

TOWARDS NETWORKED BANKING – THE IMPACT OF IT ON THE FINANCIAL INDUSTRY’S VALUE CHAIN

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ABSTRACT

The main objective of this article is to systematically analyse the impact of IT on financial intermediation and its underlying functions and to discuss how this impact might alter the industry’s value chain. In this context we put forth the thesis, that IT effects the financial services industry in two distinct ways: (1) IT intensifies the different economics underlying brokerage, transformation and clearing & settlement which are the main functional activities residing from financial intermediation. IT thereby enhances the potential value of performing these activities separately. (2) Further, IT facilitates both the disaggregation and subsequent reintegration of activities, which then may be organised in network structures. By introducing the paradigm of networked banking we analyse these structures. In contrast to other theoretical approaches focusing on the temporary character of networks and the ability of companies to switch their partners, we expect the network structures in the financial services industry to be characterised by tightly coupled relationships and a limited number of network members. We conclude our research with some implications regarding the implementation and management of network structures.

1. INTRODUCTION

There are few industries that have been subjected to such radical changes in environmental and industry conditions like financial services. Advances in information technology and emerging electronic markets [Schmid 1993] have a profound impact on core processes in the banking industry. While many authors believe that we will see a dominance of market coordination [Malone/Yates/Benjamin 1987] and virtual organisations that only form temporary to fulfil a single productive task [Davidow/Malone 1992] we albeit take a different stand and subject the banking industry to a bottom up analysis, in which we choose the underlying economics of financial intermediation as a starting point.

Our analysis starts with a short description of financial intermediation and its core functions and processes that may also be seen to represent steps or sub-processes of the industry's value chain. This conceptual framework will first allow us to assess the role of IT for financial intermediation. Second, by applying this framework we will discuss the hypothesis of a reconfiguration (disaggregation and re-integration) of value chains within the financial industry along the core functions of intermediation. We illustrate this hypothesis by the example of the Rheinischen Hypothekenbank AG. In the last part of our article we set forth what we believe will be the emerging paradigm: networked banking. We discuss problems arising in the establishment and management of such structures and conclude with some managerial implications.

2. INTERMEDIATION

2.1. Financial Intermediaries and the Functional View

For the analysis conducted in this paper it seems useful not to focus on separate institutions as incumbents in the financial services industry but to take a broader stand and set in analysing the functions performed in the industry's value chain – as opposed to one institution's value chain. These functions are *ex ante* independent of any institutional type and we now introduce them as unit of analysis from a theoretical perspective.

Financial intermediation may be defined as any activity geared at enabling the exchange of financial capital between its providers and users [Greenbaum/Thakor 1995]. Any institution enabling the exchange of financial capital may therefore be termed financial intermediary. While this definition suggests some equivalence between financial intermediation – a function performed in a market – and financial intermediaries – an institution – it is useful to distinguish the two perspectives.

By adopting an institutional perspective one could start out separating thrifts, buildings societies and commercial banks examining the products they offer and the markets and customers they serve. However, under this perspective the conclusions derived may not be valid for a long time as the nature of the institutions changes constantly when they adapt to new market conditions and regulatory frameworks. In doing this they strive for the most efficient institutional form, while the functions performed remain stable. Hence, by taking the functions as conceptual anchor one can explain dynamic changes in institutional structures [Merton/Bodie 1995], which is the concern of the present paper. We will continue explaining the basic functions underlying financial intermediation in further detail.

2.2. The Functions of Financial Intermediation: Brokerage, Transformation and Clearing & Settlement

Financial intermediation may be divided into three functions from which sub-functions may be derived. As core functions one can identify transformation of financial assets, brokerage and clearing & settlement.

First, financial intermediation may serve the needs of providers or users of capital by producing the type of financial assets they require [Greenbaum/Thakor 1995]. This production involves the transformation of financial assets, whereby specific characteristics of these assets are altered, such as term to maturity, risk, liquidity, and unit-size. The function will be termed transformation. We want to clarify this by an example: Deposits will typically be transferred into different types of loans. Loans will usually have a longer term-to-maturity and a greater unit-size inducing more risk while being less liquid than deposits. Through this mismatch an institution accepts some form of risk exposure. Subsequently this risk may be diversified or traded on financial markets [Mason 1995].

