Inter-organizational Networks in the Brazilian Financial System: Case Studies

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2008
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Fundação Dom Cabral stimulates the exchange of experiences between and within companies, strategically conciliating concepts and practices that make possible collective learning and the shared search for solutions.
Inter-organizational Networks in the Brazilian Financial System: Case Studies

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Abstract

This article presents two case studies of inter-organizational networks constituted by two Brazilian banks with a view to the joint development of innovations in banking services. One of them analyses the alliances established between a large bank and mobile telephone operators for the development of a new bank service channel. The other case study presents the model of a private bank's correspondents network. These cases evaluate the management instruments established in these networks, particularly transfer flows and the generation, control and coordination of knowledge and information. The analysis carried out allowed the identification of management instruments, the mapping of the transfer flows and the generation, control and coordination of knowledge and information established in the alliances in question. From this perspective, the results found contributed to a better understanding of the micro foundations of partnership management. In addition, these cases also contribute to an understanding of innovations in the services sector, particularly in banks, an area almost unexplored in the literature.

Keywords:
Inter-organizational networks - Innovation - Brazilian Financial System - alliance management instruments
Introduction

The current context is marked by an intensive R&D process, for cooperation and for increasingly faster technological change. This leads markets to be characterized by higher volatility, while product cycles are remarkably shortened. As a consequence, increased flexibility and reduced lead times become mandatory pushing companies to restructure themselves accordingly. Therefore, new ways of organizing production have come into being giving priority to a horizontal information framework, production decentralization or modularization, and new ways of organizing work, leading to greater autonomy, versatility and distribution of intelligence.

In the organizational field, this new configuration of frameworks represented a deep change in previous organizational structures, which were influenced by Fordism, specialization, division of labor and a clear separation of conception, execution and production control. Tigre (1998, p.91) states that “the need to adapt the productive process to frequent changes in product quantity, mix and design substantially reduces the advantages of hierarchical coordination. As a consequence, growing importance is given to company networks as an intermediate way to coordinate the vertical company with the atomized market.”

Undoubtedly, the number of strategic alliances, networks and other means of collaboration among organizations tend to grow. Among other factors, such movement stems from the increase in international markets, competition, uncertainty, rate and costs of technological progress, as well as from the intense application of science to the productive process of goods and services (Johnson and Lundvall, 2000).

Specialized literature (Powell, 1988; Gulati, 1999) shows that companies increasingly use cooperation strategies. There has been a growing trend to set up networks and, particularly, to set up strategic alliances. Actually, strategic alliances have become one of the most common strategies adopted by companies according to Gulati (1998). Schrifin, cited by Rond and Bouchikhi (2004), states that the number of new alliances setup each year exceeds 10,000. Hagerdoon (2002) presents empiric evidence that shows the evolution of this organizational trend for R&D collaboration in various industrial sectors between 1960 and 1998. Furthermore, this database shows that more flexible ways of cooperating, such as networks and strategic alliances, have become more predominant in comparison to more formal relations like joint ventures.
The nature of these partnerships varies from formal contractual links to informal networks of knowledge exchange, including all different forms of intermediate arrangements. These structures have been used in firms that voluntarily subordinate part of their autonomy in exchange for access to the capabilities they do not have. These companies are formally independent and their relations give rise to a specific form of coordination of their economic activities (Britto, 2002). As their structure is flexible, that type of coordination creates a mix between centralization and decentralization, with which the companies gain mobility—an indispensable characteristic in environments whose basic trait lies in their dynamism.

In general, the term network is understood as the set of interactions, knowledge and information exchange which occurs in the organizations. As knowledge is incorporated by the individuals, into the companies and other institutions, the networks can be represented by the agents and the interaction nodes existing between them (Cimoli, 2002). Therefore, networks can be viewed as the locus of formal and/or informal relations between organizations through which the interactions and exchange of knowledge and information occurs. In this context, various forms of agreement can be found. In the literature, authors like Ring and Van de Ven (1994) include agreements between companies, joint ventures, research groups, franchises, etc. in the category network. Others, like Gulati and Gargiulo (1999) believe that the alliances have been more and more inserted in this context, that is, they arise from the relations established by the companies within their networks.

Within such a context marked by the reality of networks, a collective process is implemented to deal with information and seek solutions, which leads to common interests in relation to the available information and to the expertise available within the group. Furthermore, it is possible to highlight the creation of a space where it is possible to add up collective resources specific of the network, as well as to frame socially defined practices and rules that will guide the interactions between the agents which make up the network (Britto, 1999, p. 116).

In the past few years, the literature has shown the great involvement of scholars in their quest to understand the phenomenon of cooperative strategies, since networks have become an important tool for competition. There is an extended literature on networks. A brief analysis of dedicated journals and magazines published in the past 20 years allow the reader to find uncountable papers and research reports on the theme. Research has tended to issues related to the design, regulation and performance of alliances. Nevertheless, this matter is still a challenge to researchers, as there are still many aspects which call little attention, but must be answered, such as processes, evolution and management of partnerships (Rond and Bouchikhi, 2004).

In an attempt to contribute to this debate, the current paper presents two case studies of networks set up by two brazilian banks aimed at developing banking product and
service innovation. One of them details the network model of correspondents banking of a private bank. The other analyses the alliances established between a large bank and mobile telephone companies to develop a new channel of access to banking services. These studies assess the management tools used within this network, particularly the flows of knowledge transfer, generation, information, control and coordination. It is believed that due to scarce literature about the setting up of networks in the brazilian financial system, mainly about those linked to innovation processes, this paper can contribute towards an understanding of this phenomenon.

