Problem Set 1 for Economics 180.266:  
Financial Markets and Institutions  
Due at the beginning of class on September 19

Note: Point totals are shown at the beginning of each question.

1. (10 pts). What is the current discount rate for primary credit? For secondary credit?

2. (10 pts). A bank has assets of $10 million and liabilities of $100 million. Net profits are $9 million. What is the return on equity?

3. (10 pts). What is the present value of a project which pays $10 at the end of each of the next four years and $110 at the end of the fifth year, with a discount rate of 10 percent per year?

4. (10 pts) What was the name of the act of Congress which outlawed private ownership of gold?

5. (30 pts) Consider a Diamond-Dybvig model. There are 3 periods and 100 consumers. They can consume at time 1 getting $c_1$ or at time 2, getting $c_2$. 50 of the consumers have utility $1 - \frac{1}{c_1}$. 50 have utility $1 - \frac{1}{c_2}$. At the start, they don’t know which type they are and so their utility function at time zero is:

$$\frac{1}{2} (1 - \frac{1}{c_1}) + \frac{1}{2} (1 - \frac{1}{c_2})$$

Each consumer has $1 at time zero. There are 100 projects that each cost $1 at time 0, is worth $1 at time 1 or $2.25 at time 2. The bank offers to take a deposit of $1 that is worth $1.20 at time 1 and $1.70 at time 2.

(a) What is the utility at time zero of directly investing in a project?

(b) What is the utility at time zero of investing in the bank deposit?

(c) If only 50 consumers demand their money at time 1 and all get paid in full, and the other 50 demand their money at time 2, how much of a profit will the bank have left over at time 2?

6. (15 pts) From Bloomberg, find the 3 month government bill rate in the US, Sweden and United Kingdom.

7. (15 pts). The Bloomberg mnemonic for the dollar amount in institutional prime money market mutual funds is WMMFIMNA Index. Print a graph of this series over the last 5 years. What caused the large drop in 2016?