The monitoring and management of these risks is a function that can be derived from transformation. Monitoring denotes the *ex ante*, *ex interim* and *ex post* screening of borrowers and their projects. An intermediary has to assess the risk of lending funds for a borrower's project, it has to control the usage of the financial assets during the time of the commitment and finally it has to assess the resulting cash flows.

Asymmetric information demands these monitoring activities for the assessment of the risks taken by the intermediary and the prevention of opportunistic borrower behaviour.

The management of risk exposure arising from the transformation of financial assets is the second sub-function of transforming assets. Risk exposure may be reduced through diversification. Additionally risks may be shifted to other intermediaries or market participants by hedging and insurance [Mason 1995]. The function of risk management consists of these activities.

When splitting the transformation function into risk monitoring and risk management, the residual activity is risk taking. The threshold for the amount of risk being taken by an intermediary is determined by its financial capability – that is its liquid cash holdings, unused equity capital and its capability for refinancing in the short term.

Second, financial intermediation may consist in bringing providers and users of financial capital together. This may be done by searching transaction partners with equivalent needs or enhancing their information concerning financial assets through advice. According to Greenbaum and Thakor we want to term this function brokerage [1995].

As a sub-function brokerage comprises the production of information required to match providers and users of capital without changing the nature of the claims. Information production is also at the heart of offering advice. Offering advice may be an ongoing process with a high degree of interaction. Advice offered in friendly or unfriendly take-over is such an highly interactive process that may serve as an example for brokerage.

The information generated must be used in matching providers and users of capital. This is the market making or distribution aspect of the brokerage function. Information that has been produced has to be distributed to investors or lenders of capital. Distribution is also part of the transformation function, which prime concern is to take deposits and lend capital. This obviously involves brokerage, as suppliers of capital (deposits) have to be acquired and users of capital (loans) have to be identified. Thus performing the transformation function requires brokerage. Brokerage on the other hand does not require transformation.

Thirdly clearing & settlement services are offered by financial intermediaries as means for the exchange of funds. Given the intangible nature of financial assets, clearing & settlement is an activity centred at the exchange of information. Information systems therefore are at the heart of the clearing & settlement function. The systems involved are designed to cope with the risks that arise when one of the parties does not fulfil its terms [Perold 1995].

