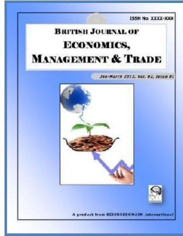

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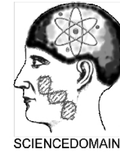

Brokers in the Credit Market: An Examination of the Vertical Scope

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Author's contribution

The only author performed the whole research work. Author AOA wrote the first draft of the paper. Author AOA read and approved the final manuscript.

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ABSTRACT

This paper analyzes the vertical disintegration of the bank loan origination value chain. The main aim is to identify the relevant drivers which cause the emergence of brokers in the credit market which lead to vertical disintegration of the credit origination value chain. Transaction cost economics is the typical perspective of analysis of the vertical scope of banking value chains. This paper argues that in order to capture the drivers underlying the dynamic evolution of the vertical scope of bank loan origination business models, the above perspectives must be combined and further integrated with a capabilities and resource based view and with a modularity perspective.

Keywords: Loan broker; loan origination; lending; value chain; vertical scope; vertical disintegration.

1. INTRODUCTION

In the past, most banks adopted an integrated value chain model, in which a single bank conducted all the phases of lending production and distribution. A single bank originated the loan, subscribed it on its own, managed and held it to maturity. The individual stages of the lending value chain were integrated into a single banking firm.

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Nowadays, business areas of financial intermediation are subject to redefinition in relation to competitive dynamics. In recent years the most notable trend is the adoption of a disintegrated value chain model. Banking firms coordinate combinations of lending activities, leading to a specialization viewpoint in the process of financial intermediation. Value chain disintegration is based on the possibility to separate lending activities in the value chain. The emergence of new markets along the banking value chain:

- fosters the breakdown of the value chain;
- induces the focalization on the strategic relevance of business activities;
- implies a distinction between core business activities and other activities;
- creates new forms of specialization and alter the role of banking firms in the financial system, and
- leads to a severe reorganization of bank lending processes.

In my paper, I shall analyze the disintegration of the lending value chain in relation to the loan origination and, in particular, credit application and processing. The central question in my paper is to identify the relevant drivers which cause the emergence of loan brokers markets which lead to vertical disintegration of the credit origination in the lending business value chain. My theoretical framework includes the following paradigms:

- *transaction cost economics*: which allows to answer the question of whether market based production should be preferred to the 'in house' production;
- *capabilities and resource based view*: to explain how knowledge and capability differences among firms are necessary conditions for the development of specialized intermediate markets;
- *modularity*: to examine the technological prerequisites of the emergence of the loan brokers market.

Combining managerial and financial perspectives, this paper offers an examination of the drivers of vertical disintegration in the lending value chain. In particular, the paper identifies the enabling drivers underlying the decision to outsource the upstream activities of the loan origination and analyzes their role and the way they are linked together. I shall discuss how the creation of a market in the stage of loan origination is an innovation of great importance that changes the vertical scope of the industry. This innovation implies that other firms outside the bank can effectively carry out loan origination activities. This process of unbundling the lending value chain changes instruments and organizational forms employed by banking firms, fostering a flow of financial, organizational, and technological innovations. Such innovations have significant managerial and financial implications at firm and industry levels and the comprehension of their underlying rational is critical in maintaining competitive business model configurations in the bank lending industry. This paper thus helps to shed light on the dynamics of the industry structure.

The paper is organized as follows. The second section analyses the role and functions of loan brokers in the bank lending business. The third section examines the drivers underlying the creation of the loan brokers markets in the loan origination value chain. The fourth section aims to clarify the theoretical and managerial implications of the vertical disintegration. The final section concludes the paper.

2. LOAN BROKERS AND LENDING VALUE CHAIN

The value chain is a way of describing the activities by which a specific output is managed and realized. In particular, the lending value chain is a sum of interactive processes that a bank performs in order to deliver loans to customers. It is a useful tool to systematically portray the different activities and processes that are closely related to the lending business [1]. Furthermore, the value chain helps to understand the critical aspects of interrelations among different activities in the loan production processes [2,3] that could have important effects on the creation and development of competitive advantages in the economics of banking firms. Through the use of the value chain it is possible to better understand the different configurations of bank business processes and their different degree of integration, interdependence, differentiation, and homogeneity [4,5,6].

