The Competitive Challenge in Banking

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Abstract

The increasingly competitive environment poses challenges to bankers. This paper emphasizes relationship banking as a prime source of the banks' comparative advantage. The proliferation of transaction-oriented banking (trading and financial market activities) does however seriously challenge relationship banking. Competition from financial markets may well destabilize (traditional) durable relationships. However, we argue that, contrary to what many believe, banks may optimally respond by increasing relationship-specific investments. These observations echo the insights generated by fundamental research in the area of financial intermediation, and seem consistent with banks' recent strategic choices. We subsequently analyze the implications for the competitive positioning of banks. To this end, we discuss the rationales and empirical evidence regarding the recent consolidation and conglomeration trend in the financial sector, and the implications for both the industrial structure and the optimal internal organization of banks. We also discuss the potential disaggregation of the value chain via joint ventures or outsourcing.

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1 Introduction

Over the last few decades, the liberalization and deregulation of the financial sector have dramatically changed the financial landscape. Interbank competition has heated up and banks face increasing competition from non-banking financial institutions and the financial markets. Mutual funds, like Fidelity and Merrill Lynch, compete fiercefully for the banks' core deposit base. Commercial paper, medium term notes and other financial market innovations challenge the banks' traditional lending products. The last 25 years have shown a spectacular proliferation of new financial instruments. Examples of such financial innovations are plentiful: zero-coupon bonds, Collateralized Mortgage Obligations, Eurodollars, warrants, callable bonds, and all kinds of derivatives (from plain-vanilla interest-rate swaps to collars and caps). Many of these product innovations may have been infeasible were it not for contemporaneous advances in financial market microstructure and trading practices. The ongoing revolution in information technology has improved information dissemination and enhanced overall market liquidity. Consequently, the business of banking is changing rapidly. "Traditional" relationship banking is under siege. The proliferation of financial innovations, advances in securitization and underwriting push funding to the financial markets. Does this tilt the comparative competitive advantage to the transaction-oriented financial markets?

The challenge for bankers is to draw the right conclusions. Fads need to be distinguished from long term trends. While banks – on average – have been quite profitable in the last few years, their real competitive strength has been questioned. In particular, many suggest that the banks' traditional comparative advantage in relationship banking has been diluted by transaction-oriented finance available in the financial markets. This begs the question: what is the future of relationship-based bank lending? And, more generally, what should be the competitive positioning of banks? Our core message is that the

fundamentals of banking have *not* changed. For many of the modern "funding vehicles" bankers' traditional skills are indispensable. In many other cases, bank loans may continue to be the optimal instruments. The threat to banks may therefore come from bankers themselves. They may falsely interpret modern banking (and their own future) as transaction- rather than relationship-oriented. As *The Economist* put it over ten years ago in the context of the experience of securities firms:

> "Perhaps the worst feature of the 1980s – which has subsequently returned to haunt the securities firms – was the abandonment by most of them of the old relationships with their customers. [...] "The aim was to do a deal, any deal", remembers one manager who prefers not to be named" (*The Economist*, April 15 1995, Special Section: A Survey of Wall Street, p. 13).

Indeed, as we will argue, banks' strategic choices may have undermined rather than strengthened their competitiveness. In particular, banks may have neglected relationship finance and relationship-oriented activities in general. Consequently, relationship banking may have suffered as a selffulfilling prophecy. Not surprisingly (with hindsight), Citigroup's retail banking head Steven S. Freiberg seeks to reinvigorate Citigroup's banking retail operations by emphasizing Citi to think "locally".[1]

Our evaluation however would be incomplete without considering the positioning of banks in a broader context. Important questions here are: How will banks evolve? What is the optimal size of banks (scale)? And which activities are optimally combined (scope)? A related question is about the role of alliances and joint ventures, and the value of outsourcing or, more generally, specialization *within* the value chain. This relates to the potential optimality of the disaggregation of the value chain. These questions have no easy answers. The financial services industry is going through a major transition, and only at the end of the process, we may have some hope of finding somewhat more definitive answers.

One source of (potential) tentative answers is the evidence on mergers and acquisitions in banking. The motivations for mergers seem obvious to many bank executives, and many consultants. The popular press points to the increasingly competitive environment of banking as the trigger for the observed

[1] See "Thinking Locally at Citigroup", *Business Week*, October 24, 2005, p. 50-51.

developments. With competition in commercial banking heating up, banks feel forced to quickly and significantly increase efficiency. A short-cut to achieving efficiency gains could be a cost-saving motivated merger with another bank. A horizontal merger may allow to exploit efficiencies of scale through elimination of redundant branches and back-office consolidation. Moreover, increased competitive pressure and diminishing margins in commercial banking could invite banks to look outside their traditional domain. Some non-banking activities may offer higher margins, so expanding scope may become attractive.

However, these popular explanations have their limitations. The empirical evidence on scale and scope economies in banking is far from conclusive. It is questionable whether these economies are large enough to justify consolidation and scope expansion on the scale that we have observed. Moreover, ample research in corporate finance points at the existence of a "diversification discount". On average, diversification seems to destroy value. There is substantial empirical evidence that improvements in operating performance and stock returns have been experienced by firms that have refocused.

We will examine the existing empirical evidence on scale and scope economies in banking. One conclusion that we will draw is that this evidence is of little help for assessing the optimal positioning of banks, and their configuration of activities. An issue in this context is that the literature needs to differentiate more between the various activities (services and products) of financial intermediaries. Scale and scope economies have been looked at too generically. From a deeper level of understanding, we can then move on to discussing the (potential) optimality of the disaggregation of the value chain, and the desirability of alliances and outsourcing in particular.

The organization of the paper is as follows. In Section 2 we analyze the economics of banking, and seek to identify the comparative economic advantages of banks, particularly in the context of funding corporations. Our analysis identifies relationship-oriented banking as the key characteristic of value-enhancing financial intermediation. Section 3 discusses the future of relationship banking and particularly the desired responses of banks to increased competition. In Section 4 we discuss scale and scope

economies in banking, and also include a brief summary of the extant empirical evidence. Section 5 addresses the potential disaggregation of the value chain, including the role of alliances, joint ventures and outsourcing. Section 6 concludes.

2 The Economics of Banking[2]

2.1 Traditional versus Modern Banking

Traditional commercial banks hold nonmarketable or illiquid assets that are funded largely with deposits. There is typically little uncertainty about the value of these deposits which are often withdrawable on demand. The liquidity of bank liabilities stands in sharp contrast to that of their assets, reflecting the banks' *raison d'être*. By liquifying claims, banks facilitate the funding of projects that might otherwise be infeasible.

The banks' assets are illiquid largely because of their information sensitivity. In originating and pricing loans, banks develop proprietary information. Subsequent monitoring of borrowers yields additional private information. The proprietary information inhibits the marketability of these loans. The access to information is the key to understanding the comparative advantage of banks. In many of their activities banks exploit their information and the related network of contacts. This relationship-oriented banking is a characteristic of value-enhancing financial intermediation. The relationship and network orientation does not only apply to traditional commercial lending but also to many areas of "modern banking".

One might be tempted to interpret modern banking as transaction-oriented. So does an investment bank – generally considered a prime example of modern banking – facilitate a firm's access to public capital markets. The investment bank's role could be interpreted as that of a broker; *i.e.*, matching buyers and sellers for the firms' securities. In this interpretation investment banks just facilitate transactions, which would confirm the transaction orientation of modern banking. The investment banks' added value would then be confined to their networks, *i.e.*, their ability to economize on search or matching costs. As a

[2] The analysis in this section follows Boot (2003).

characterization of modern banking however, this would describe their economic role too narrowly. Investment banks do more. They – almost without exception – *underwrite* those public issues, *i.e.*, absorb credit and/or placement risk. This brings an investment bank's role much closer to that of a commercial bank engaged in lending; the processing and absorption of risk is a typical intermediation function similar to that encountered in traditional bank lending.[3]

In lending, a bank manages and absorbs risk (e.g., credit and liquidity risks) by issuing claims on its total assets with different characteristics from those encountered in its loan portfolio. In financial intermediation theory this is referred to as *qualitative asset transformation*.[4] Underwriting by an investment bank can be interpreted analogously; risk is (temporarily) absorbed and is channeled through to the claim holders of the investment bank. The role of investment banks is therefore more than purely brokerage. Underwriting requires information acquisition about the borrower which is supported by a relationship orientation. A relationship orientation will therefore still be present in investment banking, both in the direction of investors ("placement capacity") and towards borrowing firms.