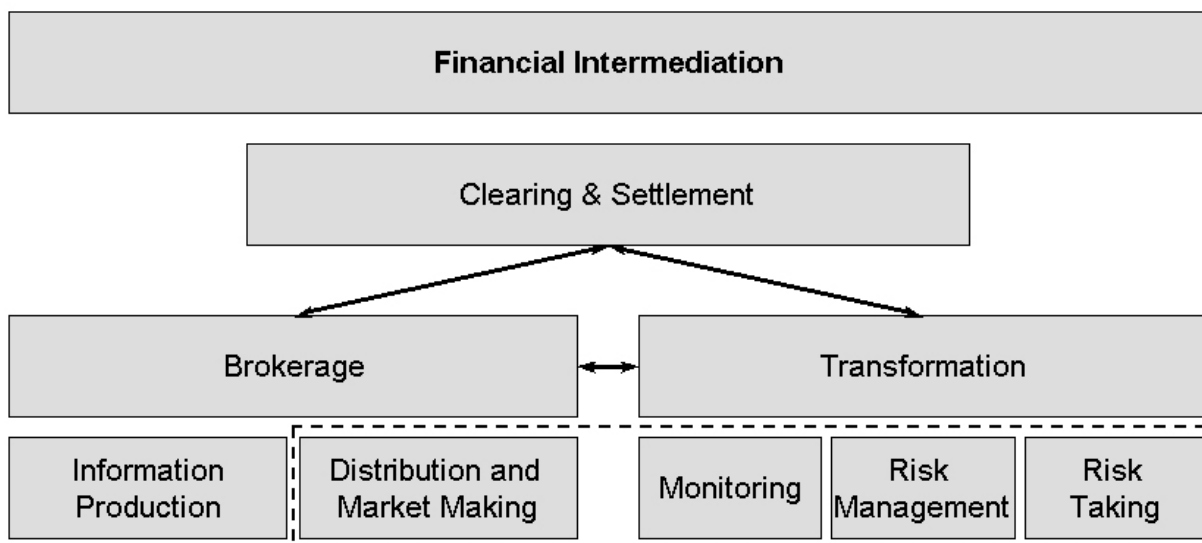


Figure 1: Functions of Financial Intermediation

2.3. Performing the Functions of Financial Intermediation in Firms

Now let us briefly review why the functions given above are - at least partly - performed by firms as opposed to by markets. Financial intermediation comes at a cost to its customers, as the institutions charge fees for brokerage and clearing & settlement services and collect interest income for asset transformation. The modern theory of financial intermediation puts forward information asymmetries between providers and users of capital. The intermediary's existence may then be explained as a delegated monitor. The lender delegates monitoring of borrowers to the intermediary who experiences a diversification advantage in the cost associated with monitoring and economies of scale, due to the fact that monitoring efforts do not have to be duplicated [Diamond 1984]. Thus intermediation – better, transformational services – are beneficial as opposed to direct lender-borrower relationships.

The existence of intermediaries acting as brokers may be explained on the basis of information asymmetries as well. Borrowers may want to raise capital from a number of investors. These face a problem of adverse selection, as borrowers with poor quality cannot be distinguished from high quality borrowers *ex ante*. Without an intermediating broker there would be a high amount of duplication in information production concerning the borrower. A broker may reduce this cost and further reduce problems of moral hazard – caused by incentives to produce unreliable information – by the diversification of its information producing efforts [Ramakrishnan/Thakor 1984].

Finally, clearing & settlement activities are performed by firms rather than individuals because they exhibit significant economies of scale. In fact economies of scale are this large, that in many cases it is beneficial for a coalition of firms to jointly conduct clearing & settlement services. SWIFT is only one example among many.

3. IT AND THE CHANGING ECONOMICS OF INTERMEDIATION FUNCTIONS

In the following we will put forth the thesis that IT – used as a general term to describe all technologies applied by banks for processing information – alters the nature of financial intermediation. The IT impact is twofold: (1) IT intensifies the underlying economics of brokerage, transformation and clearing & settlement including their sub-functions, thereby enhancing the potential value of performing these activities separately. (2) Further IT facilitates both the disaggregation and reintegration of these activities, which then may be organised in network structures. We want to term the resulting paradigm networked banking and analyse it in the next section.

Let us first turn to efficiency considerations regarding the transformation function. We explore the nature of the functional economics and how they are impacted by IT.

- The monitoring function fulfils the task of assessing and controlling risks, mainly arising from lending relationships. IT may support both the *ex ante* screening and the *ex interim/ex post* controlling of these relationships. *Ex ante* screening and *ex interim/ex post* controlling of risks involves an in depth risk assessment that can be supported by scoring systems and analytical tools. Hence, IT allows the assessment of more complex risks [Emmons/Greenbaum 1998]. Consider junk bonds or emerging markets government bonds. These are risks that were difficult to assess prior to the use of IT-systems. As monitoring is an information processing activity it benefits from the reusability of information. Borrower information may therefore be used inter-temporal for recurring financing needs. Cross sector reusability is an issue, too, as an intermediary may draw conclusions regarding developments in one company, industry or region for other sectors. Thus the monitoring function exhibits information based economies of scale drawn from a stable customer base and economies of scope from diverse information across sectors.
- Risk management requires an adequate assessment of the risks taken by the intermediary. These risks may then be diversified across companies, industries and regions. Diversification is subject to economies of scope and scale. The latter stem from the law of large numbers. IT mainly impacts risk management by hedging and insurance, as analytical tools and sophisticated technologies for market access allow for

complex hedging strategies. For example, securitisation of risk assets would not be possible without IT-systems being involved.