Loan origination is the credit asset creation which starts with the loan application and ends with the loan approval. As shown in Fig. 1 below, the different activities in the loan origination are: application, processing, credit assessment, and approval. In the past, the value chain of bank lending was an integrated one but, nowadays, the loan origination processes are fragmented and, as a consequence, intermediate markets emerged.

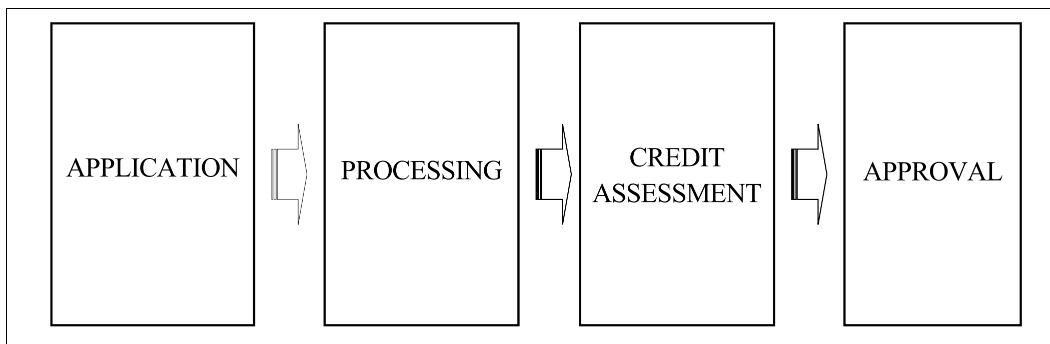

Fig. 1. Loan origination value chain: a scheme

This disintegration process means that other firms outside the boundaries of a banking firm can manage some of the loan origination activities. This discontinuity enables the development of specialized firms linked to banks through the intermediate market alongside the loan origination value chain.

The loan origination activities that were integrated in a single value chain can be split between different firms. Loan brokers are specialized firms that operate in a particular segment of the loan origination value chain. They operate at the upside of the loan origination value chain and perform the following activities:

- seek customers;
- acquire and prepare loan applications;
- provide advising services to support funding decisions;
- support borrowers preparing adequate loan documents to let banks better estimate the credit worthiness;
- provide a preliminary credit analysis;
- send loan application and loan documents to banks to let them uphold other loan origination activities.

In this way, the bank may raise loan applications and documents through loan brokers in the intermediate market. As White [7] correctly points out, loan brokers are a sort of 'financial facilitators' that facilitate the financial transactions between the primary issuers of financial liabilities and investors who purchase these instruments.

With the emergence of the loan brokers market a banking firm may outsource some activities of the loan creation process, i.e., the bank may externally originate loans. The bank can acquire loans through a wholesale function from third party brokers, and then perform the other lending functions.

As a result, two business models may emerge in the banking industry. One is vertically integrated, i.e., a banking firm may internally originate loans and manage all the activities in the loan origination value chain; the other is vertically disintegrated, i.e., a banking firm may externally originate loans through the loan brokers market.

3. WHAT DRIVES THE EMERGENCE OF THE BROKERS MARKET IN THE LOAN ORIGINATION VALUE CHAIN?

The appearance of the loan brokers market in the governance of the loan origination value chain sets the basis for its vertical disintegration. This section of the paper examines the causes underlying the decision to vertically disintegrate the loan creation value chain. My theoretical framework includes the following paradigms: transaction cost economics, capabilities and resource based view, and modularity. Each one is particularly illuminating with respect to certain aspects of the vertical disintegration of banks.

3.1 Transaction Cost Economics Perspective

According to the transaction cost economics perspective, the transaction is the unit of analysis and firms choose their vertical scope as a function of transaction costs. By posing the crucial question "What determines the boundaries of the firm?" Coase [8] argues that the decisions to *make or buy* are determined by transaction costs and that the reduction of these costs increase market transactions. Following this approach, a bank decides its degree of vertical integration in accordance to transaction costs that are necessary to originate loans.

Williamson [9,10] defines two types of costs: internal costs of coordination and external costs of transaction (e.g., costs of screening, contracting, negotiating, monitoring, and agreement implementation). Firms should rely on the market when external transaction costs are lower than costs of internal coordination. Transaction cost economics poses the problem of economic organization as a problem of contracting.

