

EE 431/ EE438 Economics of Financial Markets and Institution

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Assignment 6

Due Date: 24 March 2012

1. The demand for loan and deposit be given by $L = \frac{1}{r_L^\alpha}$ and $D = r_D^\frac{1}{\varepsilon}$, where L is the loan demand, r_L is the lending interest rate, D is the deposit demand, and r_D is the deposit rate. In addition, let q be the probability of default. Meaning even though the bank lend out L amount of loans, it only recovers $(1-q)L$ of the loan back.
 - a. Before doing anything, what do you think the default rate will do to the lending rate?
 - b. Setup the monopolist problem and solve for the profit-maximum lending rate the monopolist will charge. What is the relationship of default rate and the lending rate?
 - c. Solve for the deposit rate charge by the monopolist bank.
2. Re-derive and complete the analysis of the Cournot competition in banking. Particular, find the expression of the deposit rate and the margin of intermediation (interest spread between lending rate and deposit rate).