- Risk taking is not effected directly by IT. Indirectly does a more efficient and global access to capital markets enhance liquidity and reduce transaction costs incurred. Therefore, it may be beneficial for risk taking to be performed not by a financial intermediary, acting as asset transformer, but by individual investors on the capital market.

Brokerage has been identified to be an information processing activity. Hence, the impact of IT can be considered to be substantial.

- The production of information is greatly supported by increased information availability and processing capabilities that provide analytical tools and applications, such as neural networks and expert systems or artificial intelligence. On the other hand, increased information availability causes competitive advantages that are due to private information to diminish, simply because it is harder to obtain private information in the first place. The availability of analytical tools and applications further enhances this trend. Therefore, one might consider personal skills to become of increasing importance in the interpretation of unobservable information.
- The IT impact on the distribution of financial assets and advice and the matching of providers and users of capital may be said to be the most obvious and far reaching effect on intermediation functions. First, and most significant, IT supports distribution by making financial services (transaction and advice) available conveniently around the clock from any place. This has largely reduced transaction costs incurred by the customer in consuming financial services and has allowed for entry of new competitors on a large scale. Further it facilitates the internationalisation of the distribution function, as the technologies employed for this purpose exhibit large economies of scale. Second, increased information availability and transparency reduce the need for providers and users of capital to contact a large number of partners individually and increase the number of alternatives that can be considered, thus increasing the quality of the alternative eventually selected. This electronic brokerage effect [Malone/Yates/Benjamin 1987] increases competition, as the alternative offered by any intermediary has to be of superior quality to be selected in a highly transparent market.

We have already indicated that information systems are at the heart of clearing & settlement services and that these exhibit large economies of scale. IT amplifies the existing scale effects. Further, IT and network structures like the internet will make clearing & settlement systems more open and accessible, so that it becomes more difficult to lock in users (of the processing systems) by proprietary access technologies. This further increases the possibility of scale effects.

4. RE-CONFIGURATION OF THE VALUE CHAIN: DISAGGREGATION AND RE-INTEGRATION

Today financial intermediaries are highly integrated enterprises performing most of the functions in a consolidated value chain without utilising outside suppliers. As indicated above, IT serves as an enabler for the disaggregation of these core functions and processes of financial intermediation. It does so by providing networks and standardised protocols as a means of exchange of the resulting information output and (sub-components) of financial assets generated by each activity of value chain. Although there may be specialised intermediaries concentrating on separate functional services, such as information production (rating agencies), distribution and matching (M&A boutiques), transformation of unit size and risk (mutual funds) and clearing & settlement (automated clearing houses, ACHs) most of these intermediaries do not integrate activities in order to create a coherent offer for end customers. IT allows for such a reintegration of unbundled functional activities by enabling a close coordination and fast exchange between the functions via standardised interfaces. This may lead to joint, interpenetrating processes at the interfaces between steps or sub-processes of the industry's value chain. The underlying reintegration effect has also been formulated by

Malone, Yates and Benjamin [1987]. While disaggregation and reintegration are possible and can be observed in the marketplace, we firstly want to take look at the value these effects possibly yield.

4.1. The Value of Disaggregation

The value of the disaggregation of functional activities stems from their varying underlying economics which have been analysed above. Consider the scale benefits in risk management by diversification that can only be realised through an increased customer volume. Also, in performing the monitoring function an intermediary may specialise – both in IT and personnel – in order to process low risk engagements more efficiently or to enable the analysis of complex transactions.

Llewellyn formulates the potential value of disaggregation applying the example of a loan [1999, p. 30]: “A standard bank loan (such as a mortgage) can be decomposed into three main components: origination, management and asset-holding. A loan has to be originated (a borrower located), subsequently administered (interest rate set and collected), and held on a balance sheet. This is traditionally undertaken as a single process by a lending institution. And yet different agents may have comparative advantages and there is no necessary presumption that a single institution is the most efficient at undertaking all three parts of them.” The example can be enhanced by suggesting that the monitoring of the loan can be performed as a separate function. In a bank that fully integrates all functions which exhibit differing economies the result is a compromise of each that averages positive effects such as scale or scope economies. By disaggregating the functions they are freed to exploit their inherent advantages at the most [Hagel/Singer 1999; Evans/Wurster 1997].