The main dimensions of the transaction costs are identified by Williamson [10]. One of these is the specificity of the transaction. Furthermore, the degree of specificity of banking loans changes with reference to transaction object, credit market segment, kind of loans, parties involved, terms of transaction, complexity of credit worthiness evaluation, and borrower-lender relationship. If the bank loan has a high degree of specificity, banks should rely on internal loan origination. In accordance to transaction cost perspective, the specificity of the loan is an obstacle to vertical disintegration of the value chain.

In addition, banking loans are affected by contractual incompleteness [11,12], bounded rationality [13], opportunistic behavior of the parties involved, and information opacity of

contractual relations. The higher uncertainty and specificity of the market transactions, frequency, risk of opportunistic behavior, the higher the transaction costs [9,10].

With the emergence of the loan brokers market it is possible to find all the dimensions of the transaction cost paradigm:

- uncertainty, in relation mainly to the difficulties to evaluate the borrower's credit worthiness;
- specificity of bank loans;
- opportunistic behavior and bounded rationality of the parties involved in the contractual relation.

In brief, the transaction cost perspective recognizes that transaction costs influence make-or-buy decisions. In the presence of high transaction costs loans should be internally originated conversely, in the absence of high transaction costs or, more precisely, when internal production costs are greater than the costs of using markets, loans should be externally originated. This difference between 'in-house' production costs and the costs of using the market crucially determine the vertical integration in the loan origination value chain.

Despite the theoretical importance of the transaction cost perspective, this does not fully explain the formation and evolution of loan brokers market in the banking industry.

Transaction cost economics, the dominant paradigm for understanding make-or-buy decisions, represents the starting point of my research in order to understand the effects of asset specificity, uncertainty, bounded rationality, and opportunistic behavior on the creation of intermediate markets in the loan origination value chain.

Although transaction cost economics constitutes an important theoretical starting point, it is not capable of identifying all the possible drivers of vertical disintegration in the economics of banking firms. In this perspective, make-or-buy decisions are influenced by the difference between costs of internal governance and costs of using the market. As Williamson [10] points out, transaction cost economics assumes the *a priori* existence of the market. It is particularly focused on individual transactions, and it is unable to evaluate the evolutionary dynamics at the industry level.

3.2 Capabilities Perspective

Following a different approach, Argyres [14] suggests that differential production costs arise from different firm-specific capabilities. Argyres has been one of the first authors to empirically analyze the role of firm capabilities as a driver of vertical integration decisions. The outsourcing of some activities in the upside loan origination value chain may be put into relation with the capabilities differences between banks and loan brokers. Vertical integration relates to capability differences. In contrast with the transaction cost perspective, in which the driver of vertical integration is *transaction-specific*, the driver of the capabilities perspective is *firm-specific*. If all firms have similar capabilities at all stages of the value chain, no form of specialization emerges. If, however, a significant difference between inter-firm capabilities emerges, even in the presence of transaction costs, intermediate markets along the value chain will appear [14,15,16,2,3,17].

Banks may have no sufficient or adequate commercial, organizational or managerial competences and capabilities in the upstream of the origination value chain or in a particular credit market segment (e.g. mortgage loans, consumer loans, student loans, loans to small-medium enterprises, corporate loans). These obstacles could be overcome by acquiring loans through the loan brokers market. The specialization of the loan brokerage business would be able to integrate the banking capabilities and competences in the different segments of the credit market. Loan brokers may possess:

- knowledge on the bank's target markets;
- commercial knowledge and competences in particular credit market segments;
- competences and knowledge of marketing;
- organizational competences and capabilities to support long-term relationships with borrowers (relationship lending);
- capabilities to seek new customers;
- capabilities to identify any financial needs of potential borrowers;
- innovation and professional capabilities.

Banks have interests in fostering loan brokers markets in order to better support their loan production capacity and make use of their competences and capabilities in the subsequent steps of the loan origination value chain (processing, credit assessment, approval, loan warehousing, credit management, etc.).

According to this perspective of analysis, banks externally originate loans when they do not have adequate 'in-house' capabilities, competences, and knowledge for the starting asset creation processes, also in the presence of transaction costs [3,18,19]. A bank's entrance into a new market or a new credit market segment requires a starting threshold of competences, capabilities, and knowledge that might not be present within banking firm boundaries. In this case, a bank will be able to acquire these intangible resources on the loan brokers market. Each step of the loan origination value chain requires skills, knowledge, and capabilities that differ from those in the other steps, and each displays distinctive economies of scale and scope.