Therefore, it is worth noting that the specialized literature has a long tradition of studies about the industrial sector but, by and large, disregards the financial services sector. Some initiatives such as the CIS (Community Innovation Survey) and the SIID project\(^1\) reflect a change of attitude towards this kind of literature. However, in Brazil, such issues are viewed as a new space for research. The limited availability of studies about the Brazilian financial sector grows more serious due to the lack of domestic research on technological innovation\(^2\) to cover the financial services sector and allow the development of isolated analyses of the activities that make up that sector, as well as comparisons with international experiences. Despite the growing importance of the services and financial sectors for the contemporary society and economy, Brazil and the world still lack comprehensive studies about international organizational networks and the generation and transfer of innovation within the financial sector.

However, differently from what is found in the literature, the country's main newspapers and magazines frequently mention that alliances are largely used by banks. Recent research developed by IBM Consulting Service (2002) about worldwide trends of the financial sector has found that leading banks will achieve better performance by being transformed into specialized companies. From this perspective, these institutions will manage internally only what is of strategic importance to their core businesses and will set up partnerships with experts in the sector for those activities that do not bring competitive advantage.

In accordance to the international trends observed in networks of the financial sector, alliances are seen as an important option for innovation within the financial sector. In fact, this is an alternative that is already being used by Brazilian banks (Milagres et alli, 2007).

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\(^1\)This project was conducted in Holland and it aimed at developing measures adequate to the innovative activities of the service sector in the country.

\(^2\)Like the Pesquisa Industrial de Inovação Tecnológica - PINTEC (Industrial Research on Technological Innovation) carried out by Instituto Brasileiro de Geografia e Estatística - IBGE (Brazilian Institute of Geography and Statistics), which is a national survey about the innovation in industrial sector.
The present paper reports the results of the research project "The Domestic Financial System: Partnerships, Alliances and Innovation" developed by Serasa Center of Services Innovation of Fundação Dom Cabral. The main goal of this research is to investigate, analyze, and report the processes of setting up and developing inter-organizational networks in the Brazilian financial system, mainly those connected to the generation and transfer of innovation.

This research was organized in two stages. The first stage, exploratory in nature, is based on data and secondary indicators survey about inter-organizational networks. And it was also based on a qualitative research carried out through in-depth interviews with representatives of the domestic financial system aimed at seeking an understanding of their main perceptions, evaluations and expectations about alliances, partnerships and innovation in their respective fields of work. The empiric research was carried out between May and July, 2006 and involved 16 (sixteen) banks. Its goal was to explore issues that deal with the processes of setting up and developing networks of companies in the domestic financial system. The banks surveyed made up a representative sample, as the qualitative research involved small, midsize and large institutions, domestic and foreign, private and state-owned.

The second stage of the research was carried out in 2007 and was aimed at thoroughly describing and analyzing processes to manage existing networks in the domestic financial system. Therefore, it uses inter-organizational network case studies carried out through document analysis and interviews with alliance managers. As previously mentioned, the research was carried out in two Brazilian banks. The study assesses the management tools set up within these alliances, particularly the flows of knowledge transfer, generation, information, control and coordination. The analysis of the management tools adopted by the alliances is based on the characterization of their organizational functions, contracts and of their control and management processes.

The two case studies allowed us to understand the dynamics and the way banks manage their cooperation agreements dedicated to innovation, identify the management tools used and map the flows of knowledge transfer, generation, information, control and coordination as established in the alliances.

From this perspective, the results achieved contributed to a deeper understanding of the micro foundations that make up partnership management. Furthermore, these cases also contributed to an understanding of organizational innovation in the banking services sector.

Besides this introduction and final comments, this paper is structured in four sections. The first section contains a review of the literature on inter-organizational networks. The second section sums up the main trends of the financial sector, noticeably the strategic option for inter-organizational networks related to innovation processes. The third section presents two cases studies of networks set up by two Brazilian banks to develop innovative banking products and services.
Inter-Organizational Networks

In recent years, the literature has been engaged in explaining the increasing importance of alliances (Keil, 2000; Grant, 1996; Powell et al., 1996). Other authors have questioned the effectiveness and the scope of the conceptual framework of the different currents and theoretical schools for the understanding of the topic. Gulati et al. (2000), for example, investigated the effectiveness of the concepts and the focus of the analysis of such theories as a resource-based view, the transaction costs and the industrial organization in their quest for answers to the partnership phenomenon. Yet others have based their studies on the above mentioned theories or in others like the games theory (Hennart, 1988; Dyer, 1997; Madhok and Tallman, 1998; Parkhe, 1993). Kogut (1998) assessed the issue in relation to joint ventures; Dyer and Singh (1998) and Bernardes (2000) dealt with networks that involve suppliers; Gulati (1995), Arino, De La Torre (1998), Barney, Hansen (1994), Dyer and Singh (1998) investigated the issue of trust within a network context; Powell (1998) and Dyer and Singh (1998) developed the subject from a relational view perspective, etc. There are also those who seek an understanding of how learning occurs within network environments (Hamel et al., 1989).

