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Efficient Transactions and Synergies in Banking

Transaction technologies are not intrinsically useful by themselves. Their main purpose is to lower transaction barriers to facilitate trade such that individuals can exchange goods more easily which provide them utility. The efficiency of a transaction technology is key for the degree to which transaction barriers get effectively lowered. Hence the efficiency of the various transaction technologies analyzed in the preceding chapters is compared in section 10.1.

When analyzing efficiency it is not only interesting to look at the comparison of the T-bank with other transaction technologies in solving transaction problems. In section 10.2 it is argued that the same institutional structure of the T-bank which provides an efficient solution to the problem of trust in exchange can be useful also for other activities of banks.

Transactions are typically short-term. But if one lengthens the time horizons considered in the model of the T-bank, interest paying accounts become attractive forms of safe, highly liquid investments whereas loans can be used not only for financing transactions short-term but also for financing longer-term, information sensitive projects just as in the banking model of Diamond (1984). In this sense an integrated theory of money and banking starting from the problem of trust in exchange provides an analytical foundation for contemporary banking theory. It should be noted that in the preceding chapters the institutional form of a bank emerged quite naturally from a discussion of efficient ways of creating transaction technologies dealing with the problem of trust in exchange. A monetary analysis gave rise to this institutional form rather than the usual analysis of financial intermediation.

The provision of transaction services, liquidity insurance services, and financing and investment services under the roof of one banking institution is likely to exhibit economies of scope. Synergies between these different activities presumably exist. Hence it is not only the flexibility of the institutional structure stemming
from the monetary origins of banks but also the associated cost advantages which explain what banks do and why they exist.

10.1 Comparing the efficiency of transaction technologies

The four different transaction technologies in the models of chapters 6 to 9 lead to different outcomes for traders. Because endowments, externally given prices, and basic trading patterns within the framework of the shopper's paradise model are very similar in all four models, the differences in outcomes are mainly due to the differences in transaction technologies.

As a proper benchmark case the first-best solution in the model of trade with privately issued I.O.U.s is considered. In this model the asymmetric information problem is manifest in its most direct form. Hence if traders had the ability to observe the wealth of their trading partners ex post and therefore were willing to use I.O.U.s as a medium of exchange, (almost) all endowments would be exchanged (except for one strategic unit of the goods of suppliers which can be neglected for a large group of traders) at prices of one. In addition buyers in the first round of exchange could fully profit from not having to exchange their endowments prematurely and would therefore earn additional returns on them. No resources would get lost in the trading process. The maximum potential for advantageous trade at market clearing prices could be fully exhausted. Total wealth for traders would be \( N(4p^* + 2\bar{p}) \) which serves as a basic benchmark.\(^{40}\)

The efficiency of transaction technologies can be viewed from different angles. From a welfare perspective one transaction technology may be considered as being more efficient than some other if it is Pareto-better, i.e. if it increases the wealth of some traders without decreasing the wealth of other traders. Pareto efficiency is an important concept in economics and will therefore be used also for the comparison of transaction technologies. However, not all technologies can be ranked according to the Pareto-criterion. Other problems exist with this approach in the current context. E.g., arbitrary factors such as the sequence of moves may matter. In some models traders of a group moving first do not have to bear the burden of the trading friction whereas traders of some other group have to bear it. However, assigning traders to groups and determining the sequence of moves is arbitrary. Furthermore, the incidence of the burden from trading frictions may be different depending upon the specific market context such that generalizations of results may be problematic. A measure of aggregate welfare such as total wealth in the society of traders can deal better with those problems. It captures the overall impact of the trading technology on society.

Total social wealth may be regarded as a social welfare function weighing equally the wealth of each individual trader. Relative price effects favoring one group of traders at the expense of some other group cancel out in such an aggre-