In brief, the different distribution of productive capabilities and competences in the upstream of loan origination value chain (both retail and wholesale) is a significant driver of vertical disintegration decisions in the economics of banking firms. Vertical disintegration radically changes the nature of the banking industry and the capabilities that firms need in order to compete [20,21]. The unbundling of the loan origination value chain reduces barriers to the entry into the banking industry. New firms may enter into the lending business. These evolutionary dynamics gradually develop new banking business models for lending [3,22].

3.3 Modularity View

Focusing mainly on the computer and industrial sectors, Baldwin and Clark [23,24], Sanchez and Mahoney [25], Langlois [17], Schilling [26], Schilling and Steensma [27] offer insights to identify other significant drivers of vertical disintegration. They highlight how information technology enables a certain degree of standardization and coordination among different activities and processes in the lending value chain which reduces its vertical integration.

The modularity originates largely in the studies regarding the decomposition of systems [28]. Modularity enables the standardized connection, interaction and exchange of resources (information) between different organizations through communication interfaces. Standards

facilitate intra-firm and inter-firm transactions in the form of connection and communication interfaces [23,24].

The separability of the different steps in the loan origination value chain is a pre-condition for the emergence of intermediate markets. The different types of interdependences among steps in the loan creation value chain determine the degree of value chain partitioning. Intermediate markets may be created when a range of basic conditions are satisfied [24,2]:

- simplification of coordination among different activities that support loan origination;
- standardization of information that is produced, acquired, and used in the loan origination;
- standardization of the basic characteristics of loans;
- standardization of loan documentation, agreements, definitions, and terminology;
- standardization of corporate structures and processes involved in loan origination activities through the definition of rules and procedures that reduce the variability of behaviors.

The increasing modularization of loan contracts, loan origination activities and practices, and the increasing standardization of information, enables the unbundling and market-creating process in the upstream of the loan origination value chain. The unbundling of the loan origination value chain leads to the creation of specialized financial firms (loan brokers) that are interconnected with the bank (the lender) through the market. The creation of an intermediate market implies that interdependences between different steps of the lending value chain can be reduced [29]. The definition of the transaction content, documents, level of quality, technical aspects, makes possible the development of shared conventions that facilitate communication between various entities involved in the transactions. For example, the spreading of credit scoring techniques and credit underwriting standards in the credit market has widened the possibilities to originate loans through the loan brokers market. Loan brokers markets have mainly grown in US mortgage business, where government agencies such as Freddie Mac and Fannie Mae, or associations such as National Association of Mortgage Brokers (NAMB), American Association of Residential Mortgage Regulators (AARMR), and Mortgage Industry Standards Maintenance Organization (MISMO), have contributed in increasing the level of standardization in the origination of mortgage loans.

As Sturgeon [30] points out, the standardization creates a sort of ‘shared language’ and a process of ‘knowledge codification’. The creation of intermediate markets is caused by a process of information standardization, standardization of communication patterns and coordination simplification. Information and telecommunication technologies enable this knowledge codification through the standardization of data and information. The sharing of standards significantly reduces not only asset specificity of transactions but also the incentives to integrate activities within firms. Information technology enables better information handling capabilities across firm boundaries.

Information and telecommunication technologies increase the role of modularity at product and organization level in the banking industry. It enables the deconstruction and fragmentation of integrated banking business models and the increase of vertical disintegration in the loan origination value chain. Modularity and standardization have contributed to separate the activities of seeking customers and loan application from the activities of loan processing, credit evaluation, and loan approval. Modularity provides the breakdown of traditional business processes in distinct phases. The standardization of

communication interfaces is necessary to develop a valuable inter-firm coordination and to enable the loan value chain marketization.

The problem of coordination of interdependent activities [29] is a crucial factor for the configuration of structures and processes that enable the production and the distribution of banking products/services. The higher the interdependence among activities in the loan origination value chain, the lower the level of separability and unbundling of the loan origination value chain.

According to the modularity view, the degree of interdependence and coordination among different processes and activities of loan origination, and the information standardization, are significant drivers of the creation and development of intermediate markets in the lending value chain. New information technologies are questioning the basic assumptions of the integrated banking model in the loan origination business. The lending value chain becomes more disintegrated and intermediate markets appear. The modularity theory identifies important conditions for the development of the loan brokers markets and the comprehension of lending value chains dynamics.