The studies are also different in relation to the level of analysis used. Some studies focus on the relations established among the institutions within the network. Among these, some are dedicated to an understanding of the elements that allow the agreement to be established. In relation to these links created between companies, we should stress the papers which investigate their relational capabilities (Dyer and Ouchi, 1993; Lorenzoni and Lipparini, 1999; Cooke and Morgan, 1998; Nohria, 1992). In their interpretation, companies are seen as agents which interact alongside their chain and which are dependent on their relationships. Consequently, they have to develop relationship skills so as to enhance their capability to coordinate the different agents which are internal and external to the organization. Aspects such as trust and reputation appear as important variables. According to Dyer and Singh (1998), this capability to relate with each other can be counted as the source of company competitive advantages. This approach has been seen as a source of criticism in the attempt to understand networks from the perspective of transaction costs, as the analysis of agreements is performed isolately and, consequently, does not deal with issues related to interaction. Here, the networks are considered as a second option vis-à-vis integration. On the whole, these studies are not very specific as to the results achieved by cooperative relationships and the way institutions are organized to reach their goals.

Concerning the levels of analysis, other studies seek an understanding of the cooperative relationships through intra-company variables. In general, these studies are based on theoretical frameworks such as the evolutionary theory, resource-based view, dynamic capabilities, competence-based view and learning organization. Along this line, these studies look at networks from a company's perspective. Research intended to understand performance and the establishment of capabilities to manage alliances are
usually based on this type of conceptual and theoretical approach. In spite of this, Doz (1996) states that there are few research projects based on evolutionary reading, mainly if we have in mind how the processes are understood.

Although many research papers investigate causes and failures, partnership management still receives little attention from researchers. The literature has increasingly pointed to the need to investigate cooperation agreement management, as it is still not clear how companies manage their networks and their cooperation agreements. Some authors state that the different capabilities to manage partnerships may turn into an important asset, which can even differentiate companies and, therefore, generate competitive advantages. These authors believe it is necessary to carry out a deeper investigation about the setting up and development of this skill, that is, network management and the consequent setting up of alliance capabilities (Heimeriks, 2004; Simonin, 1997). According to Heimeriks (2004), these capabilities can be viewed as institutional mechanisms which allow for the accumulation of knowledge and consequently facilitate the establishment of processes and instruments upon which the capacities are built. One important aspect to these capabilities is the experience accumulated by the companies involved in cooperative networks (Dyer, 1996). And experience, or the lack of it, might account for some of the reasons which lead to uncountable unwanted breakoffs, but also for the good results shown by some partnerships.

Coombs and Metcalfe (1998) state that one of the main characteristics of modern innovation processes is that they are collective. They also state that, in general, the competitive differentials of the companies are based on their capability to manage the cooperative relationships demanded by a complex process of innovation. Such a fact leads to this new reality where capabilities are exploited and created within the networks, and those arrangements properly respond to the increasing complexity of the environment. Although this consensus already exists, little is known about which instruments are used within the networks and cooperation agreements to allow certain partnerships to achieve their strategic goals, and companies to develop this kind of capability (Kale, Dyer and Singh, 2002).

Much more than viewing companies as a mechanism to process information, take decisions and solve problems, they have been analyzed from the perspective of seeking and creating knowledge. Within such a context, the capability to deal with knowledge is viewed as a function of the relationships established by the company, as they act as vehicles to disseminate, learn and create technologies and new knowledge. These links between companies can be either formal or informal and involve agreements to transfer and create new technologies. They can also use sophisticated mechanisms to support network management and involve the participation of third parties or of the partners' proprietary structures, among several others. These structures have been in use by companies that voluntarily subordinate part of their autonomy in exchange for access to capabilities they do not have (Britto, 1999).
It is within this environment that studies on networks are justifiable, particularly those studies that seek to understand the processes that transfer, create and share knowledge. As stated by Powell (1998), we know little about how such processes happen within the context of networks. Moreover we need to go deeper into finding out which management tools and mechanisms are used by companies during this process.

**General Trends in the Financial System**

Despite the dearth of studies about the services sector, it has begun to be included in quantitative research such as the CIS (Community Innovation Survey) and Pintec 2005 (Technological Innovation Research - IBGE), and sector-specific surveys such as the SIID project have also been carried out. Such initiatives reflect a change of attitude of the economic literature as until the mid-1980s it did not consider the services sector to be important from the point of view of wealth generation (productivity increase) or of innovative dynamics. Barras (1986) pioneered the change of this point of view by launching the bases to the study of service innovation although, at first, he considered the sector dependent on or dominated by the industry.

The lack of studies about the financial sector is even greater. Frame and White (2002) carried out a broad bibliographic survey of empiric studies on financial innovation and came to the conclusion that "a striking feature of this literature is the relative dearth of empirical studies that test hypotheses or otherwise provide a quantitative analysis of financial innovation" (p. 1). They also quote a bibliographic study carried out by Cohen (1995) who found 357 books and articles on the theme of innovation in general, and none of them dealt with financial services. This fact reflects how difficult it is to measure innovation in this field. According to Mulders and Hertog (2003), this situation becomes more serious because not even financial institutions themselves have a clear definition of innovation or manage to measure it internally.

Frame and White (2002, p. 11) state that there are few studies describing the effect of networks on the financial system:

"[...] neither the general innovation literature nor the financial innovation literature has satisfactorily addressed how the presence of network externality effects (Rohlf, 1974) influences the type and pace of innovation. With networks, the benefits to membership increase as more members join the network. Also, economies of scale and compatibility among members are usually important features of networks. The implications for innovation are cloudy, but potentially important. Incremental innovations within the compatibility of a network are clearly possible. But the scale-related problems of creating new networks may discourage such 'large' innovations."

