

Lecture 2: More about core competences of banks

We proceed from where we stopped on Monday, dealing with cases where financial intermediation has a role to play in society, all of them connected with asymmetric information in some form.

Delegated Monitoring. In this story, we have a number m of consumer-investors, as always endowed with one unit of money. There are n of firms in which to invest, and the outcome of firm j is random. Investors have to monitor their investment at a cost, so that if each investor has to monitor all firms, this amounts to quite a sum of money.

The cost can be reduced if a middleman is introduced, but upon a closer look we realize that one problem has been replaced by another one: How can the investors be sure that the monitoring agent does the job instead of just reporting back that everything is ok?

What is needed is an arrangement giving the agent the right incentives. It almost suggests itself since we are dealing with banks – we let the monitoring agent open a bank, taking the investments as deposits which are paid back with a deposit interest rate, and investing the deposits in the firms. The bank is assumed to maximize profits, and it will definitely monitor the firms.

Only one small detail remains: it may happen that the firms obtain results which taken together are too small to pay the deposits back with interest. Then the bank defaults, and the depositors get whatever the firms delivered. Moreover, there is a cost (to lawyers etc.) of processing the default. Does this possibility of default upset the promising result?

The answer is – as one might well guess – that if there are enough firms, then actual performance will be very close to the average, and therefore the arrangement will work and save money for the investors.

As a by-product of our story, we have introduced the idea of *costly monitoring*, which will be used on many occasions in the following.

Moral hazard: This model is again one which will be used repeatedly. In the present context, where we construct cases for financial intermediation, it ends up using the same main argument as the previous model, namely monitoring, but the model is a useful workhorse in many contexts, and this is the reason that we use some time on it.

For the time being, think of borrowing in a (bond) market at a given repayment rate. The entrepreneur has a choice between two different techniques, a safe and a risky one. Asymmetric information enters into the problem since the choice of

technique cannot be observed before it is too late.

At high repayment rates, the investor prefers the risky investment. But this means that the money market cannot fund investments at the high repayment rates, and consequently not be made.

A bank which can observe investor behavior can force investors to choose projects with better average performance. This comes at a (monitoring) cost, but even so it may be better for society than the previous situation with no investment at all.

Information signalling: The last of our four models deal with a situation where entrepreneurs cannot readily borrow money for their projects, mainly due to asymmetric information – the market cannot observe the quality of the projects and therefore investors are reluctant to fund these projects. The trick for the borrowers to solve this problem is to go together, borrowing and repaying as if it was a single project, so that losses of one project is covered by gains of another one.

There are many project owners, and the project owners are risk averse, so they would rather sell the project ("at the root" as one says nowadays). But if good and bad projects sell at the same price, then the good projects get too little.

What can an owner of a good project do in this case? In order to tell the market that the project is a good one, the owner must keep a share of the project, selling only the rest. If the message is trustworthy, then the good is sold at a decent price, even if there is still a cost of selling rather than keeping. But if sellers of good projects go together, then this cost is reduced. Thus, we have created a bank in the form of a coalition of borrowers; actually, many of the institutions for providing real estate credits have arisen exactly in this way.

We skip section 5, which addresses the question of whether financial intermediation can create cycles (so that the banks might be the cause of a real economic downturn), an interesting question to which we return in another context later.

If time permits (which it probably doesn't), we proceed to Chapter 2, the first sections of which need only few comments, but where Section 4 on relationship banking is of some interest, in particular the Freixas model in 2.4.3 and 2.4.4, which is a further development of the moral hazard model already introduced.

We read:

Chapter 1, Sections 1.3-4.