4. THEORETICAL AND MANAGERIAL IMPLICATIONS OF LOAN ORIGINATION VALUE CHAIN DISINTEGRATION

The considerations developed in the above sections have paved the way for the theoretical and managerial implications of the loan origination value chain disintegration at firm and industry level. The value chain disintegration is very controversial and its extent in the economics of banking firm is subject of debate. After having identified underlying causes of bank vertical disintegration, this section of the paper examines how they interact and how this interaction affects policy implications.

The vertical disintegration of the loan origination value chain is reshaping the boundaries of banking firms and the emergence of a new market divides the previously integrated loan production processes. Taking decisions on the degree of bank vertical integration has a corporate level impact. Banking loans have a high variety of characteristics and contractual schemes, different degrees of standardization, complexity, and information asymmetry, different credit risks drivers, and different levels of interdependencies between loan production and loan distribution processes. In addition, credit market segments require different capabilities, competences, knowledge, and different interrelations between lender and borrower. Consequently, different options may coexist in the economics of banking firms.

Integrated value chains in some credit market segments may operate close to disintegrated ones in other credit market segments, in which some activities of the loan origination are outsourced to brokers outside the banking boundaries. Banking firms choose their degree of vertical integration taking into account the above considerations, knowing that the level of vertical integration in the lending business affects the development of capabilities and the process of knowledge accumulation [14,20,3].

The analysis of the drivers of loan origination value chain disintegration helps understand not only the genesis and development of intermediate markets, but also the decisions to re-integrate lending value chains. Processes of value chain disintegration are not irreversible; therefore, integrated value chains may disintegrate over time, and vice versa. Decisions to re-integrate lending value chains may be caused by:

- financial innovation of product and process;
- financial regulation;
- an increase of the problems and complexity of coordination and interrelation among different steps of the value chain;
- a shift toward a wider adoption of a relationship-based lending;
- the elimination of risks associated to the outsourcing of core competences and capabilities that are closely related to loan origination, which could have a huge negative impact on bank competitive advantages.

The decisions to increase the level of vertical integration in lending imply the development of integrated capabilities and governance capabilities that should strengthen the bank capacity to vertically manage loan origination processes [3]. Furthermore, integration and disintegration choices may coexist in the same industry. Multiple vertical structures coexist and can therefore form different ecosystems [31].

Nevertheless, decisions to disintegrate the loan origination value chain are not immune to criticism. First of all, the disintegration of the loan origination value chain could attenuate the relevance of the *relationship & experience-based* banking, mainly in the wholesale corporate segment, medium/long-term loans segment, and high net worth clients segment. The relationship lending is based on a sequence over time of lending transactions, and a better exchange of information. It is affected by the trust of the parties involved (lender and borrower). Mayer [32] expressively underlines how in the presence of information asymmetry and incompleteness of credit contracts, lenders and borrowers may prefer to establish long-term credit relations instead of short-term ones. The presence of a long-term relationship increases the value of information production about the borrower. In addition, the disintegration of the loan origination value chain largely overlooks the impacts on cross-selling opportunities in the economics of banking. The reduction of the proximity between the bank and the borrower may attenuate the sources of the benefits of relationship banking: proprietary information about borrowers, reusability of customer-specific information over time and across banking products or services, flexibility in bank loan contracts, and multiple interactions with the same customer (to provide additional banking products and services to existing customers).

The credit function of banks requires a relationship based on trust. The uniqueness of banking loans is put in relation with the private and confidential nature of information [33,34,35]. In the lending business, banks have private information on the creditworthiness of customers. According to Gorton and Pennacchi [36], banks provide borrowers with unique services in the form of (publicly unobserved) credit evaluation and monitoring activities. In order to have the incentive to provide an efficient level of these services, it is necessary that banks hold (or retain the risk of) the loans they create.

These particular aspects of the bank credit function may be significantly altered by the unbundling of the loan origination value chain. In short, a bank qualifies as an information producer [37] to overcome or at least reduce the problems caused by the presence of asymmetric information in the credit market.

Secondly, the increasing standardization and modularization at product, firm, and industry level points out the fact that banking loans have a ‘product’ dimension instead of a ‘service’ one. It is not a question of terminology – it has profound epistemological, managerial, and financial implications: it affects bank strategies, the bank organization in the production and distribution of loans, the meaning of the financial intermediation function performed by

banks, and the adoption of transaction-based business models in lending instead of relationship-based ones.