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3A striking feature of this literature is the requirement for empirical studies which can test assumptions or develop quantitative analyses of financial innovation.
Innovation in the financial sector

The main goal of this section is to present some indicators of innovation in the financial sector by exploring, in particular, the results of the 3rd Community Innovation Survey (spelled CIS 3 from now on).

CIS 3³ (1998-2001) proposes measures for innovative activity in the various sectors of the economy. By analyzing financial services ("financial intermediation"), we can observe a larger number of innovative companies (58%) as compared to those in the services subgroup (40%) or to the general average (44%). Such data helps demystify the idea that services, notably those performed by the financial sector, do not innovate.

As to the sources of innovation to the financial sector specifically, besides those that are internal to the company (34%), others, like clients and consumers (24%), equipment, materials, components and software suppliers, as well as competitors (17%). In terms of cooperation, the companies of the financial sector show a strong tendency to cooperate (21%), which is an average slightly lower than that found in the services sector (22%), but higher than that found for all sectors of the economy (19%).

Summing up, the evidence organized by CIS 3 not only shows that the financial sector is dynamic in terms of creating innovation but also that it depends, to a large extent, on partnership and technological cooperation.

The IBM Consulting Service report (2005), which studies the trends in the sector for 2015, suggests that banks will increasingly focus on their competencies and will set up partnerships with companies whose expertise lies in areas where banks do not have competitive advantage.

As to cooperation, Faerman et al. (2001) present four interconnected factors that can encourage or inhibit cooperation between banks, and these are: willingness to cooperate; existing obstacles and incentives; leadership; and the number and variety of actors involved in the partnership. According to the authors, such cooperation efforts can be assisted or hindered by personal and institutional experiences. Variables such as trust and behavior are mentioned by the authors as incentives to the creation of alliances and partnerships, while the opposite can be responsible for misgivings between actors.

Important changes in the financial sector such as consolidation, regulation, market specialization, changes in the needs of the workforce and new technologies have put

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³Due to lack of empirical work in this field, this data 'is to be taken as the best material available' (Moulders and Hertog, 2003, p.28).

³CIS 3 is a survey developed within the European Union countries, besides Iceland and Norway, aimed at advancing the understanding of the innovative process and of its impact on the economy (in terms of jobs, productivity, commercial standards, growth, and others.)
pressure on operational models of retail banking and raised questions about the validity of traditional strategies to add value through growth and efficiency (IBM, 2005). To these, it can be added the existence of a client base that is increasingly well-informed and demanding, requiring greater capabilities of response from the banks. From such a perspective it becomes necessary that banks increasingly seek solutions to ease their process and satisfy their clients so that they can stay in the market.

According to IBM (2005), the creation and maintenance of advantages within a market characterized by strong competition will demand retail banks to show optimal operational efficiency and excellence. So that the leadership will fall into the hands of those institutions which are more prone to innovate their products, services and processes and consequently anticipate the needs of their clients. Therefore, innovation stands as the growth engine of banks. However, innovative activity is not carried out in isolation. The data presented in this section shows that inter-organizational networks are gradually being integrated into the strategies adopted by the banks not only for the innovation of their products, processes and organizational change but also to expand their market share.

IBM states that, if banks intend to achieve leadership, they will be restricted to their competencies and will set up strategic alliances to overcome their deficiencies. This means that "to put such (innovative) priorities into practice, banks will have to concentrate on their main strength - those activities in which they excel - and set up partnerships with the best experts in the sector for the remaining initiatives: gain more doing less." (IBM, 2005: 01)

In the competitive retail banking scenario for 2015, the advantages stemming from acquisitions, entry into new markets and offer of reworked products will not last. On the other hand, the use of partnerships and outsourcing will place efficiency as a requisite of the sectorial competitive process (IBM, 2005). Therefore, focusing on differentiated and strategic points and setting up partnerships for the remaining activities are strategic priorities for retail banks within a context of increasingly strong competition.

As for the Brazilian financial system, two sources of data were systematized by the Serasa Services Innovation Center during the first stage of the project "National Financial System: Partnerships, Alliances and Innovation". The first source was a qualitative research carried out with 22 executives from 16 banks from the Brazilian financial sector, and represented by large, mid and small-size banks. According to these executives, the inter-organizational networks that are most cited due to their importance in the domestic financial system are those set up with technology companies, other banks, companies from various sectors and correspondents banking.

Another source of data used in this work was Valor Econômico, a newspaper with a focus on economy, which was regularly read between January 03, 2005 and November 10, 2006. The newspaper recorded 92 new partnerships and 26 different types of partnerships, from which 17 were aimed at issue private label cards. Second to that, stood payroll consigned credit and banking correspondents, with 14 partnerships each.
Sales financing came next with 12 partnerships. Other types of partnership were: interconnection of ATMs and client service network; partnerships with foreign banks to service money forwarded by brazilians who live abroad; credit offers for micro and small companies; agreements to participate in biddings for road construction or equipment supply; joint development of credit cards; POS functions expansion, and payroll among others. Partners can be domestic or foreign banks, retail chains, city administrations and other associations.

In 2000, there were 13,731 correspondents banking. By 2005, the number of correspondents banking had increased by 406% and now there are 69,546 of them. During the same period, the number of bank branches increased from 16,396 to 17,515 (a 6.8% increase) and the overall number of service centers increased by 129%, from 54,075 to 123,993. The data clearly shows the importance of this strategy for the Brazilian financial sector. In 2001, there were 18,653 correspondent banking. In 2002, the Brazilian Central Bank counted 35,511 correspondent banks, which represented an increase of about 90%. Such growth can be explained by the creation of Caixa Aqui and Banco Postal. The first one stems from a partnership with Caixa Econômica Federal and the second is a partnership between Post Office Authority and Banco Bradesco.