What will also be true, however, is that in investment banking relationships depend much less on local presence. Nevertheless, public debt issues are *relatively* hands off with few interactions between financiers and borrowers over time (Berlin and Mester, 1992, Rajan and Winton, 1995). The full menu of financing options for borrowers includes many other products with varying degrees of relationships. In the continuum between bank loans and public debt issues, we can find, for example, syndicated loans. These are offered by investment banks and commercial banks alike and involve several financiers per loan. Generally, only the lead banks have a relationship with the borrower, and the relationship-intensity is somewhere in-between a bank loan and a public debt issue (see Dennis and Mullineaux, 2000, and Sufi,

[3] From this perspective, it is not surprising that several European banks are currently integrating their debt capital market activities with their corporate lending operations. Previously, the debt capital market activities were typically linked to equity capital market operations (within their investment banking divisions). The commitment to equity-linked investment banking activities is being reduced or even dismantled by many players in the industry.

[4] In this paper, we do not focus on the costs and benefits of the mismatch on the banks' balance sheets. See Calomiris and Kahn (1991) and Diamond and Rajan (2001) for theories that rationalize the asset and liability structure of banks.

2005).

It is important to note that the relationship aspect does not only involve funding, but also includes various other financial services, e.g., letters of credit, deposits, check clearing and cash management services. We will not focus on these services per se, but one should keep in mind that these services can expand the information available to the intermediary. As some have argued, the information that banks obtain by offering multiple services to the *same* borrower may be valuable in lending (Degryse and Van Cayseele, 2000). For example, the use of checking and deposit accounts may help the bank in assessing the firm's loan repayment capability. Thus, the scope of the relationship may affect a bank's comparative advantage.

2.2 Are Bank Loans Special?

Some see public capital market financing as a superior substitute for bank lending. This, however, stated as such, is unwarranted. Bank lending has distinctive comparative advantages. In particular, it may support enduring close relationships between debtor and financier that may mitigate information asymmetries. This has several components. A borrower might be prepared to reveal proprietary information to its bank, while it would have never disseminated this information to the financial markets (Bhattacharya and Chiesa, 1995). A bank might also be more receptive to information because of its role as enduring and dominant lender. This amounts to observing that a bank might have better incentives to invest in information acquisition. While costly, the substantial stake that it has in the funding of the borrower, and its, hopefully, enduring relationship – with the possibility of information reusability over time – increase the value of information.[5]

Another feature is that relationship banking could accommodate an intertemporal smoothing of

[5] Diamond (1984) introduces intermediaries as delegated monitors. See Chan, Greenbaum and Thakor (1986) for a discussion on information reusability, and James (1987), Lummer and McConnell (1989) and Gande and Saunders (2005) for empirical evidence on the informational value of bank financing. See also the recent "stories" provided by Berlin (1996) supporting the special role of banks.

contract terms (see Allen and Gale, 1997), including accepting losses for the bank in the short term that are recouped later in the relationship. Petersen and Rajan (1995) show that credit subsidies to young or *de novo* companies may reduce the moral hazard problem and informational frictions that banks face in lending to such borrowers. However, subsidies impose losses on the bank. Banks may nevertheless provide funding if they can expect to offset these losses through the long-term rents generated by these borrowers. The point is that without access to subsidized credit early in their lives, *de novo* borrowers would pose such serious adverse selection and moral hazard problems that *no* bank would lend to them. Relationship lending could make such subsidies and accompanying loans feasible because the proprietary information generated during the relationship produces rents for the bank later in the relationship and permits the early losses to be offset. The importance of intertemporal transfers in loan pricing is also present in Berlin and Mester (1999). They show that rate-insensitive core deposits allow for intertemporal smoothing in lending rates. This suggests a complementarity between deposit taking and lending. Moreover, the loan commitment literature has emphasized the importance of intertemporal tax-subsidy schemes in pricing to resolve moral hazard. (Boot, Thakor and Udell, 1991) and also the complementarity between deposit taking and *commitment* lending (see Kashyap, Rajan and Stein, 1999).

The bank-borrower relationship is also less rigid than those normally encountered in the financial market. The general observation is that a better information flow facilitates more informative decisions. In particular, relationship finance could allow for more flexibility and possibly value-enhancing discretion. This is in line with the important ongoing discussion in economic theory on rules versus discretion, where discretion allows for decision making based on more subtle – potentially non-contractible – information.[6] Two dimensions can be identified. One dimension is related to the nature of the bank-borrower relationship. In many ways, it is a mutual commitment based on trust and respect. This allows for *implicit* – nonenforceable – long-term contracting. An optimal information flow is crucial for sustaining these "contracts". Information asymmetries in the financial market, and the non-contractibility of various pieces

[6] See e.g. Simon (1936) and Boot, Greenbaum and Thakor (1993).

of information would rule out long-term alternative capital market funding sources as well as *explicit* long-term commitments by banks. Therefore, both bank and borrower may realize the added value of their relationship, and have an incentive to foster the relationship.[7]

The other dimension is related to the structure of the explicit contracts that banks can write. Bank loans are generally easier to renegotiate than bond issues or other public capital market funding vehicles. The renegotiation allows for a qualitative use of flexibility. Sometimes this is a mixed blessing because banks may suffer from a soft-budget constraint: borrowers may realize that they can renegotiate ex post, which could give them perverse ex ante incentives. In reality, bank loans often have priority to resolve this problem. With priority, a bank may strengthen its bargaining position and thus become tougher.[8] The bank could then credibly intervene in the decision process of the borrower when it believes that its long-term interests are in danger. For example, the bank might believe that the firm's strategy is flawed, or a restructuring is long overdue. Could the bank push for the restructuring? If the bank has no priority, the borrower may choose to ignore the bank's wishes. The bank could threaten to call the loan, but the borrower – anticipating the adverse consequences not only for himself but also for the bank – realizes that the bank would never carry out such a threat. When the bank has priority, the prioritized claim may insulate the bank from these adverse consequences. It could now *credibly* threaten to call the loan, and enforce its wishes upon the borrower. This identifies an important advantage of bank financing: *timely intervention*.[9]

These observations highlight the complementarity of bank lending and capital market funding.

[7] Mayer (1988) and Hellwig (1991) discuss the commitment nature of bank funding. Boot, Thakor and Udell (1991) address the *credibility* of commitments. Schmeits (2005) formally considers the impact of discretion (flexibility) in bank loan contracts on investment efficiency.

[8] See Dewatripont and Maskin (1995) on the issue of soft-budget constraints. Diamond (1993), Berglöf and Von Thadden (1993) and Gorton and Kahn (1993) address the priority structure. Boot (2000) provides a survey of relationship banking.

[9] One could ask whether bond holders could be given priority and allocated the task of timely intervention. Note that bond holders are subject to more severe information asymmetries and are generally more dispersed (*i.e.*, have smaller stakes). Both characteristics make them ill-suited for an "early intervention task".

Prioritized bank debt facilitates timely intervention. This feature of bank lending is valuable to the firm's bondholders as well. They might find it optimal to grant bank debt priority over their own claims, and in doing so delegate the timely intervention activity to the bank.[10] Consequently, the borrower may reduce its total funding cost by accessing both the bank-credit market and the financial market.

Diamond (1991) and Hoshi, Kashyap and Scharfstein (1993) further develop arguments highlighting the complementarity of bank lending and capital market funding. Hoshi, Kashyap and Scharfstein (1993) show that bank lending exposes borrowers to monitoring, which may serve as a certification device that facilitates simultaneous capital market funding.[11] Diamond (1991) shows that borrower may want to borrow first from banks in order to establish sufficient credibility *before* accessing the capital markets. Again, banks provide certification and monitoring. Once the borrower is "established", it switches to capital market funding. In this explanation, there is a *sequential* complementarity between bank and capital market funding. In related theoretical work, Chemmanur and Fulghieri (1994) show that the quality of the bank is of critical importance for its certification role. This suggests a positive correlation between the value of relationship banking and the quality of the lender.

