

THEORIES REGARDING FINANCIAL INTERMEDIATION AND FINANCIAL INTERMEDIARIES – A SURVEY

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Abstract

In this paper we propose to make a presentation of the main theories on financial intermediation and financial intermediaries. Modern theory of financial intermediation examine the main functions of financial intermediation, how the financial intermediation affect the economy as a whole and the effects of government policies on financial intermediaries. We will focus on issues of function of financial intermediaries, such as reduction of transaction costs, liquidity provision, information provision, debt renegotiation.

Key words: financial intermediation, financial intermediaries, informational asymmetry, transaction cost, asset transformation

JEL Classification: G20

1. INTRODUCTION

In this paper, we survey the results of recent academic research on financial intermediation and financial intermediaries.

The goal of intermediation theory is to explain why these financial intermediaries exist. The savings/investment process in capitalist economies is organized around financial intermediation, making them a central institution of economic growth. Financial intermediaries and financial markets are two important institutions, which contribute to the optimal allocation of resources in an economy. Financial intermediaries are firms that borrow from consumer/savers and lend to companies that need resources for investment.

2. FINANCIAL INTERMEDIATION

The modern theory of financial intermediation analyzes, mainly, the functions of financial intermediation, the way in which the financial intermediation influences the economy on the whole and the effects of government policies on the financial intermediaries. The financial intermediation theory highlights the role of financial intermediaries in economy, most of the studies performed highlight their role in achieving a durable economic growth, and the impact of regulations on financial intermediation, accentuating the role of the central bank in the regulation, supervision and control of financial intermediaries.

The theory regarding financial intermediation was developed starting with the 60's in the XX century, the starting point being the work of Gurley and Shaw (1960). The financial intermediation theory is based on the theory of informational asymmetry and the agency theory. In principle, the existence of financial intermediaries is explained by the existence of the following categories of factors: high cost of transaction, lack of complete information in useful time; and the method of regulation.

The main and most used factor in the studies regarding financial intermediation is constituted by the argument regarding informational asymmetry. This asymmetry can be of type: ex ante generating the so called problem of adverse selection; concomitant generating the moral hazard; or ex post leading to the need of applying some costly verification and auditing procedures or even the forced execution of the debtor. The informational asymmetry generates imperfections of the market, deviations from the theory of perfect markets in an Arrow -Debreu sense.

According to the model of perfect financial markets in the neo -classical theory, they fulfill the following conditions: no one participant can influence the prices; the placement/borrowing conditions are identical for all participants; there are no discriminatory fees; the lack of competitive

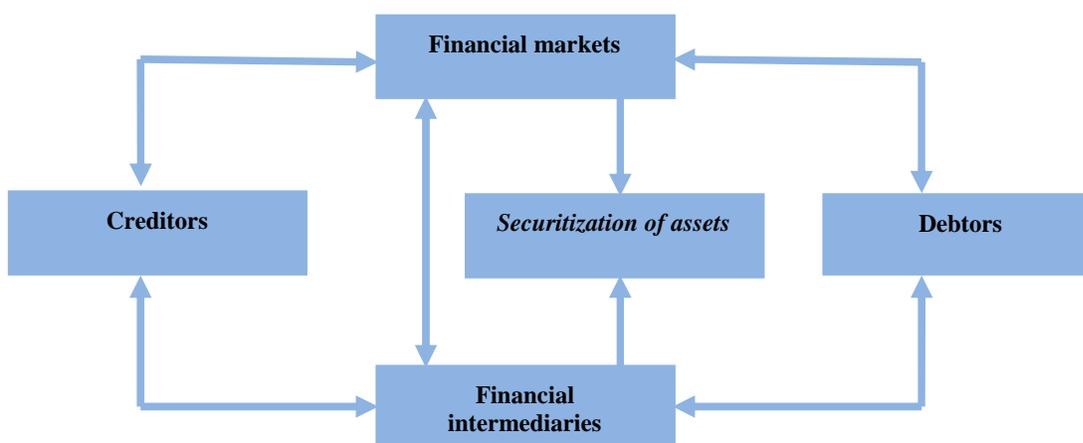


Fig. 1 Process of financial intermediation

The analysis of financial institutions that achieve the financial intermediation can be made from two perspectives: as firms or as intermediaries.