Thirdly, the rejection of a *relationship-based* lending model and the adoption of *transaction-based* one have other subtle consequences. Banks might lose informational advantages in respect to other potential lenders. The development of long-lasting lending relations allows banks to produce private and confidential information that mitigate information asymmetry and contract incompleteness [38]. In this perspective, banks can acquire and process not only hard information but also *soft information* [39,40]. These informational advantages have a huge positive impact on the bank functions of selection, screening, and monitoring [41,42,43], and on the following steps of the lending value chain (loan holding, loan transferring, loan funding). The use of soft information might put banks in a better position to select and correctly evaluate borrowers, and to reinforce the uniqueness of banking loans. Soft information is accumulated over time by the bank loan officers. It is difficult to codify and transfer soft information through standardized communication channels as soft information is deeply rooted in the relationship lending approach and personal interactions with borrowers as opposed to completely automated and standardized lending practices that have a depersonalizing effect.

Fourthly, the presence of loan brokers in the loan origination value chain may amplify the problems of information asymmetry, moral hazard, and adverse selection in the lending business. Credit market is not an ideal market without frictions. There are, however, important frictions and market failures we cannot ignore [44,45,46,47,48]. Loan brokers may take advantage of private and confidential information on borrower's creditworthiness adopting opportunistic behaviors and, for example, offer the bank a description and an analysis which is not completely true of the borrower's creditworthiness, thus providing a misrepresentation of data on loan applications, selling inappropriate loans to borrowers, attracting customers with predatory lending practices, or taking advantage of the borrower's ignorance. Unless properly monitored, loan brokers can easily appropriate disproportionate information and a competitive advantage and may spend efforts to deceive customers, which undermines support for loan origination outsourcing. In addition, these opportunistic behaviors and malfeasances may be fostered by incorrectly aligned economic incentives (fee schemes) that encourage the maximization of loan amounts being placed into the credit market instead of the quality and appropriateness of loans to borrowers' financial needs. Loan brokers have strong incentives to boost demand for banking loans.

Lastly, loan brokers might encourage opportunistic behaviors through banks in the credit market, particularly when a bank decides to transform its credit portfolio into securities (*credit securitization*) or sale loans in the secondary capital market (*loan sales*). Loan brokers might add bad incentives in the lending value chain, particularly when banks create loans and package them as products for further sale (this model is called 'originate-to-distribute' in comparison to the previous one – 'originate-to-hold' – where banks retain loans they approved). The higher the recourse to credit securitization and loan sales, the more effective this distortion on the bank credit policy. The credit securitization process and the loans sale in the downstream of the lending value chain boost incentives for banks to borrow money and pursue risky behaviors [49,50,51,52]. The credit transferring innovations produce adverse incentive effects along the financial intermediation chain. The demand for loans in the primary market is also fuelled by securitization and loan sales. With the adoption of 'originate-to-distribute' business models, banks believe they have little exposure to credit risks. These misaligned incentives induce banks to enlarge the loan offer, loose lending standards, foster loan brokers to place more loans in the credit market, provide loans to poor

people, take advantage of the poor and uninformed, engage in fraudulent behavior, and deteriorate the quality of loan portfolios, especially in the mortgage and consumer loan markets [53,54]. In brief, the presence of loan brokers at the upstream of the loan origination value chain might influence and distort bank lending in many subtle ways.

Furthermore, if we take into account the segmentation of credit market and the bank organization for lines of business (retail, corporate, private, and institutional), a different degree of vertical integration might emerge. A higher degree of vertical disintegration is expected in retail segments in which a model of *transaction-based banking* based on the following features prevails:

- high standardization of lending products and services;
- high standardization of bank lending processes and practices;
- no tailor-made business practices with customers;
- automation and development of remote communication instruments between customers and banks;
- no complex problems with interdependence coordination;
- business practices are focused not on customer relationships but on increasing the level of efficiency in products and services transactions;
- development of cross-selling practices for financial and banking products and services;
- adoption of a ‘product’ perspective of the loan in the lending business;
- direction of bank strategy toward maximization of return on the sale of a single product/service, reduction of operating costs, and adoption of mass-produced products/services techniques.