The overall conclusion is that bank lending potentially facilitates more informative decisions based on a better exchange of information. While not universally valuable, this suggests a benefit of relationship-oriented banking.[12]

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[10] The bondholders will obviously ask to be compensated for their subordinated status. This – ignoring the timely intervention effect – is a "wash". In other words, the priority (seniority) and subordination features can be priced. That is, as much as senior debt may *appear* to be "cheaper" (it is less risky), junior or subordinated debt will appear to be more expensive.

[11] Empirical evidence provided by James (1987) and Slovin, Sushka and Hudson (1988) supports the certification role of banks. Other evidence can be found in Houston and James (1995).

[12] See Petersen and Rajan (1994) and Houston and James (1995) for empirical evidence.The relationship feature also has drawbacks. There are two primary costs to relationship banking (see Boot, 2000): the soft budget constraint problem and the hold-up problem. The soft budget constraint problem has to do with the potential lack of toughness on the bank's part in enforcing credit contracts that may come with relationship-banking proximity. The problem is that borrowers who realize that they can renegotiate their contracts ex post may have perverse incentives ex ante (see Bolton and Scharfstein, 1996, and Dewatripont and Maskin, 1995). As discussed above, the seniority structure of bank loans could mitigate this problem. The hold-up problem has to do with the information monopoly the bank generates in the course of lending, which may allow banks to extend loans to borrowers at non-competitive terms in

2.3 Securitization: A Threat to Bank Lending?

Securitization is an example of a financial innovation – or an innovation in funding technology – that suggests a potential gain of (transaction-oriented) markets at the expense of bank lending. Is this true? We first evaluate the economics of securitization.

Securitization is an example of unbundling of financial services. It is a process whereby assets are removed from a bank's balance sheet. More specifically, banks would no longer permanently fund assets; instead, the investors buying asset-backed securities would provide funding. Asset-backed securities rather than deposits would then fund dedicated pools of bank-originated assets. As we will emphasize, securitization does not signal the demise of banks, even if it becomes an economically more important innovation (and thus substantially reduces the banks' on-balance sheet assets). To see this point, one needs to analyze the traditional lending function in some detail.

The lending function can be decomposed into four more primal activities: origination, funding, servicing and risk processing. Origination subsumes screening prospective borrowers and designing and pricing financial contracts. Funding relates to the provision of financial resources. Servicing involves the collection and remission of payments as well as the monitoring of credits. Risk processing alludes to hedging, diversification and absorption of credit, interest rate, liquidity and exchange-rate risk. Securitization decomposes the lending function such that banks would no longer fund the assets, but continue to be involved in the primal activities.

The economics of securitization dictates that the originating bank *credit enhances* the issue. Credit enhancement is typically achieved through the provision of excess collateral or with a letter of

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the future. More specifically, the proprietary information on borrowers that banks obtain as part of their relationships may give them an informational monopoly. In this way, banks could charge ex post high loan interest rates (see Sharpe, 1990, and Rajan, 1992). The threat of being "locked in", or informationally captured by the bank, may make the borrower reluctant to borrow from the bank. Potentially valuable investment opportunities may then be lost. Alternatively, firms may opt for multiple bank relationships. This may reduce the informational monopoly of any one bank, but possibly at a cost. Ongena and Smith (2000) show that multiple bank relationships indeed reduce the hold-up problem, but worsen the availability of credit.

credit. Effectively this means that the originating bank continues to bear the consequences (losses) if the securitized assets do not perform. The credit enhancement reduces the riskiness of the asset-backed claims from the investors' perspective, but – more importantly – it addresses conflicts of interest rooted in the originating bank's proprietary information. With private information in possession of the originating bank, the market requires assurances that the bank will not exaggerate the quality of the assets it seeks to sell. As with a warranty in product markets, credit enhancement discourages misrepresentation by requiring the originator to absorb a portion of the losses owing to default. Similarly, credit enhancement signals the market that the originator will perform a thorough credit evaluation and an undiminished monitoring effort. Credit enhancement therefore reduces the information sensitivity of securitized claims by enhancing their marketability.[13]

What this implies is that securitization could lead to a *reconfiguration* of banking. Banks would continue to originate and service assets, while also processing the attendant risks in order to sustain these activities. Banks would still screen and monitor borrowers, design and price financial claims, and provide risk management services. As such, securitization would preserve the incremental value of banks.[14]

How important will securitization become? We can only give a very tentative answer. Until recently, the securitization market in Europe was small, but it is now growing rapidly. In the U.S., securitization has been important for a long time, but mainly for car loans, mortgages and credit-card receivables. The standardization and modest size of these credits allows diversification of idiosyncratic risks upon pooling. Private information distortions – as discussed above in the context of credit enhancement – are thought to be less severe for these standardized credits.

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[13] The reputation of the originating bank will be equally important. Moreover, accreditation by credit rating agencies could also add to the marketability of the securitized claims (see also Boot, Milbourn and Schmeits, 2005). Gorton and Pennachi (1995) provide an economic rationale for bank loan sales and securitization.

[14] See also Boyd and Gertler (1994). They argue that banks have not lost importance. Their argument is that a substitution from on-balance sheet to off-balance sheet banking may have (falsely) suggested a shrinking role for banks. As in the description of securitization in the text, much of the banks' value added in the primal activities would be preserved.

What can be said for the larger, more customized and heterogeneous commercial loans? These tend to be more information sensitive. Their quality is therefore more dependent on the rigor of initial screening and subsequent monitoring. Hence, the pooling of commercial loans does less to dissipate their information sensitivity, attenuating the benefits of securitization. These considerations, however, do not preclude the securitization of business credits. They merely elevate the cost. For example, with more information-sensitive assets, the originating bank may need to retain a larger portion of the credit risk; credit enhancement becomes more important. If the information sensitivity is too severe, credit enhancement, short of total recourse, may not overcome the private-information problem. Thus, the potential advantages of securitization would largely be lost, and traditional bank lending would continue to dominate. However, for an increasing array of moderately information-sensitive assets, securitization might become the preferred intermediation technology.

In fact, over the last few years several successful examples of transactions involving the securitization of business credits have emerged. Including synthetic transactions (default swaps), the European volume of CDO's (Collateralized Debt Obligations, securitization of business credits) has grown from €40 billion in 1999 to €128 billion in 2001. Moreover, a new market for the securitization of working capital (via asset-backed commercial paper, ABCP conduits) is rapidly coming to maturity.[15]

As our discussion of the economics of securitization suggests, even if securitization would become more prevalent, banks could continue to play an important role for most of the primal activites that were previously combined in bank lending. More importantly, the comparative advantage of banks rooted in proprietary information about their clientele could be preserved. However, the message is not totally comforting for banks. In particular, the securitization of loans may greatly benefit from standardization in the origination (lending). This may weaken the bank-borrower relationship somewhat. The securitization trend does also force banks to think about their market positioning. A key question is whether

[15] As a caveat, some of this activity in securitization is undoubtedly induced by capital arbitrage; the new Basle II capital requirements may mitigate this somewhat.

securitization skills (structuring, but also placement capacity with (end) investors) need to be developed. In other words, can the commercial bank continue just to originate assets (and let others bring in the securitization skills), or do securitization skills need to be developed in-house? For most commercial banks, it will be very difficult to develop placement capacity. Also, the sheer size needed will make this a difficult proposition. Some structuring skills, however, and a better feeling for the financial markets might become indispensible.

3 Relationship Banking: the Strategic Challenge

We have argued that relationships may facilitate a continuous flow of information between debtor and creditor which could guarantee an uninterrupted access to funding. Some, however, believe that a more competitive environment may threaten relationships; others however have argued the exact opposite. The question then is: how does increased interbank competition and/or more intense competition from the financial market affect relationship banking?[16]

We first consider the viewpoint that more competition implies less relationship banking. The argument here is that with more competition, borrowers might be tempted to switch to other banks or to the financial market. When banks anticipate a shorter expected "life-span" of their relationships they may respond by reducing their relationship-specific investments. More specifically, anticipated shorter relationships inhibit the reusability of information, and thus diminish the value of information (Chan, Greenbaum and Thakor, 1986). Banks may then find it less worthwhile to acquire (costly) proprietary information, and relationships suffer. Interestingly, shorter or weaker relationships may then become a self-fulfilling prophecy. This argument highlights the negative spiral that may undermine relationship banking. An important observation is that this negative spiral might be self-inflicted. While competitive banking challenges relationships, the bankers' response – cutting back on information acquisition – may actually damage relationship banking most.

