interest rate on default-free bonds.

d. the interest rate on treasury bonds minus the interest rate on corporate bonds.

17. An increase in default risk on corporate bonds ___ the demand for these bonds and ___ the demand for default-free bonds.
    a. moderately lowers; does not change

    b. lowers; increases

    c. increases; lowers

    d. does not change; greatly increases

18. The interest rate on municipal bonds falls relative to the interest rate on Treasury securities when
    a. corporate bonds become riskier.

    b. income tax rates are raised.

    c. there is a major default in the municipal bond market.

    d. municipal bonds become less widely traded.

    e. none of the above occur.

19. The relationship between interest rates and maturity dates for various Treasury bonds is called the ___ structure of interest rates.

    a. term

    b. risk

    c. chronological

    d. liquidity

20. According to the market segmentation theory of the term structure,

    a. the interest rate for each maturity bond is determined by supply and demand for that maturity bond.

    b. investors' strong preferences for short-term bonds relative to long-term bonds explains why yield curves typically slope upward.

c. bonds of one maturity are close substitutes for bonds of other maturities; therefore, interest rates on bonds of different maturities move together over time.

d. all of the above.

e. only (a) and (b) of the above.

21. When yield curves are downward sloping,

a. short-term interest rates are above long-term interest rates.

b. medium-term interest rates are below both short-term and long-term interest rates.

c. short-term interest rates are about the same as long-term interest rates.

d. long-term interest rates are above short-term interest rates.

e. medium-term interest rates are above both short-term and long-term interest rates.

22. Investors use the money market

a. to earn high returns on their investments.

b. to reduce the liquidity of their funds.

c. to reduce the opportunity cost of idle funds.

d. to gain from expected declines in future interest rates.

23. Which of the following is always a demander and never a supplier of funds in the money market?

a. the U.S. Treasury

b. businesses

c. the Federal Reserve System

d. commercial banks

24. If the government wants to raise the Fed funds rate, then

a. the Fed will buy securities from the public.

b. the Treasury will sell fewer T-bills.

c. the Fed will announce an increase in the rate at its regular meeting.

d. the Treasury will sell more T-bills.

e. the Fed will sell securities to the public.

25. Which of the following typically finances import and export trade?

a. Repurchase agreements

b. Freddie Mac

c. Banker's acceptances

d. Eurodollars

e. LIBOR

26. Which of the following is not a characteristic of Treasury bills?

a. The interest they pay is based on a coupon rate announced weekly by the Treasury.

b. They have low interest-rate risk.

c. They have zero default risk.

d. The market for them is deep and liquid.

27. Treasury inflation-indexed bonds reduce investors' inflation risk by increasing the bond's _ __ when the consumer price index rises.

a. term to maturity

b. interest rate

c. principal

d. none of the above

28. Which of the following statements about Treasury bonds is true?

a. The government faces interest-rate risk since its interest costs will be higher if market interest rates fall.

b. Investors face interest-rate risk since their returns will be lower if market interest rates fall.

c. Investors face interest-rate risk since their returns will be lower if market interest rates rise.

d. The government faces interest-rate risk since its interest costs will be higher if market interest rates rise.

29. The least risky type of corporate bond is a

    a. debenture.

    b. variable rate bond.

    c. secured bond.

    d. subordinated bond.

30. Suppose the interest rate on a taxable corporate bond is 10% and the marginal tax rate is 25%. What is the equivalent tax-free interest rate on this bond?

    a. 2.5%

    b. 7.5%

    c. 9.25%

    d. 12.5%

Econ 340: Financial Markets and Institutions
Final Exam, Fall 2005
Bonham

Answer the following essay questions in two to three blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

Essay Questions:

1. Asymmetric Information and Financial Crises (30 points, 30 minutes)

   a. (15 points) Mishkin and Eakins (the textbook) argue that many of the structural aspects of the U.S. financial system can be explained in terms of transactions costs and asymmetric information problems. Define Asymmetric information and the problems that it creates for financial markets. Explain how the structure of the U.S. financial system can be explained by the problem of asymmetric information.

   b. (15 points) Explain the <u>root cause</u> and <u>progression</u> of recent financial crises in other parts of the world (Thailand, Malaysia, South Korea, Indonesia, Japan, Russia, Brazil, Mexico, Argentina, ...)?

2. Stock Returns and Equity Premiums (25 points, 25 minutes)

   During the 1990s, the equity premium declined significantly. One possible reason for that change is a decline in investorsÍ required rates of return.

   What is the equity premium? What is the required rate of return? What factors may have lead to a decline in the required rate of return during the 90s? Explain how these factors lead to declining equity premiums. Explain carefully how and why a decline in the required rate of return affects stock values and returns. If above average returns during the late 90s were due to declining equity premiums, explain why investors expecting above-average returns in the future may be disappointed.

Multiple Choice (30 minutes, 45 points *1.5 points each*)

1. A bond that is bought at a price below its face value and the face value is repaid at a maturity date is called a

   a. coupon bond.

   b. discount bond.

   c. simple loan.

   d. fixed-payment loan.

2. With an interest rate of 4 percent, the present value of $100 next year is approximately

   a. $96.

   b. $100.

   c. $92.

d. $104.

3. If you expect the inflation rate to be 5 percent over the next year and a one-year bond has a yield to maturity of 7 percent, then the real interest rate on this bond is

   a. 2 percent.

   b. -2 percent.

   c. -12 percent.

   d. 12 percent.

4. A bond investor faces reinvestment risk if his or her holding period is

   a. shorter than the maturity of the bond.

   b. identical to the maturity of the bond.

   c. longer than the maturity of the bond.

   d. none of the above.