3.1. FINANCIAL INTERMEDIARIES – COMMERCIAL COMPANIES

The financial intermediaries are commercial companies, firms, whose behavior can be analyzed in the same way as the economists analyze any other type of firm [1]. Thus financial intermediaries can be regarded as commercial companies that produce different types of loaning products for the individuals who wish to borrow. The main finished products of financial intermediaries are the loans granted to clients, and the main variable inputs are the deposits attracted from the depositors. Furthermore we can regard financial intermediaries as companies that have as sole purpose the maximization of profit, profit that occurs as a result of the difference between the interest perceived for the granted loans and the interest abated for the attracted deposits. The maximization of profit is made when the difference between the total incomes minus the total costs is maximum, that is when the marginal income is equal to the marginal cost. In order to attract more resources necessary for the increase of the volume of granted loans the financial intermediary must increase the abated interest of the depositors which is transposed into the increase of costs, thus the cost of resources for short term is increasing. Financial firms are large in size and this is owed to the scale economy which is manifested in the production of financial products. In this analysis we must consider that financial intermediaries do not activate on a market characterized by a perfect competition but rather on one with an imperfect competition, oligopoly - type, dominated by a few large firms. The main characteristic of the oligopoly -type market structures is the interdependency of the actions of different participants [3]. The competition between financial intermediaries is manifested both on a price level and on a product differentiation level. The financial intermediaries often give up the profit maximization objective and have as objective the increase of the market share.

In the analysis of financial intermediaries as commercial companies we must consider the similarities with other firms but also the numerous differences: the characteristics of the products and the motivation of the clients in purchasing the products of financial intermediaries.

3.2. FINANCIAL INTERMEDIARIES – “INTERMEDIARIES”

Financial intermediaries have the role to create assets for creditors and liabilities for debtors which are much more attractive for each of them than if the transfer of funds from creditor to debtor were to be made directly between the two parties [4].

The analysis of financial institutions as intermediaries implies the analysis of the services they offer to clients.

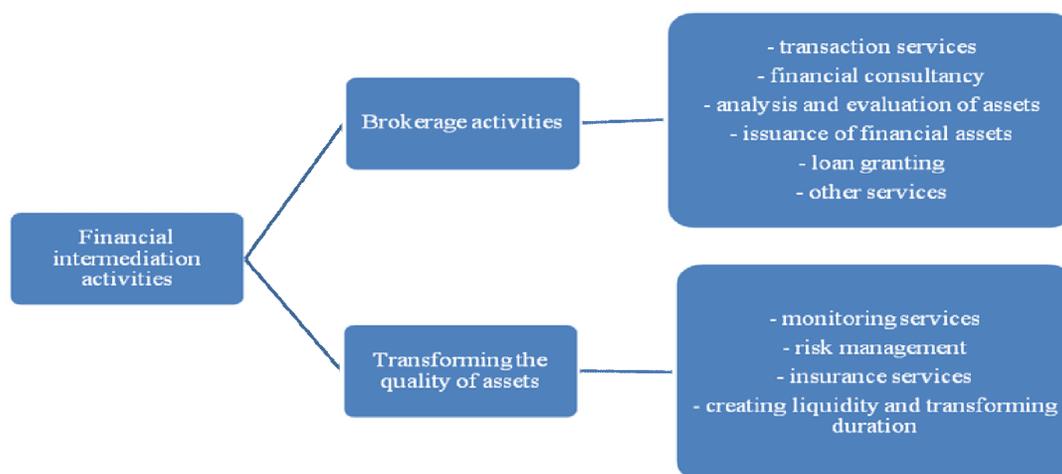


Fig. 2 Services offered by Financial Intermediaries

*Processing after Greenbaum, S., Thakor, A. – *Contemporary Financial Intermediation*, page 50

The brokerage activity of financial intermediaries entails the bringing together of the two parties with complementary needs, the elimination of informational asymmetry and the performing of the transaction; in order to achieve brokerage activities information is needed. The financial intermediary achieves these activities better than other participants because he has the necessary information, information that is obtained because of his abilities in the interpreting of market signals, unnoticeable for other participants, and of the reuse of the previously obtained information. The financial intermediary presents two competitive advantages: he has special abilities in the interpretation of the signals unnoticeable for other participants and an advantage of the reuse of the information obtained from several clients over a long period of time. The broker is most times reimbursed for the reuse of these services with a certain commission.

The brokerage activity does not imply that the financial intermediary becomes a party in the agreement signed between his clients, but he merely facilitates the meeting of the two parties.

