

### Problem Set 4

Due in lecture on **Monday, November 20<sup>th</sup>**. No late submissions will be accepted. Make sure your name is on your problem set, as well as the name of your (*official*) TA.

1. "If inflation had not risen in the 1960's and 1970's, the banking industry might be healthier today." Is this statement true, false, or uncertain? Explain your answer.
2. What bank regulation is designed to reduce adverse selection problems for deposit insurance? Will it always work?
3. What are the costs and benefits of a too-big-to-fail policy?
4. How can the S&L crisis be blamed on the principal agent problem?
5. If you buy a put option on a \$100,000 Treasury bond futures contract with an exercise price of 95 and the price of the Treasury bond is 120 at expiration, 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 \$4,000?
6. Consider the following interactions between the Fed and First National Bank.
  - 6.1 If the Fed buys \$2 million of bonds to the First National Bank, what happens to reserves and the monetary base? Use T-accounts to explain your answer.
  - 6.2 Again using T-accounts, show what happens to checkable deposits in the banking system when the Fed buys \$2 million of bonds to the First National Bank. Assume the required reserve ratio is 10%
7. If the required reserve ratio on checkable deposits is set to 5%, how much multiple deposit creation will take place when reserves are increased by \$50 million. Use the appropriate equation(s) to obtain the answer (and show your work).
8. In general, when the required reserve ratio rises, what happens to the simple deposit multiplier? Refer to a *specific equation* to demonstrate show your answer.