5. During a business cycle expansion, the supply of bonds shifts to the ___ as businesses perceive more profitable investment opportunities, while the demand for bonds shifts to the ___ as a result of the increase in wealth generated by the economic expansion.

6. The Fisher effect is the ___ relationship between ___ and ___.

   a. direct; expected inflation; interest rates

   b. inverse; expected inflation; interest rates

   c. direct; interest rates; bond prices

   d. inverse; interest rates; bond prices

7. The risk premium on corporate bonds becomes smaller if

   a. the interest rate of corporate bonds increases.

   b. the liquidity of corporate bonds increases.

c. the riskiness of corporate bonds increases.

d. both (a) and (c) occur.

8. If the expected path of one-year interest rates over the next four years is 6 percent, 5 percent, 3 percent, and 2 percent, then the pure expectations theory predicts that today's interest rate on the four-year bond is

   a. 2 percent.

   b. 5 percent.

   c. 4 percent.

   d. 1 percent.

   e. 3 percent.

9. Large banks issue ___ as an alternative to checking and savings accounts as sources of funds.

   a. Treasury bills

   b. banker's acceptances

   c. commercial paper

   d. negotiable CDs

   e. repurchase agreements

10. Suppose the interest rate on a taxable corporate bond is 10% and the marginal tax rate is 25%. What is the equivalent tax-free interest rate on this bond?

    a. 2.5%

    b. 7.5%

    c. 9.25%

    d. 12.5%

11. Potential for conflict of interest arises when

a. profits can be made providing financial services.

b. people expected to provide reliable information to the public can profit by not doing so.

c. bankers can pay depositors low interest rates but charge borrowers high interest rates.

d. all of the above.

12. Conflicts of interest
    a. reduce the flow of reliable information in financial markets.

    b. result in misallocation of credit resources.

    c. make adverse selection and moral hazard problems more difficult to solve.

    d. all of the above.

13. Which of the following are reported as assets on a bank's balance sheet?
    a. (a) bank capital

    b. (b) loans

    c. (c) borrowings

    d. (d) only (a) and (b) of the above

14. Which of the following are reported as liabilities on a bank's balance sheet?
    a. securities

    b. nontransaction deposits

    c. loans

    d. reserves and cash items

15. Bank capital
    a. (a) provides a cushion against a drop in the value of assets.

    b. (b) serves to reassure uninsured depositors that the bank is sound.

c. (c) serves to reassure bank regulators that the bank is not likely to fail due to a few bad loans.

d. (d) does each of the above.

e. (e) does only (a) and (b) of the above.

16. Dividing a bank's net income by its capital gives the bank's
    a. return on assets.

    b. return on equity.

    c. equity multiplier.

    d. net interest margin.

17. If a bank has more rate-sensitive assets than liabilities, then
    a. a rise in interest rates will raise income.

    b. a fall in interest rates will raise income.

    c. a rise in interest rates will lower income.

    d. none of the above is true.

18. Suppose a bank has assets of $150 million, liabilities of $132 million, and a duration gap of 1.50. If interest rates fall from 10 percent to 5 percent, then
    a. net interest income will fall by $6.8 million.

    b. net interest income will rise by $6.8 million.

    c. the market value of net worth will fall by $10.2 million.

    d. the market value of net worth will rise by $10.2 million.

19. Which of the following is not a financial derivative?
    a. options

    b. forward contract

c. futures contract

d. interest-rate swap

e. Treasury bond

20. Which of the following is not a reason to hedge a portfolio?
    a. to offset a long-position with a short-position

    b. to stabilize income

    c. to limit exposure to risk

    d. to increase the probability of gains

21. If at expiration a futures contract has a price of 98 while the underlying asset has a price of 99, then arbitrageurs would take ___ futures positions and ___ the underlying asset.
    a. short; sell

    b. long; buy

    c. short; buy

    d. long; sell

22. If you sell a futures contract on the S&P 500 Index at a price of 450 and the index falls to 400, then
    a. you will lose $12,500.

    b. you will lose $50.

    c. you will gain $12,500.

    d. you will gain $50.

23. You paid $2000 for a call option on 100 shares of Dell company stock at $150 per share. At expiration Dell stock is at $125.
    a. Your net profit is $500.

    b. Your net loss is $4500.

    c. Your net profit is $2500.

d. Your net loss is $2000.

24. Who hopes a call option finishes öut of the money?"
    a. neither the option purchaser nor the option seller

    b. the option seller

    c. the option purchaser

    d. both the option purchaser and the option seller

25. Using the Gordon growth model, if a stock's next dividend is expected to be $5, the discount rate is estimated to be 16 percent, and dividends are projected to increase at 6 percent per year indefinitely, then the stock should sell for
    a. $6.10

    b. $31.25

    c. $22.73

    d. $50.00

    e. $83.33

26. When comparing stocks and bonds, investors find stocks attractive because
    a. there is potential for greater gains investing in stock than there is investing in bonds.

    b. stockholders have a higher priority than bondholders when a firm is in trouble.

    c. firms are legally required to pay dividends on stock each year.

    d. returns are less volatile on stocks than on bonds.

27. If the inflation rate in the United States is higher than that in Europe and productivity is growing at a slower rate in the United States than in Europe, then, in the long run,
    a. (a) the euro should appreciate relative to the dollar.

    b. (b) the euro should depreciate relative to the dollar.

c. (c) the dollar should depreciate relative to the euro.

d. (d) both (a) and (c) will occur.

e. (e) it is not clear whether the dollar should appreciate or depreciate relative to the euro.

