Week 13: Competitiveness and risk

Before starting on this week’s topics we have a brief discussion of BitCoin and in particular, the blockchain technology, which may have many applications not yet contemplated. After this, we move to Chapter 11: It deals with competition and risk and begins with a brief treatment of perfect competition, which of course is not the most realistic setup when dealing with banks, and its role is mainly to set up the model. This means that we run quickly through the model, which anyway is not very complicated. After this, we t The model of a monopolistic bank is a classic – known as the Monty-Klein model – but doesn’t give us much, it is basically a translation of ordinary monopoly models to banking, and its extension to Cournot competition is straightforward.

The monopolistic competition model of banking is perhaps not too realistic, but we have used zero-profit conditions already, so it may be worthwhile to consider a model of this type in more detail. The reason why theorists are so happy with monopolistic competition is that it often allows us to derive the demand of the single firm (here: bank) from the fundamental notions of the model. The circular-city model in this section should be well-known from Industrial Organization, and the section follows the standard treatment in IO so closely that it should be easy to understand; nevertheless, this model is however sufficiently useful to give some perspective to standard approaches to interest rate regulation. We skip the subsection 4.2 which adds some features from the financial world to the standard circular city model.

We then move beyond price determination and address the problem of whether risk taking in banks is connected with the competitiveness of the banking sector. This is the important part of the chapter. Here we consider two different approaches:

In the Matutes-Vives model (section 5.1), the bank may choose its risk profile, and under asymmetric information (of depositors on riskiness) this choice is found in a trade-off between current and future profits, the latter represented by a charter value of the bank (the discounted future incomes from having the right to do banking business). Competitiveness enters only indirectly, since the charter value becomes smaller when the market is very competitive.

We skip the model in section 5.2 and move to the Allen-Gale model in section 5.3. Here we consider a situation where banks choose the riskiness of their investments, and in the first version of the model, we get a result much like the previous one, namely that riskiness increases with the number of banks. Don’t be scared by the formalism involved, it is much less complicated than it looks, and we are mainly interested in the underlying intuition, which fortunately is never far away. In the
Boyd-Nicoló version of the model, where banks lend to entrepreneurs who then choose the risky investments, the conclusion is the opposite – riskiness decreases when the number of banks gets larger. The intuition behind the model (again the formalism may seem very heavy, but at a closer look it is not too bad) is quite simple: If there is not enough competition, loan rates will be high, and entrepreneurs will respond (as we have seen many times) by choosing more risky investments. Therefore, more competition and lower loan rates will give us less risky investments.

If time permits, we then proceed to the next chapter, which considers some cases where financial intermediation may give rise to allocation problems in society. The first case, treated in section 2, has the smart title “economics of looting” and deals with bankruptcy for profit. The general part looks more complicated than it is, it basically states that under certain conditions, it may be advantageous for the owners to withdraw too much money as dividends and then go bankrupt. There are some examples of a more practical character, we consider only the one in section 2.2, “riding the yield curve”: Under suitable conditions (increasing interest rates over time) a financial company may receive deposits and use them for an investment in bonds over two years; due to the accounting rules, it can take out most of the profits the first year, thereby basically making the bank insolvent, and it will then go bankrupt next year. The owners however made a nice profit in year 1. We skip the example of interference of banking and corruption in section 3.1 and move directly to section 3.2, dealing with the implicit option of a loan contract. We know about such options already from our recent discussion of credit risk, but here they occur as part of a model of bank management behavior. We stick to the rough outline of the model, as presented at the beginning: If bank managers ignore the implicit option of the loan contract, then they are charging too low interest rates. Of course the question arises as to why bank managers should behave in this way, and Pavlov-Wachter explains this by the bonus system (you get a bonus if success and lose only your job if failure, inducing some sort of moral hazard).

We proceed with other cases of pathological financial intermediation in the next week.

We reed: Chapter 11 except 11.4.2, 11.5.2 and 11.5.3, Chapter 12 sections 1 and 2, subsection 12.3.3.