[16] Another threat is the better dissemination of information. This, in itself, could reduce the value of (previously) proprietary information in the hands of banks, and possibly reduce the value of relationship banking.

A complementary negative effect of competition on relationship banking may come from the impact that competition has on the intertemporal pricing of loans. Increased credit market competition could impose constraints on the ability of borrowers and lenders to intertemporally share surpluses (see Petersen and Rajan, 1995). In particular, it becomes more difficult for banks to "subsidize" borrowers in earlier periods in return for a share of the rents in the future. Thus, the funding role for banks that Petersen and Rajan (1995) see in the case of young corporations (see our discussion in Section 2.2) may no longer be sustainable in the face of sufficiently high competition.[17] This implies that excessive interbank competition ex post may discourage bank lending ex ante.[18]

An alternative view is that competition may actually *elevate* the importance of a relationship-orientation as a distinct competitive edge. This may somewhat mitigate the negative effect that pure price competition would otherwise have on bank profit margins. Boot and Thakor (2000) show that a relationship orientation can alleviate these competitive pressures, because it can make a bank more *unique* relative to its competitors.[19] A more competitive environment may then encourage banks to become more client-driven and customize services, thus focusing more (rather than less) on relationship banking. [20]

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[17] An extensive empirical literature focuses on the effect of consolidation in the banking sector on small business lending. This consolidation may in part be a response to competitive pressures (see also Section 4). The effects on small business lending, however, are not clear-cut. Sapienza (2002) finds that bank mergers involving at least one large bank result in a lower supply of loans to small borrowers by the merged entity. However, Berger, Saunders, Scalise and Udell (1998) show that the actual supply of loans to small businesses may not go down after bank mergers, since they invite entry of de novo banks that specialize in small business lending.

[18] Berlin and Mester (1999) provide a related, albeit different argument. Their analysis suggests that competition forces banks to pay market rates on deposits, which may complicate the potentially value-enhancing smoothing of lending rates.

[19] In Boot and Thakor (2000) banks choose between "passive" transaction lending and more intensive relationship lending. Transaction lending competes head-on with funding in the financial market. Competition from the financial market (as well as inter-bank competition) will lead to more resource-intensive relationship lending, and reduce transaction lending. The rationale for this is – as hinted at above – to mitigate the margin-reducing effects of price competition. The *absolute* level of relationship lending is however non-monotonic in the level of competition: initially competition increases relationship lending, but when competition heats up "too much", investments in bank lending capacity will suffer and that may start to constrain relationship lending.

[20] In related work, Hauswald and Marquez (2005) focus on a bank's incentives to acquire borrower-specific

Relationships may foster the exchange of information, but may simultaneously give lenders an information monopoly and undermine competitive pricing.[21] Transaction-oriented finance, however, may give little incentive to acquire information but is potentially subject to more competition. There might be no winners in this process; e.g., transaction-oriented finance may not be feasible where relationship-oriented finance retreats. More specifically, markets for transaction-oriented finance may fail when problems of asymmetric information are insurmountable. This argument is used by some to highlight the virtues of (relationship-oriented) bank-dominated systems (e.g., Germany and Japan) vis-à-vis market-oriented systems.[22]

What this discussion indicates is that the impact of competition on relationship banking is complex; several effects need to be disentangled. What seems to have emerged, though, is that greater lender competition may very well elevate the value of relationship banking. Pure price competition is an unattractive alternative. A relationship orientation can alleviate competitive pressures. Thus, a more competitive environment should encourage banks to become client-driven, and customize services. Since a relationship orientation may earn banks a substantial added-value, banks would then isolate themselves from pure price competition. However, truly creating an added value in relationship banking may require skills that banks do not (yet) have. Without those skills a retreat from relationship banking (including for

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information in order to gain market share, and Dinç (2000) examines a bank's reputational incentives to honor commitments to finance higher quality firms.

[21] The informational monopoly on the "inside" lender's side may be smaller if a borrower engages in multiple banking relationships. This would mitigate the possibilities of rent extraction by informed lenders and induce more competitive pricing (see Sharpe, 1990 and also Petersen and Rajan, 1995). Similarly, Schmeits (2005) shows that competition reduces the hold-up problem associated with the bank's informational monopoly. This allows for the use of price discretion in bank loan contracts, *i.e.*, banks that produce information on borrowers can optimally adapt a borrower's lending terms to "soft" (or non-verifiable) information in the course of lending (see Section 2.2). In the absence of lender competition, such discretion may not be feasible, since the rent extraction by the bank may be prohibitively high. Importantly, the use of contractual discretion in relationship lending also requires that the bank's quality (skill) as an information producer is sufficiently high. Other recent papers also address the importance of a relationship focus in the face of increased interbank and/or financial market competition.

[22] A fascinating academic literature focuses on the design of financial systems; see Allen (1993), Allen and Gale (1995) and Boot and Thakor (1997). One objective of this literature is to evaluate the pros and cons of bank-dominated versus financial market-dominated systems.

example downsizing of the branch network) might be unavoidable.

As discussed in Section 2, bank lending, securitization of loans and underwriting of public capital market issues may all benefit from a relationship orientation. The distinction between relationship-oriented finance and transaction-oriented finance, or between bank-dominated systems and market-oriented systems, may therefore be less well defined than it appears. What might be true is that a bank-dominated system invites oligopolistic behavior such that competition is contained (and relationships preserved) while a market-dominated system suppresses competition less.

The overall message is that the comparative advantage of banks is rooted in relationships (note that this is directly related to "information", see Section 2.2), and that this is of particular importance in a more competitive environment.

4 The Consolidation Trend in Banking: Rationales and Empirical Evidence

4.1 Recent Developments

We have witnessed an unprecedented restructuring and consolidation trend in the financial services industry across the globe. In the last decade, mergers in the U.S. have led to a consolidation of money center banks (e.g., the Chase Manhattan and Chemical Bank merger, prior to the subsequent merger with J.P. Morgan) and the emergence of regional powerhouses (e.g., the expansion strategies of BankOne and Nationsbank and their mergers with, respectively, First Chicago/NBD and BankAmerica). Recently, a merger brought together BankOne and J.P. Morgan Chase, and Bank of America further enlarged its footprint by acquiring Fleet Boston. In Europe, mergers have been prominent as well. While cross-border mergers are relatively infrequent – with exceptions in Scandinavia and across the Dutch-Belgian border (e.g., the acquisition of the Belgian Bank BBL by the Dutch financial conglomerate ING) [23] – on a domestic scale, mergers typically involve large universal banks and are often spectacular (e.g.,

[23] Some noteworthy cross-border mergers that go beyond these culturally aligned regions are HSBC's purchase of Crédit Commercial de France in 2000, Bank Austria's acquisition of Germany's HypoVereinsbank in 2000 and the purchase of Abbey National, Britain's six biggest bank, by Banco Santander Central Hispano of Spain. The Spanish bank, BBVA, may succeed in its bid to acquire Banca Nationale del Lavoro. Italy's largest bank, UniCredit, is in talks

the marriage of the Union Bank of Switzerland and Swiss Bank Corporation and the acquisition of Paribas by Banque National de Paris (BNP)). More recently, a somewhat higher level of activity has been observed, e.g., ABN AMRO has been successful in acquiring control over the Italian bank Banca Antonveneta.

The coincidence of the consolidation trend in the financial sector with increased competition have led many to believe that the massive restructurings in banking are a response to a more competitive environment. That is, as commercial banking becomes more competitive, banks need to examine all possible ways to eliminate inefficiencies from their cost structures, for example, by merging with other banks and realizing *scale efficiencies* through elimination of redundant branches and back-office consolidation. Moreover, the diminishing margins in commercial banking have invited banks to look outside their traditional domain. Some non-banking activities may offer higher margins and make *scope expansion* look attractive. The key question addressed in this section is whether these responses indeed create value.