28. According to the interest parity condition, the domestic interest rate is equal to the foreign interest rate
    a. plus the expected appreciation of the domestic currency.

    b. minus the expected appreciation of the domestic currency.

    c. less the expected depreciation of the domestic currency weighted by the domestic interest rate.

    d. minus the expected depreciation of the domestic currency.

29. An increase in the domestic interest rate shifts the expected return schedule for ___ deposits to the ___ and causes the domestic currency to ___.
    a. foreign; right; appreciate

    b. domestic; left; depreciate

    c. foreign; left; depreciate

    d. domestic; right; appreciate

30. The theory of PPP suggests that if one country's price level rises relative to another's, its currency should
    a. float.

    b. depreciate.

    c. appreciate.

    d. do none of the above.

Midterm Exam
March 13, 2003

Essay (40 minutes): ***55 points***

1. The Bush administration has proposed significant tax cuts and increases in government spending. As a result, the Congressional Budget Office predicts a significant increase in federal govt. budget deficits over the next three years.

   a. *(15 points)* Using a supply and demand for bonds model, illustrate and **explain** the impact these budget deficits are likely to have on treasury bills yields over the next three years (assume the deficit is financed using t-bills).

   b. *(20 points)* Write down an equation representing some theory of the term structure of interest rates. Based on this theory, explain the relationship between yields on short term and medium term government bonds. Illustrate this relationship using a yield curve and your answer to part (a) above.

   c. *(25 points)* Write down an equation representing the short run equilibrium in foreign currency markets. Explain the intuition behind your model. Given your answer to part (a), and assuming everything else remains unchanged. Illustrate and explain the impact of the federal govt. budget deficits on the spot exchange rate.

Multiple Choice (20 minutes): ***3 points each***

1. A bond denominated in Japanese yen and sold in the United States is known as a
   a. international bond.
   b. foreign bond.
   c. yenbond.
   d. eurobond.

2. Interest rates are determined in the market for
   a. assets.
   b. bonds and other forms of debt.
   c. foreign currencies.
   d. stocks.

3. When borrowers know more than lenders about the future prospects of a project to be undertaken with borrowed funds, the lender faces the problem of
   a. moral indignation.

   b. default risk.

   c. free riding.

   d. asymmetric information.

4. If bad credit risks are the ones most actively seeking loans, then lenders are subject to the
   a. good information problem.

   b. free-rider problem.

   c. principal-agent problem.

   d. moral hazard problem.

   e. adverse selection problem.

5. Which of the following is no longer used to ensure the soundness of financial intermediaries?
   a. restrictions on assets and activities

   b. restrictions on interest rates

   c. deposit insurance

   d. restrictions on entry

6. Which of the following $1,000 face-value securities has the highest yield to maturity?
   a. 5 percent coupon bond with a price of $1,500

   b. 5 percent coupon bond with a price of $800

   c. 5 percent coupon bond with a price of $500

   d. 5 percent coupon bond with a price of $1000

   e. 5 percent coupon bond with a price of $1200

7. With an interest rate of 4 percent, the present value of $100 next year is approximately

   a. $100

   b. $96

   c. $104

   d. $92

8. (I) Prices and returns for short-term bonds are less volatile than those for long-term bonds. (II) The prices of longer-maturity bonds respond more dramatically to changes in interest rates.

   a. Both are false.

   b. Both are true.

   c. I is true, II is false.

   d. I is false, II is true.

9. When people <u>expect</u> interest rates to rise in the future, the ___curve for bonds shifts to the ___.

   a. supply; left

   b. demand; left

   c. demand; right

   d. supply; right

10. An increase in the <u>expected</u> rate of inflation causes the demand curve for bonds to ___ and the supply curve of bonds to ___.

   a. rise; remain unchanged.

   b. rise; fall.

   c. fall; fall.

d. rise; rise.

e. fall; rise.

11. Government budget surpluses shift the bond ___ curve to the ___.
    a. demand; right.

    b. demand; left.

    c. supply; right.

    d. supply; left.

12. When the growth rate of the money supply increases, interest rates end up being permanently higher if
    a. there is slow adjustment of expected inflation.

    b. there is fast adjustment of expected inflation.

    c. the liquidity effect is larger than the other effects.

    d. the expected inflation effect is larger than the liquidity effect.

    e. none of the above.

13. The risk premium on corporate bonds becomes smaller if
    a. the riskiness of corporate bonds increases.

    b. the liquidity of corporate bonds increases.

    c. either (a) and (b) occur.

    d. the liquidity of corporate bonds decreases.

14. The relationship between interest rates on various bonds and the time to their maturity is called the ___ structure of interest rates.
    a. chronological

    b. term

    c. risk

d. liquidity

e. information

15. If the today's one-year interest rate is 5%, and the expected path of one-year interest rates over the next three years is 4 percent, 2 percent, and 1 percent, then the pure expectations hypothesis predicts that today's interest rate on the four-year bond is

a. 2 percent.

b. 4 percent.

c. 3 percent.

d. 5 percent.

e. 1 percent.

16. According to the market segmentation theory of the term structure,

a. the interest rate for each maturity bond is determined by supply and demand for that maturity bond.

b. investors' strong preferences for short-term bonds relative to long-term bonds explains why yield curves typically slope upward.

c. bonds of one maturity are close substitutes for bonds of other maturities; therefore, interest rates on bonds of different maturities move together over time.

d. all of the above.

e. only (a) and (b) of the above.

17. If the inflation rate in the United States is higher than that in Europe, then, in the long run,

a. the euro should appreciate relative to the dollar.

b. the euro should depreciate relative to the dollar.

c. the dollar should depreciate relative to the euro.

d. both (a) and (c) will occur.

e. it is not clear whether the dollar should appreciate or depreciate relative to the euro.