It is important to stress that these sources point to the relevance of organizational innovation, that is, the use of networks as an option to innovation within the current business context of the sector. Added to that are bank product and services innovation based on a multiplicity of banking services channels, whether by means of mobile solutions such as mobile telephony or correspondent banking.

The data presented in this section shows the importance of alliances to bank strategy. Therefore, in view of the concerns with the intense dynamism of the economy, increasingly demanding clients and strong competition, banks must keep seeking solutions to increase their competitiveness vis-a-vis the market.

**Methodology**

The methodology adopted in this work included qualitative research applied to document analysis, interviews with network actors, analysis of the contents of the interviews, a survey of specialized bibliography and an explanatory analysis, all this supported by a case study. According to Yin (2005), this type of work is aimed at explaining and not only describing or exploring case studies. Furthermore, it was our intention to generalize the lessons learned from the case to theoretical propositions and not to populations or universes. We also wanted to seek an understanding of how these networks are coordinated. Therefore, the discussion is about the tools adopted by the companies participating in the network.

We decided to make use of a case study as an answer to the questions we had would require the observation of a contemporary phenomenon whose limits between context
and events are not clear. It should be clear, however, that this study was not intended to investigate the results obtained by the network but the tools used to manage it.

Another aspect that justifies the use of a case study through interviews is the fact that these networks are geographically disperse. Therefore, it would be impossible to carry out local observations of the interactions between the agents.

The studies were carried out in nine stages: an analysis of the partnerships in the banking sector to select the cases that would be studied; contacts with the banks; bibliographic survey; preparation of the interview framework; interviews with bank executives and other staff members; analysis of documents supplied by the banks; participation in in-house training, more specifically in the case of correspondents banking; analysis of the data and of the content of the interviews; preparation of the report.

We would like to stress that, according to Yin (2001), document analysis is an important stage in the formulation of a case study as it contributes to provide evidence stemming from other sources. In the cases studied, particular importance was given to this item, mainly in relation to in-house documents, that is, those generated during the development of the partnerships.

In 2006, while choosing the cases to be studied, we sought examples of partnerships in the banking sector characterized by knowledge exchange and joint development of products or processes. This search was carried out through newspaper news, academic bibliography and internet site dedicated to the sector. Bank A and Bank B stood out among the cases to be studied. Bank A was chosen due to its innovative format for the sector. On the other hand, Bank B proved notable for adopting mobile solutions.

The first step in the case study was to survey the bibliography on inter-organizational networks, alliance capabilities, management tools, innovation in the financial sector, correspondents in Brazil and in the world, and specialized literature to support the case involving Bank B and mobile telephone operators.

After several discussions, the interview guidelines were prepared, bank executives and other staff members interviewed. The goal was to understand the characteristics of the networks, the history of the partnerships, the roles of the actors involved in the process and the main flows established among them. Furthermore, it was our intention to identify which tools were used to manage the networks and which ones were used by the banks to manage their partnerships with the companies. The last item was intended to identify the degree of concern of the banks as to creating alliance capabilities. The interviews were based on basic questions supported by theories and previous assumptions. New questions cropped up as the interviews were made and then incorporated into the guidelines. It is, therefore, a case study based on semi-structured interviews.
Bank A interviews were carried out between July and October, 2007 with 14 bank employees, among them the general director, six superintendents and six employees linked to the network during approximately 7 hours and 45 minutes. These interviews were transcribed, codified and analyzed with the use of the NVivo software package.

Besides the interviews, we analyzed the materials made available by Bank A about its history, correspondents, products and offers, among others. Together with new employees, we took part in an in-house training program to facilitate our understanding of the routine operations of the bank; the program was conducted by Bank A managers and technical staff. The following areas were visited: administration, comptroller's (accounting); infrastructure; marketing and products; internal controls and MIS (Information System Management); treasury; commercial department and networks. The training lasted for two days (a total of 6 hours). After performing the interviews, analyzing the documents made available and the literature, and after taking part in the in-house training program, we began to develop a process to analyze the data side by side with the literature so that we could produce the final report. The goal of this stage was to understand the point of view of the bank concerning the strategic importance of setting up partnerships and the choice of tools used to manage the goals of the network. The following stage presented a study of managing networks that partner Bank A so as to gain a deeper understanding of how correspondents work.

For the second case study, the research team sought to interview the whole team involved in the development of the mobile channel (listed below) as well as five technical employees (senior aides or executive managers) from the other areas (technology; strategy, organization/alliances and partnerships; marketing and communications) who took part in this project in their areas of responsibility.

The team responsible for implementing the project had initially five member coordinated by the Retail Director: a) Project Coordinator - Retail Director; b) IT Analyst - Technology Director; c) IT Analyst - Technology Director; d) Senior Analyst - Commercial Director; e) Senior Analyst - Retail Director. As we carried out the field work we found that Bank B had already internalized the management of this new banking service channel.

Due to the specific demands of the positions of the employees interviewed, the original guidelines underwent some adaptation. We had expected to be able to exploit to the full the contribution of anyone involved in the network, and due to the complexity of the network studied, we carried out more than one interview with some of the employees.

The interviews were carried out between July and December, 2007 with 10 Bank B employees during approximately 13 hours and 30 minutes. The interviews were transcribed, codified and analyzed with the use of the NVivo software package.