The recent trend on banks' inclination to expand scope is somewhat mixed. For example, while we have seen a spectacular cross-industry merger of Citicorp and Travelers, bringing together insurance activities with bank-oriented financial services, more recently, Citigroup has been divesting its insurance assets. Similarly, Credit Suisse expanded into insurance by acquiring the insurance company Winterthur, but lately has been divesting these assets. Some European banks (e.g., ING in the Netherlands) however continue to center their strategies around *bancassurance*, *i.e.*, combining banking and insurance activities. While there does not seem to be a consensus on the added value of bancassurance, banks do define their scope quite broadly, and by some measures scope expansion might have become more prevalent over time.[24]

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with the HypoVereinsbank.

[24] For example, Bankers Trust, with its activities aimed at the corporate market, put itself in the arms of a scope expanding universal bank (Deutsche Bank). Furthermore, major investment banks are redefining their domain by offering traditional commercial banking products like commercial and industrial loans and by moving into retail brokerage (see the union of Salomon Brothers (investment bank) and Smith Barney (brokerage) within Travelers.

Scale and scope economies are often cited as one of the main reasons behind the current merger and acquisition wave in banking. But are scale and scope economies truly present? And could they rationalize the current restructuring in the industry? In the next subsection, we summarize the empirical evidence on scale and scope economies.

4.2 Empirical Evidence on Scale and Scope

Existing empirical evidence is quite generic. One conclusion that can be drawn is that the existing studies do not really differentiate between which activities in combination could offer scope benefits, nor do they focus on which activities generate economies of scale.

Scale and scope economies in banking have been studied extensively. A survey paper by Berger, Demsetz and Strahan (1999) concludes that, in general, the empirical evidence cannot readily identify substantial economies of scale or scope. Illustrative is Saunders (2000). He cites 27 studies, 13 of which found diseconomies of scope, 6 found economies of scope and 8 were neutral.[25] In particular, scale economies could not be found beyond a relatively small size of banks as measured by total assets (*i.e.*, beyond $100 million up to $10 billion in total assets. The story on scope economies is even more negative. Diseconomies of scope are quite prevalent.

An important caveat is that this research mainly involves U.S. studies using data from the 70s and 80s. The results therefore do not capture the dramatic structural and technological changes in banking that since then have taken place. Furthermore, they reflect the historic fragmentation of the U.S. banking industry due to severe regulatory constraints on the type of banking (banks could engage in commercial banking or investment banking, but not both) and the geographic reach of activities (limits on interstate banking) till the deregulation in the 90s (see Calomiris and Karceski, 1998).

Similarly, Credit Suisse bought the U.S. stockbroker DLJ, and UBS bought Paine-Webber).

[25] See also Shaffer and David (1991), Cornett and Tehranian (1992), Mester (1992), Mitchell and Onvural (1996) and Clark (1996).

Diversification discount

A large empirical literature in corporate finance documents that the diversification associated with conglomeration destroys value. Berger and Ofek (1995) find that diversified firms trade, on average, at a 13-15% discount relative to a portfolio of specialized single segment firms. Many papers suggest that this "diversification discount" arises from investment inefficiencies caused by inefficient cross-subsidies between the divisions in a conglomerate firm (see Lamont, 1997, and Shin and Stulz, 1998).[26]

While this literature addresses the impact of conglomeration in general, some recent studies examine the existence of a diversification discount for financial institutions. Laeven and Levine (2005) confirm the existence of a diversification discount in banks that combine lending and non-lending financial services, and suggest that the potential economies of scope in financial conglomerates are not large enough to compensate for potential agency problems and cross-subsidies.

Rajan, Servaes and Zingales (2000) emphasize that, even though conglomerates trade at a discount on average, 39.3% of the conglomerates trade at a premium. They show that the interrelation between activities within the conglomerate is of crucial importance. Diversified firms can trade at a premium if the dispersion between activities low.[27] High dispersion induces inefficiencies. This points at the importance of focus within the conglomerate.

The sources of inefficiencies in combining banking activities are often subtle. In the Box we have included an illustration that focuses on the potential value destruction in combining relationship banking and proprietary trading. These activities are very heterogeneous and highlight Rajan, Servaes and Zingales'

[26] For example, Berger and Ofek (1995) find that conglomerate firms overinvest in industries with limited investment opportunities, as measured by a low Tobin's *q* ratio. In the context of the oil industry, Lamont (1997) has shown that diversified companies tend to subsidize and overinvest in poorly-performing segments. Furthermore, Shin and Stulz (1998) have shown that investment by segments of a highly-diversified firm is larger and less sensitive to their own cash flow than that in unrelated firms, and is also relatively insensitive to the quality of their investment opportunities.

[27] These conclusions are roughly consistent with Boot and Schmeits (2000), who argue that heterogeneity of activities is generally bad for conglomeration.

(2000) conclusion that dispersion between activities in a diversified firm has a negative impact.

BOX: An Illustration of the Downside of Conglomeration: Combining Relationship Banking and Proprietary Trading

An important issue is what the costs and benefits are of combining different activities. We focus on the question how relationship banking is affected by the banks' increased involvement in trading-related activities? The extreme manifestation of this is proprietary trading.

First, note that banks like to *combine* many different activities. This distinguishes banks from many of their competitors, e.g. non-banking financial institutions like mutual funds and finance companies (see Merton, 1993). The latter often choose to specialize and therefore are much more transparent. Banks generally choose to diversify their activities. Although few would readily deny that some degree of diversification is necessary, banks seem to engage in a very broad variety of activities. The question that arises is what is the optimal conglomeration of bank activities?

This question is of particular importance because self-inflicted opaqueness may come to haunt banks in a more competitive environment. Outsiders – including the banks' financiers – may not be able to assess the performance of banks sufficiently. More importantly, opaqueness gives outsiders very little control over the bank. Bank managers therefore may have excessive discretion. This may elevate a bank's cost of funds.[28]

Till recently, the opaqueness even meant that bankers themselves did not really know the profitability of many of their activities. Cross-subsidies were the rule, and internal cost accounting was rudimentary. Recently some improvements have been made. Banks by now have a better understanding of the costs and benefits of different lines of their businesses. Some of the implicit or explicit cross-subsidies are now recognized. While cross-subsidies may sometimes be an optimal competitive response, often they will not be sustainable in a competitive environment.

Banks face a challenge in that they may need to become more transparent. This is in apparent conflict with the current practices in banking. Banks increasingly combine transaction- and relationship-based activities. Trading activities within banks have grown enormously (see Berger, Kashyap and Scalise, 1995) and seem sometimes in conflict with the "traditional" relationship-oriented activities. These developments have broadened the activities of banks and may have reduced transparency. An interesting example is proprietary trading, an activity that has gained importance, and – on paper – seems to have contributed significantly to the profitability of banks in recent years.

A noteworthy example of a banking institution where proprietary trading gained importance rapidly was the Barings Bank, a British bank with a long tradition in corporate banking. Some interpret the Barings debâcle as a meltdown caused by a clash of cultures: aggressive and ambitious traders versus traditional and conservative bankers. For them, better internal controls and external supervision aimed at aligning incentives seem obvious remedies. We believe that the economics of banking dictate a more fundamental analysis, one that transcends the specifics of Barings and sheds light on the banks' strategic choices in general.

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[28] Securitization could be interpreted as a mechanism that seeks to enhance accountability and transparency by giving the market a direct claim on a specific group of assets. Dewatripont and Tirole (1995) discuss the benefits of securitization in the context of these transparency arguments.