18. The theory of asset demand suggests that the most important factor affecting the demand for domestic and foreign deposits is the ___ on these assets relative to one another.

    a. expected return

    b. interest rate

    c. risk

    d. liquidity

19. If the government wants to raise the Fed funds rate, then

    a. the Fed will sell securities to the public.

    b. the Treasury will sell more bills.

    c. the Fed will buy securities from the public.

    d. the Fed will ask bond holders to lower the prices on their bonds.

    e. the Fed will print money.

20. If the price of a Big Mac in Japan is 294 yen, the price in the United States is $2.54, and the spot yen-dollar excange rate is 124,

    a. the PPP exchange rate is 124, and yen is fairly valued.

    b. the PPP exchange rate is 2.37 and the yen is undervalued.

    c. the PPP exchange rate is 116 and the yen is undervalued.

    d. the PPP exchange rate is .009 and the yen is overvalued.

Final Exam, Spring 2002

Answer the following essay questions in two to three blue book pages or less. Be sure to <u>fully explain</u> your answers using economic reasoning and any equations and/or graphs needed to make your point.

Essay Questions:

1. (Asymmetric Information and Financial Crises)
    a. (15 points) Mishkin and Eakins (the textbook) argue that many of the structural aspects of the U.S. financial system can be explained in terms of transactions costs and asymmetric information problems. What are their arguments? Are they convincing?

    b. (15 points) Explain the root cause and progression of recent financial crises in other parts of the world (Thailand, Malaysia, South Korea, Indonesia, Japan, Russia, Brazil, Mexico, Argentina, ...)?

    c. (5 points) In what ways, if any, are Mishkin's and Eakin's concerns about asymmetric information problems in securities markets exemplified by the Enron bankruptcy scandal?

2. (IRP and hedging)
   Over the past 16 months, the U.S. Federal Reserve has cut its fed funds rate (short term interest rate) target 11 times to its current 1.75% rate. Suppose at their next OMC meeting, the FED decides to increse its short term interest rate target by 200 basis points.
    a. (15 points) Write down an equation representing interest parity, and provide an intuitive explanation for the equation. That is, explain how market forces ensure that interest parity holds.

    b. (10 ponts) Use your interest parity model to explain the impact of the Fed's move on the value of the dollar. Provide both a graphical and intuitive explanation of your results. Suppose the Bank of Japan (BOJ) wishes to maintain the yen/dollar exchange rate at its level prior to the Fed's policy move. What action is the BOJ likely to take?

    c. (10 points) As a manager of a bank's portfolio, how would you hedge against the risk your bank faces from changes in Fed policy?

Multiple Choice *2 points each*

1. If the inflation rate in the United States is higher than that in Germany and productivity is growing at a slower rate in the United States than in Germany, then, in the long run,
    a. the German mark should appreciate relative to the dollar.

    b. the German mark should depreciate relative to the dollar.

    c. the dollar should depreciate relative to the German mark.

d. both (a) and (c) will occur.

e. it is not clear whether the dollar should appreciate or depreciate relative to the German mark.

2. The present value of $400 received in two years with interest rate i is:
   a. $400/(1+i)

   b. $200*(1+i)

   c. $400/(1+i)^2

   d. $400*(1+i)^2

3. If a bond sells at a premium, where price exceeds face value, then we would expect to see:
   a. market interest rates could be the same, higher, or lower than the coupon rate.

   b. market interest rates below the coupon rate.

   c. market interest rates above the coupon rate.

   d. market interest rate the same as the coupon rate.

4. Financial intermediaries, particularly banks,
   a. are experts in the production of information about firms so that it can sort good risks from bad ones.

   b. overcome the free-rider problem by primarily making private loans, rather than purchasing securities that are traded in the open market.

   c. play a greater role in moving funds to corporations than do securities markets.

   d. all of the above.

   e. only (a) and (b) of the above.

5. Interest rate risk is:
   a. the risk the coupon rate on the bond will fall.

b. the risk the government or firm will not make interest payments.

c. the risk associated with change in return with changes in interest rates.

d. the risk the coupon payment will rise

6. An increase in the expected inflation rate will:
   a. increase the supply of loanable funds (bond demand), increase the demand for loanable funds (bond supply) and increase the interest rate.

   b. decrease the supply of loanable funds (bond demand), increase the demand for loanable funds (bond supply) and increase the interest rate.

   c. increase the supply of loanable funds (bond demand), decrease the demand for loanable funds (bond supply) and increase the interest rate.

   d. decrease the supply of loanable funds (bond demand), decrease the demand for loanable funds (bond supply) and increase the interest rate.

7. Bank capital
   a. acts as a cushion against a drop in the value of assets.

   b. acts to reassure uninsured depositors that the bank is sound.

   c. acts to reassure loan customers that the bank is not likely to fail due to a few bad loans.

   d. does each of the above.

   e. does only (a) and (b) of the above.

8. The risk premium on a corporate bond is:
   a. the difference in interest rates between that bond and a S&P 500 firm bond.

   b. the difference in interest rate between that bond and a bank CD.

   c. the difference in interest rate between that bond and a municipal bond.

   d. the difference in interest rate between that bond and a US government bond.

9. A U.S. company which exports to Germany can hedge the exchange rate risk by

a. taking a long position in futures contracts on German Marks.

b. taking a short position in futures contracts on German Marks.

c. both of the above.

d. none of the above.

10. If a bank has more rate-sensitive assets than liabilities, then
    a. a fall in interest rates will leave its income unchanged.

    b. a fall in interest rates will raise income.

    c. a rise in interest rates will lower its income.

    d. a rise in interest rates will raise its income.