4.2. The Value of Reintegration

It is obvious that the value of disaggregation would greatly diminish without the possibility of reintegration. Financial services for the most part are a combination of functions. Some intermediation functions such as information production, i.e. a share recommendation, may have a value on its own. Still this is not true for all kind of services. The loan example given above suggests that the financing of a borrower consists of a complex interaction between distribution (origination), monitoring, risk taking, risk management and clearing & settlement. In the perspective of the customer, an integrated service has to be offered for his needs to be fulfilled. Our thesis is, that by using IT an intermediary is able to reap the benefits of disaggregation – that is the distinct economies of each function can be realised in separate entities – by facilitating reintegration in a co-ordinated manner.

4.3. Disaggregation and Reintegration: An Organisational Example

Empirical relevance for the hypothesis of disaggregation and reintegration of existing functional activities in the banking industry can be pointed out exemplarily by a value chain analysis. We have chosen the case of the Rheinische Hypothekenbank AG (Rheinhyp), a German mortgage bank.

Rheinhyp is an almost 130 years old specialised credit institute and the largest subsidiary of the Commerzbank, whose primary business activities (real estate financing, mortgage bond refinancing, government bonds and local authority loans) are to a large extent determined by the German mortgage bank legislation. In reaction to the radical changes in the underlying conditions for its operations, in particular responding to the developments in e-commerce, the Rheinhyp has undertaken a strategic re-organisation in order to sub-contract processes of its core business to independent subsidiaries, which offer their services also to other financial institutions. Among the main objectives of this re-organisation are the leveraging of core competencies, the development of new fields of business activities, and the attraction of additional customers by an extended product range.

In 1998, Rheinhyp started its reorganisation setting up a division labelled ‘direct customers’, which was created for the internet-based distribution of mortgages. In order to take full advantage of the internet as a

significant distribution channel for real estate finance (mortgages for free-hold flats and single family houses) and due to the enormous potential, which was seen for internet mortgage brokers, this division was later converted into an independent subsidiary. Within the framework of a joint-venture with a prominent British-online-broker of financial services 50 per cent of the shares of the enterprise were sold and the subsidiary was re-named to Extrahyp. To strengthen the position of Extrahyp as an independent internet intermediary in mortgage finance, co-operations with several competing mortgage providers have been arranged. Extrahyp brokers these mortgages for the payment of a commission by its product suppliers. As a consequence of this re-structuring the Rheinhyp is one of several competing companies acting as product suppliers for Extrahyp. In contrast, the product range offered via the Rheinhyp branch network is restricted to loan contracts provided by Rheinhyp itself.

The strategic re-organisation is not limited to the distribution of mortgages. Focusing on another core competence of the Rheinhyp, the administration and settlement of mortgages, a further subsidiary labelled Prompter AG, was established. Prompter offers back office services to other mortgage companies against payment of commissions (fixed rate per mortgage). The back office services cover the entire life cycle of a loan, starting with the examination of the customer's creditworthiness on the basis of a scoring model provided by the product supplier¹ to the disbursement and administration (e.g. ex post monitoring) of the loans. For setting up IT-structures suitable for the servicing of mortgages the enterprise invested a considerable amount in IT-systems and the implementation of the SAP/Mortgage Banking Solution. Due to the high investments in IT the sub-contracting of excess processing capacity is a prerequisite for the Rheinhyp in order to reach a cost efficient scale of processing output.

The transformation, traditional refinancing or funding of the credits by the issue of mortgage bonds, remains a core function of the Rheinhyp. A prerequisite for this form of refinancing is a standing as an internationally accepted issuer of jumbo and global mortgage bonds. In order to reduce the equity bound in mortgage loans, the usage of Mortgage Backed Securities as refinancing instruments is planned to be increased. The specific know-how necessary for this transactions will be build up within a special division, named Structured Finance & Portfolio Management.

