Hints for solution

Economics of Banking June 2013

1. The problem draws on material from Chapter 5 on the loan contract and Chapter 6 on credit rationing. The payoff of borrowers cannot be observed directly, and it is probably rather expensive to verify the ability of the borrower to pay back. If the standard contract is used, the monitoring cost i high, and there will be a backward bending supply of credit.

The situation is changed if the banks get admission to the information of the tax authorities, since it then becomes possible to observe the ability of borrowers to pay back their loans. This will reduce the monitoring cost of lenders, so that possible opportunistic behavior of borrowers can largely be done way with. As a consequence, supply of credits will now increase with the loan rate.

If this approach is not feasible, other means of encouraging payment of borrowers must be contemplated, the most obvious being the denial of future credits.

2. The background for this problem is to be found Chapter 15 on deposit insurance. It should be mentioned that deposit insurance from the point of view of the bank can be seen as an option so that its value can be found using option valuation theory. There is an inherent moral hazard problem in deposit unsurance, and suitably formulated it can be shown that a payment according to the value of the deposit insurance is incompatible with profit maximizing behavior of banks. The demands to the arrangement mentioned in the problem can therefore not all be satisfied by standard methods of financing the deposit unsurance, and it might be contemplated to use a method of financing through taxes which are levied not only on banks and their depositors but also on investors not using the banking system.

It can be argued that large banks should pay relatively more than small banks, since small banks are more easily reorganized, possibly sold off to other banks, than large banks, so that the the reorganization of small banks in trouble may be relatively less costly

3. We have here a moral hazard problem of the type described in Chapter 1 and Chapter 6. Sincd the bank cannot control the investment decision of the borrower, the latter will choose the investment which gives the highest expected profit, and since nothing is paid in the case of faulure, this will give incentives towards a more risky investment than what is socially desirable. If the loan rate is set high, the investors will prefer high-risk investments, and expected repayment to the bank will be too small to cover the funding cost, so that the bank will be reluctant to engage in new credit arrangements.

A loan contract where the payoff of the investment, which can be observed by both parties, is shared between lender and borrower, may reduce the problem, since it reduces the gains to the investor from choosing high-risk investments.