Our analysis will highlight that in the absence of market discipline banks may only arbitrarily allocate capital to their different activities and charge a cost per unit of capital that is even more arbitrary. This line of argument implies that the proprietary trading activity is free-riding on the bank at large. This – as we will show – may have three consequences: (*i*) proprietary trading appears more profitable than it really is, (*ii*) a proprietary trading unit does not sufficiently internalize risks, and (*iii*) other – mainly relationship-oriented – activities of banks face an unfairly high cost of funds. The implications are twofold. First, proprietary traders may operate with little market discipline. Consequently, the only corrective mechanisms are internal controls and external supervision. Second, banks may become less competitive in their relationship-oriented activities. Thus, proprietary trading could undermine the banks' real competitive edge. We now turn to a more detailed analysis of the trading activity.[29]

Banks' trading activities have been a considerable source of earnings in the last few years. But has it been as profitable as some believe? The trading activity involves substantial risks, thus establishing the fair risk-adjusted cost of funds is important. Banks try to resolve this by allocating (costly) capital to the trading unit. Thus, the trading unit's funding cost is artificially grossed-up by adding the cost of its "capital at risk". This internal capital allocation process is far from perfect, and actually might also be flawed.[30]

The presumption in these internal capital allocations is generally that capital has one price. A bank's cost of capital might be set for example at 15%. Some believe that capital is twice as expensive as (risk-free) financial market debt financing. Whatever the presumption, capital does *not* have one price. Standard capital structure theory tells us that the per unit cost of capital depends on the risks that this capital is exposed to. More risk generally implies a higher cost of capital. Two important implications now follow. First, the per unit cost of capital will *not* be the same for all of the bank's activities. The level of risk *and* the risk characteristics will determine the unit cost of capital for each of the activities. Applying a bank's cost of capital to its proprietary trading unit is therefore wrong. Given the generally well diversified, and thus low risks, found in the bank at large, the (non-diversifiable) risks taken in the trading unit dictate a much higher cost of capital.

The second implication is more general: banks should not choose to engage in certain activities solely because they have the capital. The critical observation is that "putting capital to use" increases the per unit cost of capital. Therefore, engaging in proprietary trading to exploit the bank's capital will elevate the cost of this capital, and as a consequence increase the cost of funds for the bank at large. Banks that consider themselves "overcapitalized" and decide to put this capital to use may thus not create value at all. This argument may also explain why banks consider capital (prohibitively?) expensive. If potential investors anticipate that banks will put their capital to use at all cost, they will gross-up their required return accordingly. Banks then can issue equity only at discount prices. These beliefs and anticipations create a perverse equilibrium. Given the bankers' state of mind – fixed priced, expensive capital that needs to be put to use as quickly as possible – the market responds rationally by charging a high price for capital. And given these anticipations by the market, the bankers' beliefs are justified and confirmed in equilibrium.[31]

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[29] It is important to realize that much of modern (investment) banking is relationship-oriented. Proprietary trading is one of the few activities that is not. The trading involves arbitrage between different markets and/or different financial products. Arbitrage does strictly speaking not involve risk. However, on an intra-day basis, traders do not cover (all) their positions, and thus accept considerable risk. This is a type of speculation. Banks also speculate on an inter-day basis; this is "real" speculation. They may use their "vision" and try to benefit from anticipated developments in interest rates, exchange rates, etc.

[30] The capital allocations are typically based on Economic Capital, VaR and RAROC-type methodologies.

[31] Another compelling argument is that banks' credit ratings have become increasingly important due to the

The arguments above explain why proprietary trading has been granted an artificially low cost of capital, at the expense of a (potentially) prohibitively high cost of capital for the bank as a whole. Other – mainly relationship-oriented activities – are then implicitly taxed and falsely appear not profitable. The general lesson from the discussion in this subsection is that the rather opaque nature of the banking business easily distorts decision making. This suggests that focus may have distinct benefits. In the next section, we further analyze this issue.

Recent evidence

Recently, and using more recent data, DeLong (2001) looked at the shareholder gains – that is, the immediate announcement effects – from focused versus diversifying bank mergers in the U.S. between 1988 and 1995. She found that focused mergers, both on the level of activity and geography, have positive announcement effects. Moreover, focus in activities was shown to be more important than geographical focus, albeit the latter was important as well.[32] Activity-diversifying mergers had no positive announcement effects. These results point at the presence of scale rather than scope economies. While this study focuses on relatively small U.S. banking institutions (market cap of the acquirer approximately $2 billion, and market cap of target less than $100 million), recent European evidence on much larger institutions confirms the desirability of geographical focus.[33]

An alternative approach for analyzing scale and scope economies is to focus on structural

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proliferation of off-balance sheet banking. The viability of banks in their off-balance sheet activities (e.g., writing guarantees as in underwriting and securitization) necessitates sufficient capitalization and high credit ratings (see Boot, Milbourn and Schmeits (2005) for a general analysis of the raison d'être of credit ratings).

[32] Geographical expansion in the U.S. often involves buying up neighboring (focused) retail banks which allow for economies on IT systems, management processes and product offerings. Relative to the European scene, where geographical expansion often implies buying up big universal banks across the border, fewer barriers to an effective integration exist. This may explain the more favorable U.S. evidence.

[33] Beitel and Schiereck (2001), analyzing mergers between European financial institutions between 1988 and 2000, show that domestic (intra-state) mergers on average have significantly positive combined (bidder plus target) announcement effects, but weaker so in the last few years (1988-2000). They also found that diversifying domestic mergers (particularly between banks and insurers) had on average a positive value impact. In line with this evidence, the Citigroup-Travelers merger resulted in an increase in the stock prices of both merger partners (Siconolfi, 1998). The latter insight is also confirmed in other European studies on bank-insurer mergers; e.g., Cybo-Ottone and Murgia (2000) find a positive effect on combined value. A key question is what role market power plays in explaining the value gains in these mergers.

differences between financial conglomerates and specialized institutions. Several studies have looked at the relative cost and profit efficiency (e.g., Berger and Mester, 1997, and Berger and Humphrey, 1997). Van der Vennet (2002) has looked at this in the European context. He finds somewhat higher cost and profit efficiency for conglomerates and universal banks. This may look surprising in light of earlier comments. However, these efficiency differences cannot readily be translated in scale and scope economies. The banking industry is changing rapidly and the (traditional) inefficiencies in banking are coming under attack from competitive pressure and technological advances. Differences in efficiency may just reflect differences in the state of adjustment of these institutions, translating into temporarily diverging levels of X-efficiency, rather than point at scale and scope economies.

Further interpretation

With respect to the interpretation of the empirical evidence on scale and scope, some general observations can be made. First, scale and scope economies are empirically often dominated by changes in managerial efficiency. For example, inefficiencies in managing larger organizations may mitigate possible scale and scope benefits.[34] Second, scale and scope economy effects are difficult to disentangle from changes in market power. Increasing scale and scope may facilitate market power, and thus elevate profitability in the *absence* of scale and scope economies. Moreover, alternative distribution networks (e.g., direct banking) and the proliferation of financial markets may have reduced the effective market

[34] Berger (2000) offers an illustration by observing that managerial ability to control costs creates a differentiation in bank performance that may well dominate the potential scale economies. The difference between an "average" bank and the "best practice bank" is about 20% of the costs of the average bank, while cost scale economies in the 1980s did not exceed 5%. Berger (2000) argues that managerial ability may have a similar effect on revenue efficiency. The arguments for this might be subtle. For example, a potential impediment for relationship lending follows from the literature on "soft" information and organizational structure. Consolidation may undermine the incentives of banks to produce and utilize soft information. In particular, recent research has shown that large banks are less capable in using soft information (see Berger and Udell, 2002, and Stein, 2002, and for empirical evidence Berger, Miller, Petersen, Rajan and Stein, 2005). Larger (more centralized) banks base their credit approval decisions more on hard (verifiable) information, whereas smaller (more decentralized) banks can more easily use soft information. This may be particularly important for the financing of smaller and informationally opaque firms, and also has implications for optimal decision-making structure of larger financial institutions (see Stein, 2002, and Liberti, 2003). These arguments also point at the importance of proximity in relationship banking (see Degryse and Ongena, 2005).

power of locally concentrated financial institutions, and elevated the contestability of markets. Third, to the extent that mergers may change the structure and dynamics of the industry, the abnormal stock returns associated with merger announcements reflect such changes. This makes event studies on bank mergers harder to interpret.