On the contrary, in the private, corporate and institutional segments of the credit market, a lower degree of modularization is expected. These market segments are usually marked out by the following features:

- adoption of a *relationship-based* business models;
- problems with interdependence coordination;
- low standardization of lending products and services;
- low standardization of bank lending processes;
- tailor-made business practices with customers;
- high variety of banking products/services offered to customers;
- organizational complexity for the management of customer relations;
- ability to bring out soft information in the lending relationship;
- high interaction with customers in the lending relationship;
- long-term customer relationship;
- adoption of a ‘service’ perspective of the loan in the lending business;
- direction of bank strategy toward maximization of economic returns on long-term lending relationship, financial assistance for customers’ needs, and adoption of systemic approaches in management of credit relations.

A bank may prefer a vertical integration in the loan origination value chain when a direction toward the adoption of relationship-based business models, a long-term lending relationship, and a ‘service’ perspective in the lending business prevails. Otherwise, a bank may prefer to adopt a vertically disintegrated value chain in the loan origination business.

The different segments of credit markets may coexist in the economics of banking firms in relation to the diversification policies and strategies adopted by banks [4,5,55,22]. These market segments imply the adoption of strategic and operative processes with a different degree of correlation and interdependence: low interdependence and correlation in the retail line of business; high interdependence and correlation in private, corporate, and institutional lines of business.

The idea of the value chain is a useful methodological tool to understand dynamic trajectories in the lending business models. It has brought tremendous insights in management and banking studies. But it must be placed in the right context. It does not mean that decisions to disintegrate the loan origination value chain are always desirable. These decisions carry with them many critic aspects, therefore, an important question is whether the disintegrated value chain is financially, economically, and organizationally sustainable not only in the economics of banking firm (firm level) but also in the banking industry (industry level).

Seeking borrowers and loan application activities are crucial stages in the loan origination value chain. They represent core activities and competences [21] for the selection and screening functions of banks. The decision to outsource the entire activities in the upstream of the lending value chain implies transferring a basic function of the bank to other firms. Consequently, it might drastically change the economics and nature of the bank. The advent of a loan broker market has profoundly altered the role of banking firms in the loan origination business. Decisions on the degree of vertical integration of loan origination value chain must profoundly consider the role that activities, or processes being outsourced, have on the generation of competitive advantages.

It might be tempting to conclude that there is an optimal degree of vertical integration of the loan origination value chain. Unfortunately, as argued above, there is not such an optimal business model. It is difficult to identify *a prior* degree of vertical integration as to which is more likely. To vertically integrate or disintegrate the lending value chain is a complex decision that involves multiple factors in the economics of banking firms and industry and raises many concerns at management and research level.

5. CONCLUSION

In the past, most banks adopted an integrated loan origination value chain. Nowadays, financial innovation and new technologies are increasingly putting the basic assumptions of integrated banking business models under pressure.

Although there is an existence of substantial research on vertical integration in the literature, none has directly focused on the loan origination value chain and the emergence of a loan brokers market. It leaves a gap that this paper aims to overcome.

I propose a theoretical framework for the analysis of the adoption of vertically disintegrated value chains in bank loan origination business. I argue that transaction costs, capabilities and competences differences along the loan origination value chain and modularity are the conditions under which loan brokers markets are emerging and that are forcing banking firms to abandon vertically integrated business models in lending.

The theoretical framework of the value chain is instrumental to represent the evolutionary dynamics of banking and, in particular, to seize the strategic and organizational capabilities

that these dynamics employ at the industry and firm level. Vertical integration is the product of multiple factors.

Transaction cost economics, the dominant paradigm for understanding make-or-buy decisions, represents the starting point of my research. A dynamic perspective of analysis points out the role of capabilities, competences, and resources differences between firms in shaping the vertical integration of the lending value chain. It means that it is necessary to overcome the static analysis of the transaction cost economics and to adopt a dynamic perspective of analysis that examines the evolutionary dynamics of the industry in order to discover the drivers of the lending value chain vertical disintegration. In this perspective, vertical disintegration could be a valuable competitive business model when banks have no sufficient loan origination capabilities to directly participate in loans in the primary credit market or do not have adequate knowledge and competences to penetrate new credit markets.

In addition, I argue that the emergence of a loan broker market, as an intermediate market in the loan origination value chain, is also determined by the increasing standardization of information, knowledge codification, and modularization.

I further underline that the above drivers are commingled. This leads to the design of different business models in bank lending and, in particular, a different degree of vertical integration in the loan origination value chain. The dynamic perspective of analysis enlarges traditional views on the drivers of value chain integration. The paper offers new insights and directions for further research. From the examination of the underlying reasons of the value chain disintegration in banking further studies and research can be undertaken.

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Author has declared that no competing interests exist.

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