Written Exam for the M.Sc. in Economics summer 2016
Economics of Banking
16. June 2016
Hints for solution

1. The first part refers to the problems of competition and risk taking (dealt with in textbook Ch.11). The standard model of the situation is one of Cournot competition, where banks choose investments subject to a trade-off between risk and payoff. In this model, it is shown that an increasing number of banks will lead to overall higher riskiness, confirming the argumentation about too many banks. However, extending the same model by taking into accoung that banks do not invest themselves but rather provide loans to investors, the opposite conclusion can be obtained, since bank competition reduces loan rates and allows the investors to choose less risky investments. Taken together, this means that closing banks will not necessarily reduce overall risk.

The second part deals with questions of closing banks in distress (textbook Ch.17). In a simple setup where banks are subject to large deposit withdrawals and future prospects are only partially known, it can be shown that the deposit insurer will be more willing to close the bank if the withdrawal is small and the central bank more willing if it is high, so that the authority could be delegated according to the size of the withdrawal. It is also known that the institutions may be reluctant in closing a bank if the liquidation costs are high, so the policy makers may decide to reimburse some or all of these costs.

2. We are here dealing with a problem related to the loan contract (textbook Ch.5). As the problem is formulated, the private hospitals have a reasonably stable income from private patients, whereas the income obtained from public patients is subject to considerable uncertainty. Although the number of public patients is observable in principle, it is rather costly and the banks cannot be expected to monitor this in detail. Under such conditions of costly monitoring, a loan contract, which gives incentives to truthful reporting and minimizes the cost of inspection, is the so-called standard contract.

In the new situation where hospitals work at full capacity, their income changes only if rates are changed, so it may be taken as a case of full information. Here the efficient loan contract is not necessarily the standard contract, instead it would be a risk-sharing agreement between lender and borrower.

3. Before agreeing to this engagement, the bank should consider the risk that it assumes (assessment of credit risk, Ch.7). Since the loan should be used for investment in bonds, the risk premium should at least correspond to the default rate of the bonds. To make sure that the contract is acceptable (loan contracts, Ch.5), the bank should be able to monitor the bond portfolio.

One of the problems of this type of engagements is that it may be open to opportunistic behavior (economics of looting, Ch.12), in particular the borrower may pay out dividends from the increased value of the bonds in the first period and then default in the next. This will

leave the bank with a net loss on this engagement. To avoid this the bank may impose rules preventing intermediate divident payments, or alternatively demand that the bond portfolio is posted as collateral.

For all three questions, the answers given above are not the only possible. Other explanations are just as acceptable, provided that they are thoroughly argumented.