11. A bank manager uses the duration gap calculation to obtain
    a. the change in the market value of liabilities if interest rates change.

    b. the change in the market value of assets if interest rates change.

    c. the change in net interest income if interest rates change.

    d. the change in return on assets if interest rates change.

    e. the change in net worth as a percentage of assets if interest rates change.

12. Using the Gordon growth model, if the next dividend on a stock is expected to be $5, the discount rate is estimated to be 16 percent, and dividends are projected to increase at 6 percent per year indefinitely, then the stock should sell for
    a. $31.25

    b. $50.00

    c. $60.00

    d. $6.15

    e. $0.50

13. Which of the following is not a reason to hedge a portfolio?

a. to immunize a portfolio.

b. to limit exposure to risk.

c. to increase the probability of gains.

d. to stabilize income.

14. To reduce the moral hazard problem caused by FDIC insurance, the government also:
    a. encourages risky off-balance-sheet activities.

    b. regulates the amount of risky assets a bank can own.

    c. repealed risk-based capital requirements.

    d. sets maximum bank leverage ratios.

15. The price of a financial futures contract:
    a. will be the same as the price of the underlying asset to be delivered when the contract is negotiated.

    b. will be greater than the price of the underlying asset to be delivered at the expiration date.

    c. will be less than the price of the underlying asset to be delivered at the expiration date.

    d. will be the same as the price of the underlying asset to be delivered at the expiration date.

EXTRA CREDIT!

16. If a bank wants to hedge a bond that differs from those underlying futures contracts, then it can use
    a. a micro hedge.

    b. a cross hedge.

    c. a macro hedge.

    d. open interest.

17. According to the expectations theory of the term structure, if the interest rate on a one year bond is 4% and the interest rate on a two year bond is 8%, then:

a. the market expects the interest rate on a two year bond in one year to be 12%.

b. the market expects the interest rate on a one year bond in one year to be 12%.

c. the market expects the interest rate on a two year bond in one year to be 9%.

d. the market expects the interest rate on a one year bond in one year to be 6%.

Midterm Exam, Spring 2002 ANSWER KEY for SPRING 2002 Midterm

1. The U.S. Federal Reserve has been cutting its fed funds rate target for more than a year. The Fed funds rate has declined from 6.5% in November of 2000 to 1.75% today. The Fed's primary goal has been to stimulate the economy so as to avoid a recession. Today, most economists believe the economy has reached the trough of the business cycle and will resume substantial growth over the **next several years**.

   a. *(15 points)* Using a supply and demand for fed funds (supply and demand for very short term bonds) model, illustrate and explain how the central bank is able to reduce the fed funds rate.

   b. *(15 points)* Based on the theory of Asset Demand, and using a supply and demand for T-bills model, illustrate and explain what you think will happen to short term interest rates as the economy enters the expansion phase of the business cycle.

   c. *(15 points)* Write down an equation representing the expectations hypothesis for the term-structure of interest rates. (Three years is long enough.) Given your answer to part (b) above, draw and explain the shape of a yield curve for bonds with terms to maturity from 1 to 3 three years?

   d. *(10 points)* Use the data below on T-bill yields to calculate the **expected** 1-year tbill rate one year from now (in year t+1) and two years from now (year t+2). Compare your results with your answer in part (c) above.

Term to maturity	Yield To Maturity as of today (t)
1-year	2.57
2-year	3.56
3-year	4.14

   e. *(15 points)* Write down an equation for the Security Market Line (CAPM equation). If you are considering purchasing Cisco System, which has a b = 2.0, calculate the impact on your required rate of return if the risk free rate changes as you predicted in your answer to part (d). Explain your results.

Multiple Choice ***3 points each***

1. Holding everything else constant,
   a. if an asset's risk rises relative to that of alternative assets, the demand will fall.

   b. the more liquid an asset, relative to alternative assets, the greater will be the demand.

   c. the lower the expected return relative to alternative assets, the greater will be the demand.

   d. all of the above.

   e. only (a) and (b) of the above.

2. The liquidity premium theory is based upon the idea that, other things remaining equal,
   a. investors are indifferent between short-term and long-term bonds.

   b. investors prefer intermediate-term bonds.

   c. investors prefer short-term bonds.

   d. investors prefer long-term bonds.

3. The risk premium on corporate bonds becomes smaller if
   a. the riskiness of corporate bonds increases.

   b. the liquidity of corporate bonds increases.

   c. the liquidity of corporate bonds decreases.

   d. both (a) and (c) occur.

4. Which of the following $1,000 face-value securities has the highest yield to maturity?

   a. A 5 percent coupon bond with a price of $600

   b. A 5 percent coupon bond with a price of $800.

   c. A 5 percent coupon bond with a price of $1,000.

   d. A 5 percent coupon bond with a price of $1,200.

   e. A 5 percent coupon bond with a price of $1,500.

5. If the interest rates on all bonds rise from 5 to 6 percent over the course of the year, which bond would you prefer to have been holding?
   a. A bond with one year to maturity

   b. A bond with five years to maturity

   c. A bond with ten years to maturity

   d. A bond with twenty years to maturity

6. If you expect the inflation rate to be 4 percent this year and a one year bond has a yield to maturity of 7 percent, then the real interest rate on this bond is
   a. -3 percent.

   b. -2 percent.

   c. 3 percent.

   d. 7 percent.

7. The interest rate that equates the present value of payments received from a debt instrument with its value today is the
   a. simple interest rate.

   b. discount rate.

   c. yield to maturity.

   d. real interest rate.

8. The interest rate on municipal bonds falls relative to the interest rate on Treasury securities when
   a. there is a major default in the municipal bond market.

   b. income tax rates are raised.

   c. municipal bonds become less widely traded.

   d. corporate bonds become riskier.

   e. none of the above occur.

