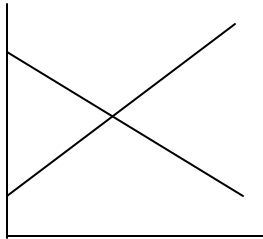


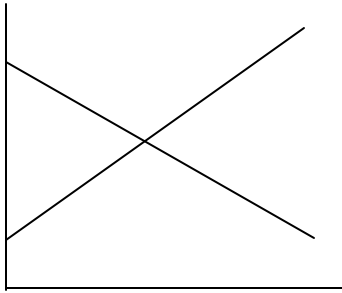
Review for First Exam.  
Money, Banking, and Financial Markets

1. According to the Wall Street Journal, a \$100,000 bond issued by Dell Computer Corporation was just sold in the secondary market for \$98,539.
  - a. How much does Dell Computer receive with the sale of their stock in the secondary market? Briefly explain.
  - b. The government is thinking about banning the sale of bonds in the secondary market. Would Dell, or any other firm, be troubled by this policy? Explain.
  
2. Virtually all municipal bonds are sold to investors with very high incomes. Explain why this would be true.
  
3. Consider a \$10,000 T-bill (a zero coupon bond) that matures in exactly one year. If the price is \$9,132.42, determine the following yields. Show the equation used to determine each.
  - a. The Yield to Maturity:
  - b. The Discount Yield:
  
4. Below is a graph of the loanable funds market. Label both axes and both lines. Label the initial equilibriums with "0" subscripts.



- a. The federal government has increased the deficit by \$100 B. In the above graph, show the effects of the increase in government borrowing. Label the new equilibrium with "1" subscripts.
  - b. If the demand for loanable funds changes, explain why. If the supply of loanable funds changes explain why.
  - c. What happens to the interest rate on loanable funds? What happens to the total quantity of loanable funds traded?
  - d. What happens to the quantity of funds borrowed by the Private Sector? Explain. Show the change in borrowing by the Private Sector in your graph above.
  - e. What do we call this relationship between government borrowing and Private Sector borrowing?
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5. You know the following information regarding a T-bond. Face value = \$10,000, time till maturity = 3 years and coupon rate = 14%, and the market interest rate = 7%. Given the above information, what is the most you would pay for this bond? Briefly explain your answer.

6. The graph below shows the market for loanable funds in the Municipal Bond Market. Label both axes and both lines. Label the initial equilibrium with "0" subscripts.



The interest rates on corporate bonds has increased.

- Show the effects of the increase in corporate bond rates in the graph above. Label the new equilibrium with "1" subscripts.
- What happens to the equilibrium interest rate and level of loanable funds in the Municipal Bond Market?
- If either the supply of loanable funds or the demand for loanable funds changes, explain why there is a change.

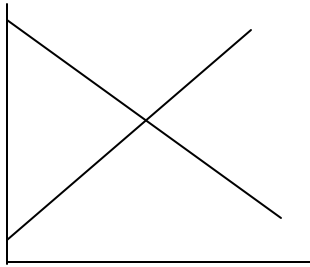
7. An examination of short-term interest rates shows they are historically very low. However, Dr. Roberts recently mentioned to me that real interest rates are, in fact, very high. Using concepts discussed in class, briefly explain how we can observe low interest rates in the economy but have high real interest rates.

8. As a financial advisor you are considering recommending one of two different bonds to a client. They are the same in every aspect except one is a bond issued by IBM the other is a bond issued by the City of Austin. The IBM bond has a yield to maturity of 12% and the bond from the City of Austin has a yield to maturity of 8.5%. You also know the following information; the market interest rate is 10%, the client has a marginal tax rate of 31%, the rate of inflation is 9% and both bonds have a face value of \$10,000.

- Given the above information, which bond would you recommend? Briefly explain your reason for recommending that particular bond. [Hint: All of the above information may not be useful.]

9. You are very concerned that the XYZ corporation will go bankrupt next year. Given your concern, would you rather hold bonds issued by the corporation or stock issued by the corporation? Briefly explain.

10. In the space below show a properly labeled graph of the market for loanable funds. Clearly indicate what is being measured on both axes. Label both curves and the values at the initial equilibrium with "0" subscripts.



Assume that the expected rate of inflation falls from 5% to 2%.

- Show, in the graph above, the effects of these changes in the market for loanable funds.
- Does the demand for loanable funds change? If so, does it increase or decrease? Briefly explain why.
- Does the supply of loanable funds change? If so, does it increase or decrease? Briefly explain why.
- Given the above changes, what happens to the equilibrium interest rate and level of borrowing. Where possible, be specific.

11. You need a car for the next 3 years and are debating buying or leasing a new car.

If you lease the car, your payments are \$3,600 at the end of the next three years, and you must give the car back to the dealer at the end of the three years.

If you buy the car, your payments are \$5,000 per year, but you can sell the car for \$4,000 at the end of 3 years.

Assume the market interest rate is 9% and all transaction costs are zero.

- Given this information, determine whether it is better to buy or lease this vehicle. Briefly explain. Show your work for full credit.