The activity of transforming the quality of the assets made by financial intermediaries implies the adjusting of the different characteristics of financial assets depending on the needs of the two parties. If in the brokerage activity the intermediary did not become a party in the agreement signed between the 2 parties, in the activity of transformation of the quality of assets the intermediary is interposed between the two parties. This interposition entails the purchasing of an asset from a client and the reselling of the same asset identical or modified, to another client.

The characteristics of the assets that are more often transformed by the intermediary are: due date (intermediaries grant long term financings based on the short term resources), the nominal value, liquidity, credit risk, interest rates and measurement unit (the currency the respective asset is in).

This activity implies the undertaking of certain risks by the financial intermediary, the gain of the financial intermediary is made from the difference between the price for which he resells the financial asset and the price for which he purchases it.

4. FUNCTIONS OF FINANCIAL INTERMEDIARIES

The theory distinguishes between the following functions of financial intermediaries: (i) the reduction of transaction costs; (ii) the reduction of liquidity risk; (iii) the information provision; and (iv) the debt renegotiation. The first of these functions concerns the problem of accessibility of financial markets for households/individuals and for firms. The second and the third functions concern the services the banks offer to savers, which cannot be obtained from financial markets.

The last function is discussed in the literature starting in the late 1990s and concerns the services a bank offers to its borrowers rather than to depositors.

4.1. REDUCTION OF TRANSACTION COSTS

Financial intermediaries transform the credit portfolio demanded by borrowers into a deposit portfolio desired by lenders[5]. This transformation is twofold:

(1) First, financial intermediaries engage in the transformation of terms: firms prefer to finance their projects with long-term credits, and households prefer short-term deposit for liquidity reasons. Financial intermediaries are able to accomplish this transformation, though non-financial firms could themselves issue instruments like demand deposits or short-term savings contracts. However, it would be costly for small creditors to write debt contracts with firms (these are complex agreements with restrictive clauses on firm activities). Moreover, small creditors typically like to diversify their risks, which implies greater number of contracts and thus greater transaction costs. An intermediary is able to exploit economy on scale considerations by writing and enforcing debt contracts with firms.

(2) Second, financial intermediaries reduce transaction costs through the payment system. Centralizing this process at the level of financial intermediaries avoids wasteful duplication of verification costs. As Dewatripont and Tirole (1994) note, the vision of banking activities in terms of transaction costs reduction, although relevant, is only incomplete (especially if the issues of control and regulation are concerned), which has stimulated the development of other views regarding bank function.

For example, in his famous model of banks as delegated monitors, Diamond (1984) shows that the existence of banks help to avoid the duplication of audit costs on the part of all creditors. The reduction of monitoring costs, though related to the transaction costs, unveils the information provision function performed by banks.

The examples above show the reduction of transaction costs on the side of depositors/creditors. On the side of borrowers/firms, the transaction costs reduction can be seen in the example of financial instrument such as loan commitment. A loan commitment may be considered a financial option, which enables a borrower to obtain a loan at predetermined conditions, and may or may not be exercised. Loan commitments may reduce borrowing rates and eliminate the associated moral hazard problems on the borrower's side. Therefore, the loan commitments provide a possibility for the reduction in transaction costs. At the same time, loan commitments are an example of lending relationships, which provide a basis for debt renegotiation.

4.2. LIQUIDITY PROVISION

Depositors (acting as creditors in their relations with financial intermediaries) face liquidity risk in sense of possibility needing liquid funds. The trade-off between liquidity and return forces them to hold their wealth (at least partially) in form of bank deposits. Therefore, models of banks as liquidity providers focus rather on bank liabilities than on bank assets. In the famous Diamond - Dybvig model, depositors do not know a priori whether they will face liquidity needs in the future. In order to provide depositors, who withdraw their deposits, with liquid assets, banks need to sell less liquid but more profitable assets thereby reducing their profit opportunities. If many depositors withdraw, others are pushed to imitate this behavior, which produces a phenomenon known as bank runs.

Consequently, banks face a dilemma: either to invest in short-term (liquid) assets and not to perform their term-transformation function or to invest (at least partially) in long-term assets and thus face the possibility of bank runs. A solution to this problem is an insured deposit contract, which guarantees the depositors that they get their money back. This prevents the bank runs and suggests an allocation of resources, which is superior to the one without insurance. At the same time, the need of deposit insurance illustrates the necessity of regulatory intervention.