9. When an economy grows out of a recession, normally the demand for corporate bonds **?** and the supply of corporate bonds **?**.
   a. increases; increases

   b. increases; decreases

   c. decreases; decreases

   d. decreases; increases

10. If the expected path of one-year interest rates over the next four years is 5 percent, 4 percent, 2 percent, 1 percent, then the expectations theory predicts that today's interest rate on the four-year bond is
   a. 1 percent.

   b. 2 percent.

   c. 3 percent.

   d. 4 percent.

   e. 5 percent.

Extra Credit! 2 points each

11. The yield on a discount basis of a 90-day, $1,000 Treasury bill selling for $950 is
   a. 5.5 percent.

   b. 10.0 percent.

   c. 15.0 percent.

   d. none of the above.

12. Which of the following are true concerning the distinction between interest rates and return?
   a. The rate of return on a bond will not necessarily equal the interest rate on that bond.

   b. The return can be expressed as the difference between the current yield and the rate of capital gains.

   c. The rate of return will be greater than the interest rate when the price of the bond falls between time t and time t+1.

d. All of the above are true.

e. Only (a) and (b) of the above are true.

13. The term structure of interest rates is
    a. the relationship among interest rates of different bonds with the same maturity.

    b. the structure of how interest rates move over time.

    c. the relationship among the term to maturity of different bonds.

    d. the relationship among interest rates on bonds with different maturities.

14. According to the liquidity premium theory of the term structure
    a. when short-term interest rates are expected to rise in the future, the yield curve will be steeply upward sloping.

    b. when short-term interest rates are expected to remain unchanged in the future, the yield curve is likely to be slightly upward sloping.

    c. when short-term interest rates are expected to decline moderately in the future, the yield curve is likely to be flat.

    d. all of the above.

    e. only (a) and (b) of the above.

15. The theory of efficient capital markets suggests that allocating your funds in the financial markets on the advice of a financial analyst
    a. will certainly mean higher returns than if you had made selections by throwing darts at the financial page.

    b. will always mean lower returns than if you had made selections by throwing darts at the financial page.

    c. is not likely to prove superior to a strategy of making selections by throwing darts at the financial page.

    d. is good for the economy.

Essay Questions:

The U.S. economy entered a recession in March of 2001, but there are a number of signs that we are near the bottom of the business cylce. This view is reinforced by the expectation of substantial fiscal stimulus (deficit spending) being discussed in Washington.

1. *(20 points)* Using a S&D for loanable funds model, illustrate and thoroughly explain how a business cycle expansion (accompanied by expansionary fiscal policy) would affect interest rates on short term government bonds. Assuming a constant expected return on the overall stock market (and constant b), predict the impact on the required return on a risky stock or portfolio based on the CAPM.

2. *(20 points)* While inflation has been declining over the past year, as the economy begins to accelerate out of the business cylce trough, bond traders will expect rising inflation over the next few years. Using your answer to the question above, and a model of the term structure of interest rates, explain how the business cycle expansion (accompanied by expectations of rising inflation) will affect interest rates on intermediate and longer term government bonds.

3. *(30 points)* Given your answers to questions 1 and 2 above, explain the interest rate risk faced by a bank. How would you hedge against such interest rate risk using financial futures? How would you hedge against this risk using options? Which method would you recommend. Why?

Multiple Choice *2.5 points each*

1. US Treasury Bills:
   a. pay no interest and are sold at a discount.

   b. are very illiquid.

   c. have substantial default risk.

   d. are loans from the Federal Reserve System.

2. Corporate Bonds:
   a. are very liquid.

   b. are issued by the Federal Reserve System.

   c. typically have higher yields to maturity than similar government bonds.

   d. are only sold at a discount.

3. The present value of $200 received in two years with interest rate i is:
   a. $200/(1+i)

   b. $100*(1+i)

   c. $200/(1+i)^2

   d. $200*(1+i)^2

4. If a bond sells at a premium, where price exceeds face value, then we would expect to see:
   a. market interest rates could be the same, higher, or lower than the coupon rate.

   b. market interest rates below the coupon rate.

   c. market interest rates above the coupon rate.

   d. market interest rate the same as the coupon rate.

5. For a $1000 one year discount bond with a price of $975, the yield to maturity is:
   a. $975/$1000.

   b. $1000/$975.

   c. ($1000-$975)/($1000).

   d. ($1000-$975/($975).

6. Interest rate risk is:
   a. the risk the coupon rate on the bond will fall.

   b. the risk the government or firm will not make interest payments.

   c. the risk associated with change in return with changes in interest rates.

   d. the risk the coupon payment will rise

7. An increase in the expected inflation rate will:
   a. increase the supply of loanable funds (bond demand), increase the demand for loanable funds (bond supply) and increase the interest rate.

   b. decrease the supply of loanable funds (bond demand), increase the demand for

loanable funds (bond supply) and increase the interest rate.

c. increase the supply of loanable funds (bond demand), decrease the demand for loanable funds (bond supply) and increase the interest rate.

d. decrease the supply of loanable funds (bond demand), decrease the demand for loanable funds (bond supply) and increase the interest rate.

8. At interest rates below the equilibrium rate of interest
   a. there is an excess demand for loanable funds and the interest rate will rise.

   b. there is an excess supply of loanable funds and the interest rate will rise.

   c. there is an excess demand for bonds and the interest rate will rise.

   d. there is an excess supply of bonds and the interest rate will fall.

9. The risk premium on a corporate bond is:
   a. the difference in interest rates between that bond and a S&P 500 firm bond.

   b. the difference in interest rate between that bond and a bank CD.

   c. the difference in interest rate between that bond and a municipal bond.

   d. the difference in interest rate between that bond and a US government bond.