The following figure schematically shows the unbundling and new arrangement of the formerly highly integrated value chain of the Rheinhyp.

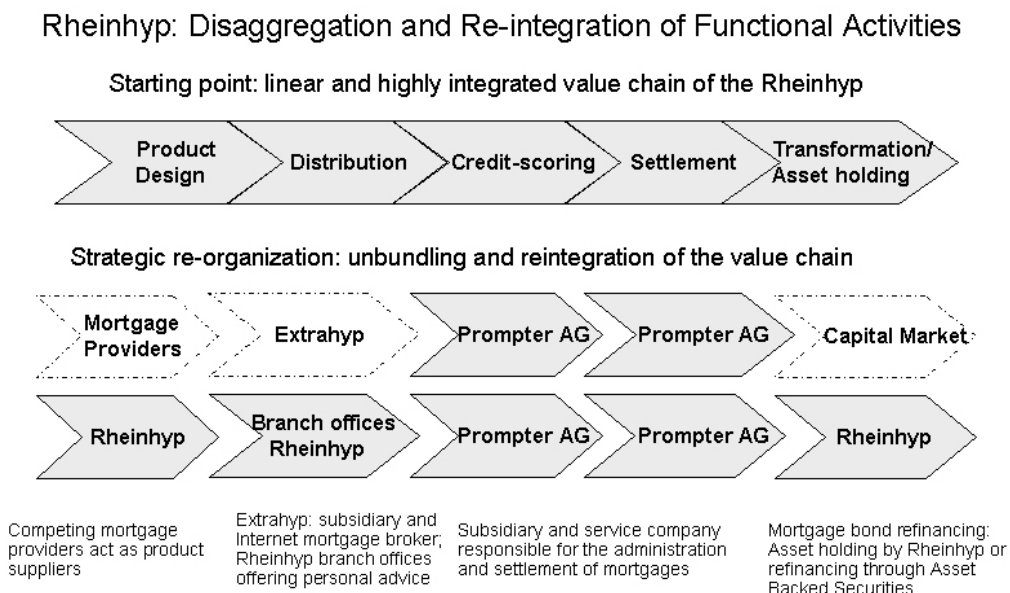


Figure 2: Rheinhyp: Disaggregation and Reintegration of Functional Activities

¹ Due to the legal conditions determined by the German banking law, everyone who assigns credits or deals in credits is obligated to participate in the credit decision.

5. INTER- AND INTRA-ORGANISATIONAL COLLABORATION: THE PARADIGM OF NETWORKED BANKING

The case of Rheinhyp not only highlights the organisational and structural changes within one company but also reflects a transformation that takes hold of the financial services industry as a whole. Increasingly banks sub-contract (outsource) processes and products or sub-components of processes and products which then are supplied by other firms or independent subsidiaries on a contract basis. Similarly, banks provide sub-components of services or processes to competitors. Thus, using the example discussed earlier, Rheinhyp procures loans, from competitive mortgage providers while exporting its know-how and capacity regarding the administration and settlement of mortgages to other financial institutions. This could lead to the development of an ancillary industry and value networks in which banks act simultaneously as suppliers and commercial customers of processes and services. What we term the paradigm of networked banking therefore implies a distributed production of services and products in the financial services industry on the basis of electronic networks. These networks are characterised by common communication standards and open interfaces and allow integrated products and services to be produced by combining the sub-products of various contributing companies.

Discussing this transformation it is instructive to consider other industries, that have already adopted network structures. The automobile industry may serve as an example how independent enterprises specialise in certain processes (e.g. the production of certain parts), each performed in a cost-efficient manner. By coordinating the production process (e.g. defining part specifications, design requirements and quality standards) and assembling the different sub-components the manufacturer creates an integrated product (e.g. car).² The economic rationale for the composition of value networks in the automobile industry can be described as follows: the economics underlying the processes (e.g. the manufacturing of the various component parts) are different, and various suppliers may have differing competitive advantages and expertise in performing them. However, a prerequisite for the composition of (production) networks is that specified processes can be determined, executed independently and finally reintegrated (e.g. by means of JIT-arrangements).