4.3. INFORMATION PROVISION

A firm that looks for debt financing typically has a choice between being indebted to the general public or to financial intermediaries. The public debt is inefficient since it forces each lender to assess firm's solvency, or at least to continuously update rating information provided by specialized agencies. This results either in an increase in monitoring costs, or in subnormal monitoring due to free-riding. Gorton and Penacchi (1990) suggest that debt is a less information intensive asset than equity and thus attracts relatively less informed creditors. Given the natural monopoly aspect of information provision, it is logical to presume that the bank debt is more desirable for such creditors than the public debt. A natural monopoly aspect arises here not only because of economies of scale in information provision, but also because of economies of scope since information about a borrower may be obtained by the bank through that borrower's bank account flows.

The information provision function of financial intermediaries is broadly discussed in the literature on information asymmetry, especially when issues of moral hazard and adverse selection are addressed.

Diamond (1984) introduced moral hazard in his model to study how crucial information asymmetry is for the bank. In extension of the transaction costs approach, delegated monitoring not only presumes economies of scale (it is socially optimal when the bank monitors the creditors/firms on behalf of depositors), but also answers the question, why the depositors do not need to monitor the bank itself (to monitor the monitor). The model shows that the moral hazard problem within the bank decreases when the size of the bank increases, and even completely disappears when the bank holds a fully diversified portfolio of assets.

Hence, if the bank holds a fully diversified portfolio of assets, the depositors hold risk-free debt contracts and do not need to monitor the bank (at least, they do not need to monitor the bank continuously).

4.4. DEBT RENEGOTIATION

If financial markets were frictionless, solvent firms would always have access to funds to raise their capital for new investment opportunities. Microeconomics of asymmetric information suggest some plausible explanations into why friction in the market, such as moral hazard, adverse selection, and/or agency costs create barriers for the flow of capital to firms with profitable investment opportunities. The role of financial intermediaries as information producers, discussed above, provides a solution of this problem. If capital can flow from creditors (depositors) to the borrowers (firms) through the system of financial intermediation, credit contracts between banks and firms should resemble the debt contracts in the market without financial intermediaries. However, empirical work strongly suggests that bank loans are different from corporate bonds in domestic as well as international capital markets [6].

Theoretically, in a reputation-lending framework, private creditors deny the future access of sovereign defaulters to capital markets. If a firm defaults on its bonds, it cannot raise additional capital with a new issue of bonds. If such funds can be obtained from banks, firms in financial distress may prefer bank debt to the public debt (bonds).

Diamond (1991) continues to develop his concept of banks as delegated monitors to show why banks can offer loans to firms who can potentially default. Since banks can monitor firms, and the bondholder cannot, the firms can acquire good reputation through borrowing from banks.

The firms, who have acquired good reputation can then switch to the bond market to finance their investment.

Bolton and Freixas(2000) stress the relationship aspect of the intermediation. This relationship acts as another kind of commitment: firms know that the banks provide better loan conditions than markets in the times of financial distress. Therefore, firms prefer banks to markets.

Hence, there are at least three reasons, which demonstrate advantages of financial intermediaries in debt renegotiation (compared to markets): (1) the monitoring advantage of the bank, which acts as a punishment instrument, and therefore allows banks to create better provisions for the reputation creation by firms (2) reputation of the financial intermediary as a reliable creditor, which acts as an informal commitment, and (3) the relationship aspect, which also acts as a commitment instrument.

5. CONCLUSION

The modern theory of financial intermediation analyzes, mainly, the functions of financial intermediation, the way in which the financial intermediation influences the economy on the whole and the effects of government policies on the financial intermediaries. The financial intermediation theory highlights the role of financial intermediaries in economy, most of the studies performed highlight their role in achieving a durable economic growth, and the impact of regulations on financial intermediation, accentuating the role of the central bank in the regulation, supervision and control of financial intermediaries.

Financial intermediaries are defined by the fact that they mobilize funds (financial assets) from the money holders (savers), registering a debt (liability) towards them, and they issue their own assets towards fund users. For example, a commercial bank attracts deposits (indebting itself towards depositors) and grants loans (creating debts in relation to their clients – the fund users).

In other words, financial intermediaries do not resell the assets they buy, but create new assets, which they sell on the market; they are debts of clients to the banking institutions and not to the savers who initially owned the assets bought by the intermediary. So intermediaries change the nature of financial assets which are distributed on the market, issuing their own assets.

NOTES:

[1] Freixas, X., Rochet, J.C. – “Microeconomics of banking”, 2nd ed. The MIT Press, 2008, p.15

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