Written Exam at the Department of Economics summer 2022

Economics of Banking

Re-exam, August 23, 2022

Outline of solution

1. The textbook background is in Chapter 1 on liquidity insurance and Chapter 14 on bank crises. The deposit contracts may be set up as an investment contract with a given high return if kept until maturity and a smaller return, possibly even negative, if terminated before maturity. In principle this contract is incentive compatible, since the depositor will be at loss if terminating the contract before its end without need. However, instability may occur if depositors who have no immediate need for liquidity have doubt about the solidity of the bank, in which case they will demand their deposits back before termination, causing the bank to default.

Organizing the contracts in the context of shadow banking means that depositors will buy shares, possibly in the mining enterprises, in the context of repo trade. If depositors are doubtful as to whether these securities keep their value, they will terminate the repo trades, which formally corresponds to running the bank. However, the shadow bank may be able to contract new repo trades using other securities, and the proceeds can be used at least partially to cover the bank run, meaning the in some cases a shadow bank may be more robust against runs than a traditional bank.

2. The theoretical background for this problem is treated in Chapters 5 and 8. From the description it is seen that the situation is one of costly verification of borrower outcome. Assuming that the optimal contract is one which sustains truthful reporting, one arrives at the standard contract, whereby reported outcome is verified if it falls below the agreed repayment, in which case the total outcome is paid to the bank.

If the bank decides to use securitization instead of traditional banking, then the potential buyers of the securities issued by the bank must expect that the borrowers will fail to repay the full depth not only in cases of bad harvest but also as a result of opportunistic behavior, since the verification part of the contract is now missing. As a result, the securities will fetch a low price in the market, and the bank may be worse off even though it saves the costly verification.

3. The problem deals with capital ratios (or arrangements close to capital ratios) which are dealt with in many chapters, from the chapters on risk (Chapters 3,4,7,13) to those dealing with bank crises (Chapters 14-17), as well as specifically in Chapter 18. The possibility of immediate cancellation of the debt in case of large losses makes this type of debt somewhat more expensive for the bank shareholders, and there is no obvious gain in terms of increased ability to avoid bankruptcy since the latter will occur as soon as losses exceed equity. So the arguments that costs are increased seem wellfounded. Since the seems to have had liquidity problems rather than too risky assets, the effects on financial stability may be small.

The splitting up of the bank into a savings bank and a shadow bank will provide depositors with non-risky financial intermediation, and the savings bank,l which works according to narrow banking, is safe against bank runs. The securitization of the remaining activities will only formally prevent bank runs, since the securities may subject to considerable risk.