In this context the legacy structures of the IT-systems in banking – at least to some degree a peculiarity of the financial services industry – have constituted an obstacle for building network structures in banking. Innovative technologies and concepts like Java, Data Warehousing and Extensible Markup Language (XML) and the implementation of middleware (software, which enables a fully automatic execution of business processes over a standard platform with uniform processing and connection to different data sources and applications) will help banks (1) to fully integrate their computer systems and (2) to extend the IT-infrastructure into a platform for internal and external co-operation, communication and transaction processes between the bank and its alliance partners and customers [Stahl/Wimmer 2000].

Within the paradigm of networked banking the following question emerges as a key issue: how will the collaboration within or between banks be institutionalised and what forms of networks will therefore be predominant in the future.

What we consider to be an extreme form of network structures is comprised by the concept of the virtual enterprise or virtual organisation. Following a definition introduced by Davidow & Malone [1992] a virtual enterprise consists of a conglomerate of loosely coupled autonomous companies (partners), which primarily are bound by bi- or multilateral contracts. This and similar definitions of virtual organisations stress the temporary character of networks and necessity of the ability of companies to rapidly switch partners.³ The potential advantages of virtual organisations (e.g. greater flexibility and responsiveness, improved resource utilisation and lower costs) are mainly derived from a systematic use of switching as a management principle

2 A detailed discussion of the network structures in the automobile industry is given in [Wildemann 1997].

3 "Conventional corporate management may occasionally switch between options, but it normally does so on an ad hoc basis, whereas in virtual organisation, switching is standard operating procedure; that is, it is basic management principle of this innovative form of organisation" [Mowshowitz, 1997, p. 33].

[Mowshowitz 1997]. However, excessive switching imposes limitations on the concept of the virtual organisation. The main reason is that switching involves costs, that have been termed as co-ordination or transaction costs. Transaction costs, for instance, arise from the time required to search for appropriate business partners and negotiate contracts. Another form of transaction costs stems from investments in the implementation of mechanisms regarding the co-ordination of the inter-organisational business processes and the necessary IT-structures supporting these processes. These have been partly neglected in research conducted so far. The following figure contains some of the issues and activities that are related to the set-up of inter-organisational networks.

Issues and activities related to the set-up of inter-organisational network structures

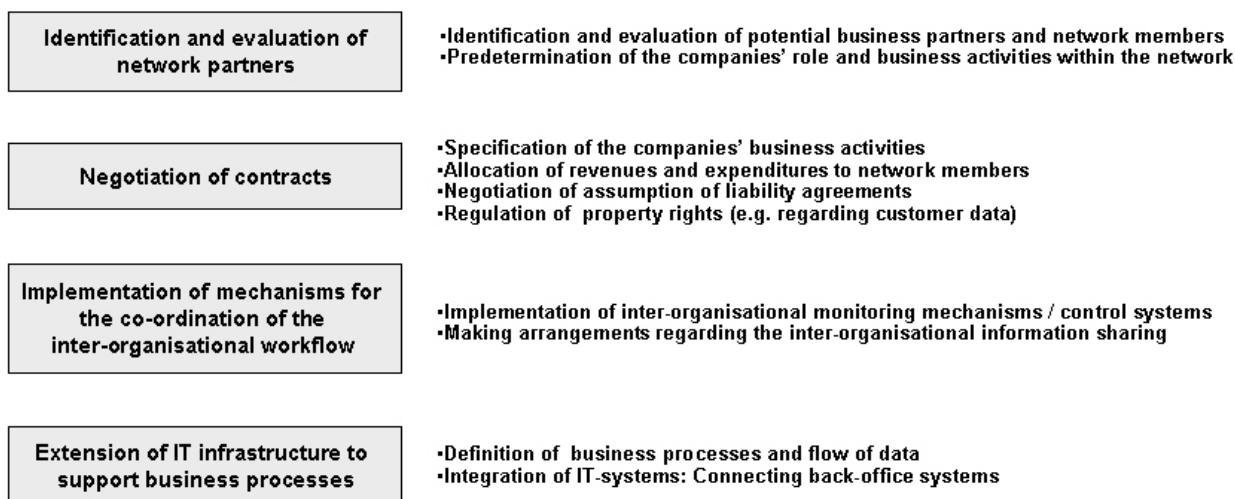


Figure 3: Issues and activities related to the set-up of inter-organisational network structures