As we mentioned before, besides field work at Bank B through in-depth interviews, we read and analyzed in-house bank documents (presentations, technical notes; the contract to provide services via mobile phones; product and services briefings by the Marketing and Communication Director; and annual reports).
After carrying out field research and analyzing the documents made available, as well as the literature, we analyzed the data side by side with the literature to prepare the final report. This stage was aimed at characterizing the structure of the "Bank B Mobile Banking" network and the tools used to manage it. The next stage of the research will deal with the interviews with the technicians who work for Brazilian mobile telephone operators directly involved in managing this network.

Case Studies of Networks Set up with Banking Correspondents and Mobile Telephone Operators

Two case studies aimed at seeking an understanding of how the trend towards setting up networks affects the Brazilian financial sector were carried out involving two Brazilian banks. The objective of those networks was to promote the joint development of banking products and services innovation. One of those case studies covers the bank correspondent network model for a small-sized bank. The other case study analyzes the alliances set up between a large bank and mobile telephone companies to develop a new banking services channel.

Bank correspondent networks

The first network case study deals with a domestic bank (herein known as Bank A) and the structure it uses to manage its correspondents banking. The main goal of Bank A is to reach a market niche which has not been explored by other bank products and services: the low income segments of the population not usually served by other banks. According to the material supplied by Bank A, research showed that the low income segments of the population believe that the cost-benefit relation between client and bank offers few advantages. In their perception, the services offered by banks, like credit, for example, can be replaced by offers from relatives, from the retail trade and from shylocks. They state that they feel uncomfortable with the real or symbolic "barriers" (revolving doors, elegant surroundings, security officers, etc.) and that they feel the lack of interest on the part of the banks to process payments of electricity, telephone bills and others, and dislike having a large number of people in their branches.

Correspondent banking help the expansion strategy of the banks by becoming an extension of a bank branch offering direct contact with the public while overcoming the barriers mentioned above. This business model was first implemented in the Brazilian financial system in 2000 with Caixa Aqui, a program developed by Caixa Econômica Federal which involved lottery shops. This program was aimed at meeting the needs of 40 million Brazilians (Neubuser et al. (2004) who did not have access to banks. According to a study carried out by the World Bank in 2001 (Kumar, 2002), 30% of the Brazilian municipalities did not count on the services of a bank branch.
Correspondent banking were initially installed within large stores and supermarkets, where consumers made their daily purchases but can also be found in smaller establishments seeking to increase their revenue. Good examples of comprehensive networks of correspondent banking are those established between large banks and large retail chains to offer credit, sell insurance, savings accounts and investment bonds to their clients, etc.

Correspondent banking offer an important service to Bank A. The network, formed by the bank, managing companies and service centers (shops that play the role of correspondent banks) is characterized by the subordination of those agents to the bank. In this case, Bank A coordinates the network and the companies coordinate the service centers which deal directly with the public, as shown in Figure 1 below. This hierarchy stems from the responsibility borne by Bank A to Banco Central do Brasil (Brazilian Central Bank) for all the operations carried out by their correspondent banking.

![Figure 1: Bank A network of correspondent banking](Source: Field Research)

Bank A plays the following roles: it collects from creditors (transfers the money, informs about payment of bills, etc.); supplies the equipment needed for the center to operate (loan for use) and software; signs agreements with private and state-owned utilities (making it feasible for the service center to process payments of bills); and stores information originating from service centers (bill payment, mobile phone recharge, loans, etc.).

These figures refer to the number of inhabitants of the municipalities not served by Banks.
The main function of the managing companies is to mediate the relations between Bank A and the service centers. The latter are in charge of prospect possible sites where to establish correspondent banking; carry out the process to select and validate partners; control the operations of the service centers via a system developed by the bank; install the equipment; carry out training programs about products and processes; and support and maintain the service centers. Therefore the managing companies are responsible for the relations with the service center. The responsibility of the centers is to receive the client and carry out all the necessary operations. This structure shows that the bank does not have a direct contact with the center, this being accomplished by the managing companies.

According to the interviews, the operational management falls under the responsibility of the managing companies, which transfer payments, supply materials for operations and publicity and decide on the guidelines to be followed while offering the necessary support for the operation of these service centers. On the other hand, the bank offers the support and technology demanded by the managing companies.

Managing companies undergo a detailed selection process carried out by the bank. First of all, Bank A checks the potential of the region to be run by the company for a qualified market and implementation of service centers. Afterwards the bank performs the due diligence of the company and its owners and the loan and risk department of the bank analyzes the company documents (balance sheets, income tax returns, powers of attorney, etc.). When finally approved by the bank, the managing company makes a collateral deposit and signs a commercial agreement, which is delivered to the Brazilian Central Bank informing that the chain is authorized to work as a correspondent banking of Bank A. Bank's responsibility with Brazilian Central Bank stresses the importance of hierarchy within the network.

The goals of the partnership, set and evaluated by the bank, and strictly followed by the contracted party, are however limited in compliance with the existing regulations concerning correspondent banking.

Information concerning new technologies, new products and services, marketing and advertising materials, operational equipment, adaptation of products, services or processes, tools to manage goals, demands for technical support, and new processes flows continuously between the parties through the intranet, e-mails, telephone, periodic newsletters, sporadic visits, meetings with the managing networks, agreements, help desk, and employee training to launch new products and services.

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7The Brazilian Central Bank Resolution n. 3110 (07/31/2003) states that the companies can act as correspondent banking, but their actions are subordinate to the contracting financial institutions, in this case, Bank A.
During the interviews, the flexibility of the partnership was clearly emphasized by the respondents. The experience gained from the relation with a managing network can be replicated in other networks provided that regional and cultural differences are duly observed.