10. According to the expectations theory of the term structure, if the interest rate on a one year bond is 4% and the interest rate on a two year bond is 8%, then:
    a. the market expects the interest rate on a two year bond in one year to be 12%.

    b. the market expects the interest rate on a one year bond in one year to be 12%.

    c. the market expects the interest rate on a two year bond in one year to be 9%.

    d. the market expects the interest rate on a one year bond in one year to be 6%.

11. The liquidity premium theory is based upon the idea that, other things remaining equal,
    a. investors prefer long-term bonds.

    b. investors prefer intermediate-term bonds.

    c. investors are indifferent between short-term and long-term bonds.

d. investors prefer short-term bonds.

_____

12. According to the law of one price, if the Japanese price level falls by 1%, and the U.S. price level increases by 2%, then:
    a. the dollar will depreciate by 2%.

    b. the dollar will appreciate by 2%.

    c. the dollar will appreciate by 1%.

    d. the dollar will depreciate by 3%.

13. Which of the following will cause a countrys currency to appreciate?
    a. A relative decrease in the productivity of a country.

    b. A rise in a countrys relative price level.

    c. Increasing tariffs.

    d. A decrease in the demand for a countrys exports.

14. The **relative** expected return on deposits in terms of dollars is given by:
    a. Relative $RET_D = i_D - i_F + (E^e_{t+1} - E_t)/E_t$

    b. Relative $RET_D = i_F - i_D + (E^e_{t+1} - E_t)/E_{t-1}$

    c. Relative $RET_D = i_F - i_D + (E^e_{t+1} - E_t)/E_t$

    d. Relative $RET_D = i_D - i_F - (E^e_{t+1} - E_t)/E_t$

15. The largest source of external funds for U.S. firms is:
    a. stocks.

    b. trade debt.

    c. bonds.

    d. loans.

16. A bad credit risk seeks out loans more actively. This is a(n):
    a. liquidity problem.

    b. moral hazard problem.

    c. principal-agent problem.

    d. adverse selection problem.

17. The free-rider problem:
    a. will only occur if information costs are zero.

    b. is that people who do not pay for information take advantage of information other people have paid for.

    c. makes it easier for an investor to continue to buy securities at less than the true value.

    d. will make more people willing to provide information services.

18. A reason for the decline in the profitability of traditional banking is:
    a. banks are gaining loan business from other financial institutions.

    b. non-interest checking accounts are growing as a source of bank funds.

    c. bank customers are skipping commercial paper markets and using banks for short-term loans.

    d. the removal of interest rate ceilings has increased costs.

19. To reduce the moral hazard problem caused by FDIC insurance, the government also:
    a. encourages risky off-balance-sheet activities.

    b. regulates the amount of risky assets a bank can own.

    c. repealed risk-based capital requirements.

    d. sets maximum bank leverage ratios.

20. The price of a financial futures contract:

a. will be the same as the price of the underlying asset to be delivered when the contract is negotiated.

b. will be greater than the price of the underlying asset to be delivered at the expiration date.

c. will be less than the price of the underlying asset to be delivered at the expiration date.

d. will be the same as the price of the underlying asset to be delivered at the expiration date.

21. *EXTRA CREDIT!* Which of the following does not generate a higher premium on call options?
    a. A more volatile price for the underlying asset.

    b. A greater term to maturity.

    c. A lower strike price.

    d. A more liquid underlying asset.

Midterm Exam, Fall 2001

1. In January 2001 the U.S. Federal Reserve Board began cutting its fed funds rate (short term interest rate) target. This policy move has brought the fed funds rate from 6.5% to 2.5% not in response to lowered expectations of inflation, but in an attempt to forestall recession.

    a. *(10 points)* Write down an equation representing interest parity, and provide an intuitive explanation for the equation. That is, explain how market forces ensure that interest parity holds.
    b. *(30 ponts)* Use your interest parity model to explain the impact of the Fed's policy move on the value of the dollar. Provide both a graphical and intuitive explanation of your results. Suppose the Bank of Japan (BOJ) wishes to maintain the yen/dollar exchange rate at its level prior to the Fed's policy move. What action is the BOJ likely to take?

2. If lawmakers and the Bush administration ultimately embrace the most expensive proposals under discussion, the result would be to wipe out all of the $170 billion to $180 billion surplus Washington expected to collect in the fiscal year that begins Oct. 1,..." Such a tax-and-spending plan "would represent the biggest fiscal jolt Washington has delivered to the economy since the Vietnam War era."

    When the Federal Government runs a budget deficit, it must sell Treasury bonds to

finance that deficit. To analyze the impact of increased government spending, assume the Treasury will be selling nearly $200 billion in new *30-year Treasury bonds* over the next several years.

a. *(20 points)* Use a supply and demand for loanable funds model to determine what is likely to happen to interest rates on 30-year bonds. (Explain your graph)
b. *(10 points)* Given your answer to part a) and the actions by the Federal Reserve described in question 1., use a liquidity premium model of the term-structure to predict the shape of the yield curve.

Multiple Choice *3 points each*

1. Fed Funds are:
   a. loans between banks.
   b. loans from the Treasury Department.
   c. loans from a foreign government.
   d. loans from the Federal Reserve System.

2. The essential role of financial markets is:
   a. Provide a method of borrowing.
   b. Provide a method of channeling funds between borrowers and savers.
   c. Provide a way for the government to finance a budget deficit.
   d. Provide a method of saving.