In contrast to the activities related to the ongoing management of the partnerships in value networks these investments are a prerequisite for the implementation of network structures. The costs invested are mainly fixed in nature or – in the case of a re-organisation of the network or the termination of the collaboration – sunk costs and therefore prohibit, to a great extent, the systematic use of switching business partners.

Some further arguments lead us to believe that network structures in banking will be relatively long lived. First, the before mentioned legacy systems currently prohibit fast switching. Second, due to the high risks involved, e.g. in processing high value payments, trust and established relationships are more important in banking compared to other industries. Third, the tight regulatory framework in many cases demands closer linkages, which are for instance characterised by having an equity stake in the network partner.

Research conducted by Bakos and Brynjolfsson [1997] is supportive to our thesis that network structures in banking will be characterised by a relatively small number of network members and by relatively tight relationships. Applying the economic theory of incomplete contracts they focus on the limitations of contractual relationships. Due to the fact that the ex ante investments analysed above are, for the most part, non-contractible⁴ in nature, the authors conclude that firms are increasingly relying on tightly coupled relationships. In contrast to other factors, that limit the potential use of switching as a strategic alternative, such as the specificity of investments in electronic data interchange (EDI) systems that can be substantially decreased by the implementation of open standards and interfaces, the non-contractable nature of some investments is also not significantly affected by advances in IT.

⁴ Certain variables may be characterised as non-contractible if they are non-verifiable by a third party, such as a court or an arbitrator. Critical investments in a key success factor such as information sharing between businesses may serve as an example.

5. MANAGERIAL IMPLICATIONS

Within an increasingly competitive environment the potential benefits of a reconfiguration of the value chain urge banks to reap the underlying economics of the core processes of financial intermediation by performing them separately. Opening up formerly integrated value chain activities allows for the realisation of greater scale and scope economies. The link between the functions of financial intermediation and the resource-based view of the firm [Wernerfelt 1984, Barney 1991], from which the better known concept of core competence has been developed, has not yet been theoretically explored in depth. Still, one can formulate some preliminary implications.

For managers this development implies the need to focus on core competencies. These should be kept in-house and leveraged [Hamel/Prahalad 1993] across the emerging network structures by sub-contracting their services to other market participants. Thereby a bank can fully realise the efficiency potential inherent in the main activities. Clearing & settlement services are a prime example for large scale economies that can only be realised by insourcing additional transaction volume from other banks. Non core functions on the other hand may be outsourced and supplied by other banks, who are able to reap the respective economies. Thereby, overall efficiency is enhanced. However, a careful decision has to be made regarding the outsourcing of functions, as reversibility may be low.

The standardisation of interfaces and protocols as enabler for reintegrating functions in the resulting networked structures is a key issue. Although many authors argue this will lead us to fast switching network structures, more qualitative aspects of trust and non-contractible investments may be held responsible for closer linkages. Management must focus on the contractual designs permitting the efficient in- or outsourcing of functional activities. Another issue in the management of the developing supplier - commercial customer relationships is the provision of incentives that make it worthwhile for business partners to conduct non-contractible investments, such as process innovation and information sharing. The complexity of these issues and the potential costs of switching make it economical to focus on relatively few partners and to establish tight relationships with them. Hence, the selection (identification and evaluation) of appropriate business and network partners becomes even more important.

In this part we could merely hint at the issues that should be of concern for bank managers. Further research has to be done to guide management with conclusive advice. Towards this end, theories of organisational network structures and strategic management, such as the resource-based view, may provide a fruitful starting point.

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