Training programs are offered only when the bank is launching new products and services and there is no concern about how often they occur. No external support to the management of this partnership was identified.

The structure of Bank A was designed for partnerships, based on a different business model, which means that its functions and positions are in tune with the cooperative strategy, although not in direct contact with the managing companies. This issue goes hand in hand with the position of various authors, who defend the importance of creating specific functions and positions aimed at accumulating network management knowledge.

The analysis of these flows allows us to conclude that the service centers and managing companies proved to effectively participate and contribute to the development of products and processes despite the limitations imposed by the hierarchical structure of the network where the bank leads the process and is the institution responsible for the general management of the network before the Brazilian Central Bank.

**Networks with mobile telephone operators**

This second case study analyzes alliances set up between a large bank (Bank B) and mobile telephony operators to develop a new channel to access banking services.

The financial sector markets have recently shown a trend towards the massive use of mobile telephones as a relationship channel. The strategic option to adopt mobile solutions acknowledges the relevant role of mobile telephones worldwide, a sustainable tool for the massive dissemination of banking services (Campos, 2007). To make it feasible to develop and launch products, solutions and specialized banking services based on mobile telephony, the banks have been signing partnership agreements with mobile telephone operators.

In strategic terms, these networks add a new tool to the multiplicity of banking service channels. The so-called 3rd wave of channel evolution (also known as the 3rd wave of banking automation) was made possible by evolution in Information and Communications Technology (ICT) and by changes in regulations. Among the channels that have been developed we should mention: services via mobile telephones, banking correspondents and POS (Point of Sale equipment). To them, we can add Internet banking and ATMs, which are typical channels that belong to the 2nd and 1st waves of banking services, respectively.
From the perspective of the bank's strategies, the mobile banking and mobile payments solutions translate into the concept of "anywhere banking", that is, the possibility of accessing banking services from any location using a mobile telephone line. In general, mobility, which is the conceptual foundation of the project, translates into the concept of "anywhere banking", that is, "[...] the bank goes where clients are. If a client is inside a shop, it is for sure that inside that shop that client will be able to carry out financial transactions, in the name of the bank. No matter whether that client is using a mobile phone or is surfing the Internet." (Interviewee A) Literature on the sector stresses the convenience, benefits and practicability associated to this new banking services channel.

Bank B had to establish partnerships with 7 (seven) mobile telephone operators to make this project feasible. As a matter of fact, to attain the necessary technological integration between Bank B and the above-mentioned technology companies, different kinds of technologies had to be adapted or developed. By establishing such strategic and commercial agreements with mobile telephone operators Bank B was technologically integrated with the most important technology companies of the segment in Brazil.

Bank B is directly connected to all the technology companies of the network with which the bank creates direct flows of knowledge and coordination. In their capacity of network coordinator, Bank B is directly connected to the seven different sub-networks, which do not interact with each other, as shown in Figure 2. This is justified, from the interviewees' perception, by the fact that these mobile telephone operators are competitors in the market. Such an arrangement creates structural holes between the different sub-networks within this technology network.

Concerning technology development, mobile telephone operators eventually integrate outside companies into the network. The latter may help the former solve specific technological problems. Bank B interacts indirectly with these external companies through its contacts with the mobile telephone operators, although, occasionally, it might interact directly with them either by obtaining information about ongoing development processes or in face of some specific technology development (technological integration, application development, etc.). As Bank B has its own technology structure, it develops all the in-house technology and does not need to integrate third parties into this network.

As the core company of the network, Bank B was the main provider of knowledge. Beside this, Bank B promoted the flow of know-how, applications, operations and solutions to the partners companies. As well as Bank B transferred the successful

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8In those occasions, Bank B signs a confidentiality and technical cooperation agreement with those external companies. The interviewees pointed to the punctual character of those joint developments and the fact that the strategic agreement of the Bank is entered with the technology company and not with third parties.
strategies and business models eventually developed with a particular company. These flows of knowledge are essentially based on the absence of contractual barriers to the transfer of developments within the network. This is due to the fact that the Bank owns the technology which supports the partnership. The knowledge that flows freely is the application and further developments of this technology by the operators.

On the other hand, for the creation of this channel, there was no internal division of labor among the mobile telephone operators so that one of them would be responsible for a specific development in the network. As no exclusivity contract was signed for technological developments with mobile telephone operators, the pioneer developments carried out by some of the mobile telephone operators are related to their stage of development as well as to their technological specificities.

Figure 2: Bank B's network technology framework
Source: Field Research

The exchange of knowledge and information between Bank B and the mobile telephone operators occurs mainly through e-mails, telephone calls, periodic meetings with network managers, staff exchange, and teamwork performed by bank employees and mobile telephone operators, besides direct contact between the agents responsible for the network.

In relation to the metrics used to assess the development of the partnerships, the respondents stated that they stood more as a follow-up reference than as a control tool. This was due to the dynamics and complexity of the knowledge and technology been developed.
The bank and the operators established a confidentiality agreement to enable such development. Development was based on the work plans mentioned above, in an informal way. The formalizing of the agreement among the partners happened along the process that dealt with one of the services offered by the partnership, the sending of SMS (Short Message Service) messages. From the point of view of the bank respondents, the partnership was based less on formal tools and more on trust and common goals. Mechanisms such as training programs and outside support were not identified.

