Economics of Banking

Exam 31 May 2021

Hints for solution

1. The textbook background is the theory of credit rationing in Chapter 6. The production which should be financed by the loan is subject to a specific form of uncertainty: the payoff has a given size for the case where the prroduction has the desired quality, otherwise it will be much lower. This can be described either by the deMeza-Webb or the Stiglitz-Weiss model, the conclusions will be different.

If the case of unsatisfactory quality means that the production fails and yields an outcome too small to pay back the loan, and the probability of this event varies among producers, then deMeza-Webb model applies, and the overall result is oversupply of credits. A consequence of this is that subsidizing credits is not a good idea, it may even be contemplated to add a tax to the repayment rates.

If the amount of products discarded varies and the individual producers differ in the variance of the occurrence of bad quality, then the Stiglitz-Weiss model of adverse selection may apply, and there is undersupply of credits. In this case subsidizing borrowers may be a possible way of improving the situation.

In both cases, the model selected should be desribed briefly, and the reason for selecting in should be explained.

2. The textbook background is the loan contract and the use of collateral as described in Chapters 5 and 6. The use of collateral may be based on two different assumptions on the observed droput of students, and at least one of them should be developed in detail.

Hidden action: If dropout is caused by insufficient effort, then collateral may be employed to increase the losses to students and decrase the loss to the banks cased by dropout. The use of collateral may be differentiated between students depending on the selected type of study or documented previous results, so that it fits with the BTU model, but it may also be used as a single rule for all contracts.

Hidden information: If the dropouts are due to lack of ability, then collateral may be used to differentiate between the good and the less good students, using the standard approach of the Bester model, so that the students themselves choose the contract with or without collateral.

If collateral cannot be used, the alternatives again depend on whether the case is considered as one of hidden action, where the lottery-based contract allowing for small or no repayment in the case of very satisfactory results might be used, or of hidden action, where it is less easy to design a satisfactory contract, standard contracts with monitoring or threat of termination might be applied.

3. The textbook background is Chapter 17 on closing and reorganising banks. The problem as described fits with the Repullo model, where a central bank or a deposit insurance organization may decide either to close the bank or to assist it in solving current problems. Given that each of these institutions must cover some of the costs of liquidating the bank, their willingness to assist rather than closing the bank differs from what is socially optimal, and a suitable rule would be using a threshold for transfer needed, so that below this threshold decisions should be taken by the central bank, and above the threshold the deposit insurance shoudl be in charge.

If the case where the banking sector is urged to take care of problems internally before being assisted by the central bank or the deposit insurance, there will be an initial phase, where the bank in trouble may be taken over by other banks, depending again both on the current capital needs and the quality of its assets. Since this solution is preferred by society to the previpus two, and the other banks usually can assess the value of the assets better, it will be used as long as the capital needs are not too big, replacing the central bank as decision maker in these cases.