3. The present value of $100 received in two years with interest rate i is:
   a. $100/(1+i)
   b. $100*(1+i)
   c. $100/(1+i)^2
   d. $100*(1+i)^2

4. If a bond sells at a premium, where price exceeds face value, then we would expect to see:
   a. market interest rates could be the same, higher, or lower than the coupon rate.
   b. market interest rates below the coupon rate.
   c. market interest rates above the coupon rate.
   d. market interest rate the same as the coupon rate.

5. The real interest rate is:
   a. the nominal rate minus the expected inflation rate.
   b. the product of the nominal rate and the CPI.
   c. the nominal rate plus the expected inflation rate.
   d. the nominal interest rate/the CPI.

6. An increase in the expected inflation rate will:
   a. increase the supply of loanable funds (bond demand), increase the demand for loanable funds (bond supply) and increase the interest rate.
   b. decrease the supply of loanable funds (bond demand), increase the demand for loanable funds (bond supply) and increase the interest rate.
   c. increase the supply of loanable funds (bond demand), decrease the demand for loanable funds (bond supply) and increase the interest rate.
   d. decrease the supply of loanable funds (bond demand), decrease the demand for

loanable funds (bond supply) and increase the interest rate.

7. According to the expectations theory of the term structure, if the interest rate on a one year bond is 5% and the interest rate on a two year bond is 7%, then:
   a. the market expects the interest rate on a one year bond in one year to be 6%.
   b. the market expects the interest rate on a two year bond in one year to be 6%.
   c. the market expects the interest rate on a two year bond in one year to be 9%.
   d. the market expects the interest rate on a one year bond in one year to be 9%.

8. The liquidity premium theory is based upon the idea that, other things remaining equal,

   a. investors are indifferent between short-term and long-term bonds.
   b. investors prefer intermediate-term bonds.
   c. investors prefer short-term bonds.
   d. investors prefer long-term bonds.

9. According to the law of one price, if the French price level rises by 10%, and the U.S. price level increases by 5%, then:

   a. the dollar will depreciate by 5%.
   b. the dollar will appreciate by 5%.
   c. the dollar will appreciate by 10%.
   d. the dollar will depreciate by 10%.

10. Which of the following will cause a countryÕs currency to appreciate?

   a. A relative decrease in the productivity of a country.
   b. A rise in a countryÕs relative price level.
   c. Increasing tariffs.
   d. A decrease in the demand for a countryÕs exports.

Econ 340: Money, Banking and Financial Markets

Final Exam, Spring 2001

Answer the following essay questions in two to three blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

1. *35 points*
   The equity premium has declined in recent years. One possible reason is a decline in required rates of return.

   What is the equity premium? What is the required rate of return? What factors may have lead to a decline in the equity premium and required rate of return in recent years? Explain how these factors lead to declining equity premiums. Explain carefully how and why a decline in the required rate of return affects stock values and returns.

2. *45 points*
   At the end of 1999 the governemnt of Japan abandoned plans to move to an

FDIC form of deposit insurance for Japanese Banks. Instead, Japan has maintained its implicit guarantee of all bank deposits despite the fact that Japanesse banks may have as much as $700 billion (total) in bad loans on their books—even more bad loans than they had five years ago. In addition, the Japanese government has racked up the largest national debt (114% as a percentage of real GDP) of any nation in the world.

a. Explain the role of asymmetric information in financial markets. How does the existence of asymmetric information explain the importance of banks in financial markets?
b. Suppose that investors decided that the Japanese government was about to default on its national debt. Use a Supply and Demand for loanable funds framework to explain how expectations of a default could impact interest rates in Japan.
c. What impact would fear of default have on the Japanese currency? Use a theory of asymetric information to explain how a financial crisis could occur in Japan. Be sure to explain how interest rate and exchange rate movements could aggravate adverse selection and moral hazard problems inherent in the banking system. If such a crisis did occur, should an international lender of last resorts step in to bail out Japan?

Short Answer: (20 points)-- Do Both Questions!

A. "If inflation had not increased so dramatically in the 1960s and 70s, the banking industry might be healthier today." Is this statement true, false, or uncertain? Explain your answer.

B. If you buy a call option on a $100,000 Treasury bond futures contract with an exercise price of 110 and the price of the Treasury bond is 111 at expiriation, is the contract in the money, out of the money, or at the money? What is your profit or loss on the contract if the premium was $1500?

Econ 340: Money, Banking and Financial Markets

Midterm Exam, Spring 2001

Answer the following essay questions in two to three blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

(40 points)

1. Begining in January 2001, the U.S. Federal Reserve Board began cutting its fed funds (short term interest rate) target. This policy move was not in response to lowered expectations of inflation, rather it was an attempt to forestall a slowing of growth in real output.

a. Write down an equation representing interest parity, and provide an

intuitive explanation for the equation. In particular, explain how market forces ensure that interest parity holds.

b. Use your interest parity model to explain the impact of the Fed's policy move on the value of the dollar. Provide both a graphical and intuitive explanation of your results. Suppose the Bank of Japan (BOJ) wishes to maintain the yen/dollar exchange rate at its level prior to the Fed's policy move. What action is the BOJ likely to take?

(35 points)

2. The Bush administration has proposed significant tax cuts, including elmination of the top tax bracket. One result would be that the highest income earners would be moved to a lower marginal tax rate.

a. Use a supply and demand for loanable funds model to explain the impact of such a tax cut on the yields on municipal bonds. If investors anticipate these policy changes, what will happen to municipal bond yields today?

b. What impact would you predict on the yield on treasury bonds?

(25 points)

3. What is the theory behind the Big Mac PPP (purchasing-power parity)? How does The Economist use Big Mac prices to compute an implied PPP for each currency? What are the arguments for and against using the Big Mac as a standard for applying the theory of PPP?