Due to the need to concentrate efforts and seek synergy among the internal areas of the bank and the various mobile telephone operators involved, it was understood that it would be necessary to set up a project team to implement this new services channel. This team initially counted 5 people: a project coordinator, two analysts from the technology area and two analysts from the commercial and retail areas. Besides this structure, the project involved various internal areas like technology, communications, marketing and the legal department (and some employees who occasionally were allocated to support the development of the new channel). According to the respondents, keeping this project in the hands of the managers responsible for the management of other banking services channels will lead to unquestionable gains in synergy with other channels, as well as to the integration of the completed project into the organizational structure as an additional channel.

Finally, the respondents considered the results achieved by the partnership successful both for its innovation capabilities and the creation of a new banking services channel.

Apparently, these experiences were concentrated in one sector of the bank which supported the partnership by carrying out market research and channel internalization, the design of the framework and the work of the project team. On the other hand, however, the respondents did not clearly perceive the role of this department as a locus to store the learning stemming from the accumulation of these experiences, that is, from alliance capabilities. The goal of this department, directly linked to the presidency, was to help align the strategies of the partnership with the global strategy of the bank.

In relation to the database, Bank B created an executive secretary where technical notes are stored. However, these notes specifically register the knowledge produced within the partnership and not the management tools.

Based on this case, we question the possibility of transferring or replicating experience in a future partnership due to the absence of a framework focusing on storing this knowledge, differently from what is proposed in the literature. The bank privileges people as tools for knowledge transfer, and not for specific functions or positions. Again, contrary to what is found in the literature, people are the elements who will reproduce knowledge.
In what concerns learning, however, a few tools commonly mentioned in the literature (Duysters and Heimeriks, 2003; Heimeriks, 2004; Heimeriks et al., 2004; Heimeriks and Duysters, 2004) were not observed: a) a specific department in charge of managing the network of partnerships; b) availability of experts within the alliances offering support to the network management; c) adoption of tools for in-house and external training of network managers; d) use of procedures like the offering of bonus and awards for the achievement of objectives by network managers; e) external support for the creation and implementation of alliance policies and best practices (consultants, mediators, lawyers and financial experts) offered to the partners network.
Final Considerations

The analysis presented contributes to a better understanding of network management processes. According to Doz (1996) and Kale et al. (2002), this is an important gap in the literature. We described the framework of the two networks surveyed which constituted the core element of their coordination. The main flows identified were those of knowledge generation, control and transfer. The tools identified showed a certain degree of similarity and consisted of meetings, specific communications channels, visits, etc. In both cases, the main characteristic was informality.

The partnership involving Bank A correspondent banking aims at establish an extension of the bank branch by promoting direct contact with the public. It involves direct relations between the bank and the managing companies, and indirect relations between the bank and its correspondent banking. The latter are made up of small-sized companies divided by region, which hinders direct competition. As to the network set up by Bank B and mobile telephone operators, its goal was to develop a new banking services channel. The partners are large competing companies. Such framework, in terms of the goals and profiles of the partners, influences the specific structure of each partnership.

In the case of Bank A, we could observe a more centralized hierarchical control structure. Bank A establishes direct flows of communication, control and transfer of tangibles and intangibles with the managing companies and, in turn, these companies carry out their main function by intermediating the relations between the Bank and the service centers. As an addition to this function, they also exert more direct control over the correspondent banking, in a clear division of roles among the three agents which make up the network, and in a well-defined hierarchical structure.

On the other hand, Bank B presents a less explicit hierarchical structure stemming from the dynamic goal of the partnership, that is, developing a new technology jointly. The structure of the network is much less formal and allows for the emergence of articulation mechanisms among its agents and managers.

As to the flows of communication, it is worth noting that within the Bank B network there is no exchange of knowledge and information between the partner companies. One of the possible explanations for that is the competition among mobile telephone operators. On the other hand, in the Bank A network, the flows are two-way: from the bank to the managing company, from the managing company to the correspondents, and vice versa. This two-way flow accounts for the hierarchical characteristics of the network: the level of knowledge flows downwards and the information flows upwards. This is due to the low degree of sophistication present in the lowest ranks of the network in terms of management.
To assess the management tools adopted by the network it was necessary to investigate the existence of the following mechanisms: metrics to assess the network flow; training programs; formal and informal agreements; external support such as consulting, law firms, among others; processes and flows. At the same time, the research sought to identify the concerns of banks - the managers of the networks surveyed - to create functions, positions and databases that would allow them to accumulate experiences and learning.

Bank A stands out for using tools which were not identified at Bank B, like training programs for the members of the partnership and formal assessment metrics. In both cases, we did not identify external support. The flows found in the cases we studied do not show relevant differences.

By analyzing the mechanisms developed by the bank to accumulate and transfer learning, we observed the level of concern Bank A had in relation to creating a specific hierarchical structure with positions, functions and databases. It is believed that such concern stems from the business model implemented by Bank A, as it is designed for partnerships.

We could not detect in Bank B concerns about the internal appropriation of the management knowledge generated within the network. According to the respondents, the bank has a broad portfolio of partnerships in its different businesses and the transfer of specific knowledge about partnership management would not be possible due to the specificity of each business and, consequently, to the goal of the networks. Therefore, contrary to what is found in the literature (Duysters and Heimeriks, 2003; Heimeriks, 2004; Heimeriks et al., 2004; Heimeriks and Duysters, 2004), Bank B is not worried about setting up a formal framework and having tools to store this knowledge. As Bank A stemmed from a business model structured into networks - a network of correspondents -, the structure of the bank was designed to guarantee that such knowledge would be stored.
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