Finally, the level of agregation in most studies is high and may obscure benefits of scale and scope. In particular, one should look at what *type* of mergers and acquisitions involve scale and scope benefits. For example, Flannery (1999) points at recent research that suggests that mergers with both a geographic and activity focus are most value enhancing.[35] Similarly, in analyzing scope and scale issues one should focus on the type of activities. What are the scale economies in each activity? And what product-mix offers true scope economies?[36]

4.3 Problems with Realizing Economies of Scale and Scope

It is important to observe that technological and regulatory frictions affect the potential realization of scope and scale economies. For example, a merger between two financial institutions may not readily lead to scale and scope economies because the integration of computer systems may take time.

A similar argument can be made with respect to regulatory constraints. If regulators force banking and insurance activities to be operated separately, potential scope economies may suffer. This problem was most acute in the U.S. where up to recently insurance and banking acitivities could not be combined

[35] An important issue is whether this only points at market power benefits or whether also true efficiency gains could be at work.

[36] Surprisingly, this type of research is yet hard to find. A lot of research has been done on potential conflicts of interest in universal banking. To some extent, this is activity-specific (investment banking versus commercial banking). However, this research is of very limited interest for this study because it ignores the question of complementarity between activities. This is not really surprising, because the literature is solely motivated by the Glass-Steagall regulation in the U.S. (see Kroszner and Rajan, 1994, and Puri, 1996). See Ramirez (2002) for some evidence on scope economies in pre-Glass Steagall Act U.S. banking. In a similar spirit, Drucker (2005) shows that junk rated firms and companies in local lending relationships are more likely to select an integrated (universal) commercial-investment bank when they expect to issue public debt in the future. This revealed preference by firms that issue informationally sensitive securities for commercial-investment bank relationships suggests that there are benefits from the bank's ability to use private information from lending in investment banking.

under one corporate roof. In many other countries, regulations were less stringent but could still have a major impact on the feasibility of realizing scope economies.

In the end, implementation issues are crucial as well. As the evidence shows, there are enormous differences between the best practice and "average practice" of financial institutions. This points at the importance of managerial ability. Cultural differences between merged entities play an important role as well. Also conflicts of interest between activities might be important, and dictate functional separation of activities.

A final barrier may come from political considerations. Many countries seek to protect their domestic financial institutions, and, if needed, help create "national champions" to preserve domestic ownership and control. *Table 1* summarizes the main barriers to realizing scope and scale economies.

Barrier	**Examples**
Technological barrier	• Incompatible computer systems • Conflicting distribution channels
Regulatory barrier	• Explicit limitations on activities • Regulatory-induced Chinese walls
Managerial barrier	• Lack of leadership • Cultural differences • Conflicts of interest
Political considerations	• National "flagship" attitude

Table 1: Possible barriers to realizing scale and scope economies

4.4 Sources of Scale and Scope Economies

We will now seek to uncover the main sources of scale and scope economies. We see the

following two primary sources:[37]

(*i*) Information-technology related economies

(*ii*) Reputation and marketing/brand name related benefits

Information-technology related benefits

The first source, information technology, is most likely of great importance. IT has two primary effects. First, it allows for a disaggregation of activities, breaking up the traditionally integrated value chain. One important manifestation of this is that it facilitates a centralization of supporting activities (particularly, infrastructure and trading related activities, e.g., clearing, settlement and custody). This offers potential scale economies in those disintegrated activities, which (see Section 5) could also have implications for specialization within the value chain, and outsourcing in particular. Related to this is that it could widen the scope of control, *i.e.*, facilitate a flatter, and potentially bigger organization. Second, it has profound implications for the interface with clients. More specifically, it facilitates a more efficient and effective utilization of databases over ranges of services and customers. That is, client-specific information may allow for scope economies and facilitate a competitive advantage to financial institutions that can offer a range of services to their clientele. Similarly, possibilities for reusability of information across customers may have increased.

Information technology helps in identifying client-related needs. Scope economies therefore apply to all products that could be sold to the same client group. Examples for bank-insurance conglomerates

[37] Two other sources can be identified (see Boot, 2003): financial innovation related economies and diversification benefits. Ceteris paribus, large institutions could better recoup the fixed costs of financial innovations. Innovations could be marketed to a larger customer base and/or introduced in a wider set of activities. For financial innovations, scale and scope might be particularly important given the rapid imitation by competitors. Only for a short period of time does a true competitive advantage exist. A wider scope and larger scale may help recoup the fixed costs in this short period of time. Diversification benefits are more controversial. In many cases, conglomeration may lead to a valuation discount. This points at (anticipated) inefficiencies (see Section 4.2). Also corporate finance theory tells us that investors can choose to diversify and that this does not need to be done at the firm level. However, some bank activities (see our discussion about securitization in Section 2.3) benefit from a better rating, which suggests that diversification could be valuable.

include: life insurance features in mortgages, asset management/private banking services combined with life insurance, commercial credits in combination with industrial risk insurance, and export financing together with export credit insurance.

This also points at distribution-network related benefits. These benefits may be rooted in information-technology developments. In particular, IT developments may facilitate scale economies in running a sizeable distribution network. Simultaneously, scope economies might become much more visible. For example, information technology facilitates an increasing array of financial products and services to be offered through the same distribution network. Customers may attach value to "one-stop shopping", which encourages some financial institutions to offer a broader package of financial services tailored to particular customer categories.

Reputation and brand name/marketing

The second source for scale and scope economies is linked to brand name/marketing and reputation. Scope benefits may be present in the joint marketing of products to customers. Brand image is partially marketing related, but is also related to the notions of "trust" , "reputation" and "confidence". These notions play an important role in the financial services industry. Increasingly, financial service providers offer services that crucially depend on their reputation. For example, the growing importance of off-balance sheet claims puts great emphasis on the ability of financial institutions to honor these *contingent* liabilities. But also the succes of modern "virtual" distribution channels (Internet) may depend crucially on reputation. Under certain conditions, increasing scale and scope allows financial institution to capitalize more on their reputation. That is, a wider scope (and/or scale) may help a financial institution to put its reputational capital at work (see Boot, Greenbaum and Thakor, 1993).

A concrete example here is the Dutch bank-insurance conglomerate ING that offers direct banking services in, for example, Spain. The name of ING is linked in advertisements explicitly to the Nationale Nederlanden brand name, its insurance subsidiary, a well-known and respected institution in

Spain. This type of branding "externality" is also used by players entering the financial services arena from other industries (e.g., supermarkets leveraging their brand name for financial services offerings). Again, some link can be made to information technology. IT clearly helps in the extent to which the brand name and reputation can be leveraged.

4.5 Evaluation

We may conclude that the primary sources of economies of scale and scope are related to back-office support functions and distribution. Much of this is induced by IT. The importance of the distribution network is quite clear and should be considered a primary source of scale and scope economies. For example, on the demand side, the proliferation of savings products and their link to pensions, mutual funds and life insurance clearly pushes for joint distribution, and thereby facilitates economies of scope. However, a word of caution is warranted. IT developments might have made it possible to better exploit potential scope economies with multiple product offerings to a particular customer group, using new direct distribution channels with relatively easy access to (formerly) distant customers. The very same IT developments offer also very good possibilities for focused single-product players. Interfaces (may) come up that help bundle the product offerings of specialized providers, thereby becoming a substitute for the integrated provider. The lesson is that only very well managed integrated financial services firms may realize positive scope economies. The execution (X-efficiency) is probably more crucial than ever before, since inefficiencies will be exploited by single product players. What this means is that it is very unlikely that (ultimately) a single strategy will dominate in the financial services sector.

The same arguments apply for the vertical disintegration of the value chain. Ultimately, it does not seem unrealistic to expect the emergence of, for example, product specialists without distribution network. The scale economies and the benefits coming from focus could be substantial (see also McKinsey & Company, 2002). However, specializing in one segment of the value chain might for now be too risky a strategy. Banking is too much in turmoil and specialization within the value chain may lead to an overly

vulnerable dependence on other players.[38]

In the particular context of bank-insurer mergers several other comments can be made. An important issue is the potential benefits coming from asset management. Some argue that the income stream from asset management is relatively stable, and hence a welcome addition to the otherwise erratic revenue stream of financial institutions. There might be some truth in this, but this benefit, at least from a corporate finance perspective, cannot be really large. That is, diversification for purely financial reasons could also be accomplished by investors individually in the financial market. Thus, unless the synergies with other business lines are substantial, an independent asset management operation is a credible alternative.