12. Briefly discuss the merits of the following statement.

"If all the depositors showed up at a bank to demand payment for their deposits, the bank would be insolvent."

13. In the space below show a properly labeled graph of the market for mortgage loans. Clearly indicate what is being measured on both axes. Label the values at the initial equilibrium with "0" subscripts.

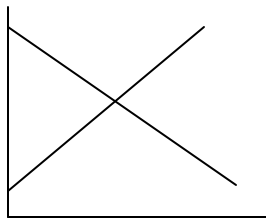
You hear that the interest rate on treasury bonds goes up and households are at the same time there is a shift in preferences and people are now more likely to borrow to buy a home.

- Show, in the graph above, the effects of these changes in the market for mortgage lending.
- Does the demand for mortgage loans change? If so, explain why.
- Does the supply of mortgage lending change? If so, explain why.
- Given the above changes determine what happens to the equilibrium interest rate and borrowing in the mortgage market.

14. Consider two investors, one with a large holding of long-term bonds and the other with a large holding of short-term bonds. If interest rates decline, which investor would be better off? Explain.

15. We often state that there is an inverse relationship between interest rates and the price of bonds. Using concepts discussed in class, give a clear explanation of this relationship.

16. We want to analyze the effects of a change in expected returns from the stock market on interest rates. In the space below, show a properly labeled graph of either the market for loanable funds or the market for bonds. Be sure to properly label both axes, both lines, and state which market you are using. Indicate initial equilibrium values using "0" subscripts.



Assume the expected return on equities (stocks) increases. Show the effect of this change in the market above. Indicate new equilibrium values using "1" subscripts.

- If the supply curve shifted, explain why. If the demand curve shifted, explain why.
- Determine what will happen to interest rates, the price of bonds, and the quantity of bonds or the quantity of loanable funds traded. No discussion needed.

17. The Fed recently announced they are going to raise the rate of inflation over the next few years. We want to examine how this change in policy will effect the market for loanable funds or the market for bonds. Let's assume people believe the Fed will be successful and that the rate of inflation will increase from 2.4% to 3.7%.

- Will the Demand for Bonds (Supply of Loanable Funds) change? If there is a change, explain why. Be sure to indicate whether you are discussing the Demand for Bonds ( $D_B$ ) or the Supply of Loanable Funds ( $S_{LF}$ ).
- Will the Supply of Bonds (Demand for Loanable Funds) change? If there is a change, explain why. Be sure to indicate whether you are discussing the Supply of Bonds ( $S_B$ ) or the Demand for Loanable Funds ( $D_{LF}$ ).
- Will the price of bonds increase, decrease, or remain the same given the increase in expected inflation? No discussion needed.
- What will happen to interest rates given the increase in expected inflation? Be as specific as possible. What do we call this phenomena? Briefly explain.
- What do you predict would happen to the total level of borrowing in the economy given the increase in expected inflation? No discussion needed.

18. Investors prefer one-year bonds to two-year bonds and will only purchase two-year bonds if they expect to receive an additional 3.5% over the return from holding one-year bonds.

- If the interest rate today on a one-year bond is 6% and investors expect that the interest rate on a one-year bond issued one year from now will be 5%, determine the yield on a two-year bond issued today. Show your work for full credit.
- In the space below, show the yield curve associated with the information you found above. Clearly label both axes and all points on your yield curve.

- 19.a. According to the Expectations Hypothesis, what must be true for the yield curve to be upward sloping?
- b. Your explanation above has been used as a criticism of this hypothesis. Briefly explain why the above is so troubling.

20. Assume that bond holders have no prefer for one-year bonds over two-year bonds. If the yield on a one-year bond issued today is 12%, and the expected yield on a one-year bond issued next year is 6%, determine the yield on a two-year bond issued today. Show your work for full credit.

21. Assume that bond holders prefer one-year bonds to two-year bonds and will only purchase a two-year bond if they expect to receive an additional 3 percent over the return from holding one-year bonds. If the yield on a one-year bond issued today is 14%, and the expected yield on a one-year bond issued next year is 8%, determine the yield on a two-year bond issued today. Show your work for full credit.

- In the space below use information from above to construct a yield curve. Label both axes. Clearly indicate two points on the yield curve.

22. Research regarding Amazon.com revealed the following information: this year's expected earnings are \$10,000,000, earnings are expected to grow at an annual rate of 6%, and 1,000,000 shares of the stock have been issued. The market interest rate is 7.5%. Using the formula derived in class, determine the price of a share of Amazon.com stock. Show the equation you used to determine this price.

23. You are thinking about purchasing stock in Vandelay Industries, a maker of latex. Expected profits are \$100,000 per year. These profits are expected to continue at this level forever. The corporation plans to return all of the earnings to stockholders. There are 50,000 shares of stock in Vandelay Industries. The interest rate on equally risky investments is 8%.

- Determine the most you would pay for stock in Vandelay Industries. Show your work for full credit.

24. Kwan in "On the Relation Between Stocks and Bonds - Part II," describes a situation where the price of stocks and bonds could have a lead-lag relationship. Briefly describe how this lead-lag relationship could come about. Be sure to state which price is the leader and why.