Seminar Problem in ECON 4335 Economics of Banking, Fall 2015

Problem set 1 – seminar # 1 (September 3, 2015)

Take the Tobin model from the first lecture, and derive the optimality condition for a bank with random deposits when loans are decided before deposits are realized.

1) Show the impact on the bank's **lending policy** when:

- Expected deposits are higher
- Equity increases
- There is a recession that lowers the marginal expected return from loans at any level of loans
- Other banks hoard liquidity

2) Show **the value to the bank** of having more equity both under full certainty and under uncertainty.
Hint: You want to show the impact on the profit function of having more equity. In order to do that you can use the envelope theorem.

3) Explain what might happen to the **bank's lending policy** if the distribution of the deposits should become more risky; say by having a higher variance. (Say for example that X is distributed uniformly on the interval [-a,a], so the parameter "a" is a measure of the variance of deposits but does not affect the expected value of the deposits, and check how the parameter value affects the lending policy).