Similarly, people argue that bank-insurance combinations have distinct benefits on the funding side. Diversification may allow for a more effective use of equity capital. Also direct funding synergies may apply. The mismatch between assets and liabilities on the bank's balance sheet (short-term funding, long on the asset side) might be the reverse of that of an insurer (long term obligations). Again, corporate finance theory is sceptical about the validity of these arguments.

Another argument for combining life insurance and banking is that it could augment the total asset management pool, and thus offer scale economies. While this might be true, more recently banks and insurers have learned that the asset-management operation requires distinct skills and is not "automatically" profitable as a passive spin-off from other (feeding) activities. Thus, synergies are present, but not necessarily dominant. This is not to say that combining banking and insurance with an appropriate customer focus could not be value enhancing. As stated earlier, combining banking and insurance could offer synergies in distribution. This builds on the distribution-network related benefits discussed earlier.

However, as discussed earlier, other factors may undermine the possibility for realizing scope

[38] On the benefits of vertical (dis)integration in the financial services industry there is little empirical work. An interesting exception is a recent paper by Berger, Cummins, Weiss and Zi (2002), who look at profit scope economies in combining life and non-life in the insurance industry. They find that conglomeration (and hence scope) *might* be optimal for larger institutions that are primarily retail/customer focused and have vertically integrated distribution systems.

benefits. For example, due to national tax regulations life insurance needs to be tailored to each specific country. Also other differences exist between countries in terms of (corporate) culture, law, etc. These complications make it important to have well-focused operations outside the home market and abstain from scope-expanding strategies that would complicate the operation even more. In some cases this also means that one should abstain from broad cross-border acquisitions, and only choose to go cross-border where the specific activity at hand requires this.[39]

These observations help understand the reconfiguration of many European financial institutions. In particular, it becomes increasingly questionable to rationalize a universal banking strategy based on some company-wide synergy argument. Scope economies need to be carefully examined, and linked directly to specific market segments across clients, products and geographic areas of operations (see also Smith and Walter, 1997).

5 Alliances, Joint Ventures and the Disaggregation of the Value Chain

More recently, alliances and joint ventures appear to have become more important in banking. An interesting example is the joint venture that ABN AMRO set up with the insurer Delta Lloyd. In fact, ABN AMRO sold its insurance activities to the joint venture in the hope that in the alliance with Delta Lloyd the bank would be better at selling insurance products via its own distribution network. ABN AMRO's motive is clear. The stand-alone nature of the joint venture together with the expertise from the insurer Delta Lloyd creates focus, urgency and better accountability and incentives in the insurance operations. It helps resolve the inefficiencies associated with trying to mix insurance and banking

[39] In contrast to domestic mergers, the expected cost savings and economies of scale in cross border mergers are rather modest. Domestic mergers benefit from the closures of branches and the cuts in the number of employees and other fixed costs. Cross border mergers are likely to bring only a few savings from the eventual integration of IT systems, back offices and perhaps the design and marketing of some financial products. But in general, even banks that have bought subsidiaries abroad tend to run them as separate banks. For example, Citigroup has not integrated its banking operations in various European countries, and nor have Nordea (the result of a merger of four Scandinavian banks), Deutsche Bank, HSBC or any of the smaller banks with subsidiaries in central and Eastern Europe (see The Economist, *Special Survey on International Banking*, May 19, 2005).

cultures.[40] As we highlighted in Section 4.4, the information technology revolution has clearly been helpful in making it possible to have a smooth interface between the more separated insurance activity and ABN AMRO's banking operations. In this sense, it is an example of disintegration of the value chain.

We expect that vertical disintegration of the value chain will gain in importance over the coming years (see also Berlin, 2002). Vertical disintegration allows for greater specialization, and hence focus, with potential gains in scale economies as well. Alliances and joint ventures could play an important role in this process. They may introduce durable, yet flexible cooperative structures facilitating interactions between the different parties in the value chain. An example is the opening up of a bank's distribution network to products from others. In that way, institutions could exploit their local presence by capitalizing on their distribution network; simultaneously, product specialists may emerge that feed products into these distribution networks.

The applicability of this idea is broader. Financial institutions rooted in strong local relationships may gain access to more "distant" asset management services that are scale intensive and globally, rather than locally oriented. It may well be possible to offer some of these services in an alliance (*i.e.*, to "join forces") and still capitalize on customer-related synergies. While some will argue that a merger with these institutions would allow for a smoother operation of these services, we would like to take issue with this point of view.

First, for several reasons, cross border mergers may not (yet) be feasible. A focused alliance would create valuable linkages between institutions with immediate synergy benefits (see above), but could also allow the possibly nationally rooted partners to "get to know" each other. In that sense, it would be an intermediate phase. As a second argument, the alliance-model based on asset management and/or specific investment banking activities may, if properly designed, combine the benefits of an integrated universal banking structure and a stand-alone type of organization of those activities. For example, the alliance

[40] The particular construction at hand gives ABN AMRO also the benefit of maintaining a direct link to insurance (and the knowledge involved). The fact that the insurance products are sold under the ABN AMRO brand name may give it a stronger bargaining position in the future vis-à-vis Delta Lloyd.

partners all have a limited exposure to these activities, putting them together helps maintain focus. In particular, cultural conflicts and distractions associated with trying to build up (or buy) an investment bank next to running the relationship-rooted regional bank are prevented.[41] Obviously, the alliance model does not come without cost. The important task is to identify a clearly defined portfolio of activities that would become part of the alliance. This will not be investment banking in the broadest sense of the word. Similarly, in the case of asset management, the alliance partners would each maintain their own proprietary access to the customers, but join forces in the asset management operations including research and back office activities. Maintaining proprietary access by the individual alliance partners preserves customer-related scope economies.

The same arguments could be made for bank-insurance combinations. That is, banks could choose to engage in an alliance with an insurer, rather than merge. The joint venture of ABN AMRO and Delta Lloyd discussed at the beginning of this section is an example of this. It is also possible to distribute insurance products via a bank's distribution network based on a license agreement. An outright merger may not be needed. The IT revolution (see Section 4.4) now makes a smooth interface between (semi) independent entities possible.

We believe that joint ventures and alliances will gain importance in the future. Economies of scale and benefits of focus could be obtained in this way. The trend towards outsourcing of back office functions fits neatly as well. Also this points towards a disintegration of the value chain. However, it will help if the level of uncertainty in the industry comes down a little. Vertical disintegration (and specialization) now may create an unpredictable dependence on other parties in the value chain.

6 Conclusion

This paper highlights *the* major challenges facing "modern" banks: how to identify and protect

[41] The experience of some Western banks is that top management gets fully distracted by the investment banking activities and as a result spends disproportionately little time on the often more profitable non-investment banking activities.

their true comparative competitive advantages. We believe that relationship banking offers distinct benefits, and see it as the banks' *raison d'être*. However, relationship banking has suffered from the proliferation of transaction-oriented banking. We have argued that the optimal response might be to invest *more* in relationships. Banks then may isolate themselves from pure price competition.

We have also looked at the positioning of banks in general. The insights from existing empirircal research on scale and scope advantages in banking proved rather limited. We argued however that the developments in information technology over the last decade may have fundamentally changed the benefits of scale and scope. In particular, we see substantial scale and scope economies in distribution, and scale economies in back office functions. We also envision a further disintegration of the value chain, and expect a proliferation of joint ventures, alliances and outsourcing.

What we have emphasized only little is that the current uncertain state of the banking industry, where the choices made by the various players are very unpredictable, makes it difficult for each individual bank to make clear choices. For example, specialization somewhere within the value chain could make a bank very dependent on the behavior of banks upstream or downstream in that same value chain. In a sense, banks hold each other hostage. Such strategic considerations make it also difficult to extrapolate from choices that we currently observe in the banking sector.[42]

Future research should be directed at further developing the basic themes of this paper. While we may have provided some important insights in the functioning of banking institutions and their optimal competitive responses, the financial sector largely remains a black box.

[42] Boot (2003) explains the rather broad strategies of banking institutions by emphasizing that in the current uncertain environment banks may want to keep their options open. The domestic consolidation wave helps underwrite this strategy in that it creates "deep pockets".

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