

Consolidation and Strategic Positioning in Banking with Implications for Europe

by

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1. Introduction

A financial services sector in flux. This is probably the best characterization of the unprecedented restructuring and consolidation that is going on around the globe. Particularly, in the United States and Western Europe transactions are numerous and breathtaking. But restructuring is also going on in Asia. Most striking is probably the ever-escalating scale of mergers in banking. In just the last few years, in the US mergers have led to a consolidation of money center banks (e.g. the Chase Manhattan and Chemical Bank merger, prior to their 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). In Europe, mergers have also been prominent. While cross border mergers are relatively infrequent – with exceptions in Scandinavia and the acquisitions across the Dutch-Belgian border,¹ e.g. the acquisition of the Belgian Bank BBL by the Dutch financial conglomerate ING – on a domestic scale, mergers typically involve large universal banks and are often spectacular. Noteworthy examples include the marriage of the Union Bank of Switzerland and Swiss Bank Corporation and the acquisition of Paribas by Banque National de Paris (BNP). And in Japan, spectacular mega-mergers have put the Japanese banks among the largest banks in the world ranked by book value of assets.

A parallel phenomenon is the continued broad, if not broadening, scope of many banks. Even banks that traditionally followed well-motivated focused strategies have given in to this trend. For example, Bankers Trust with its activities aimed at the corporate market, has put itself in the arms of a scope expanding universal bank (Deutsche Bank). Scope-expansion also originates from investment banks. Major investment banks are redefining their domain by offering traditional commercial banking products like commercial and industrial loans and by moving into retail brokerage. The union of Salomon Brothers (investment bank) and Smith Barney (brokerage) within Travelers underscores the scope-expansion in the industry. Similarly, Credit Suisse bought the US stockbroker DLJ, and UBS bought Paine-Webber. The spectacular cross-industry merger by Citicorp and Travelers also brings the insurance activities together with bank-oriented financial services. This concept is not really new, however. Some European banks – e.g. ING in the Netherlands and the Belgium-Dutch conglomerate Fortis – already engage in *banc assurance*, that is, combining banking and insurance activities. Similarly, Credit Suisse expanded into insurance by acquiring the insurance corporation Winterthur. But in the US until the passing of the Gramm-Leach-Bliley Act of 1999 many restrictions remained on combining banking, securities underwriting and insurance.

¹ A noteworthy cross-border merger that goes beyond these culturally aligned regions is HSBC's purchase of Credit Commercial de France.

One question is then immediate. Why are banks consolidating so much and expanding scope? The popular financial press points to the increasingly competitive environment of banking as the culprit. As commercial banking becomes more competitive, banks need to examine all possible ways to wring inefficiencies out of their cost structures. One way to do this is to merge with other banks and realize efficiencies of scale through elimination of redundant branches and back-office consolidation. Moreover, the diminishing margins in commercial banking invite banks to look outside their traditional domain. Some non-banking activities may offer higher margins and make scope expansion attractive.

However, these popular explanations are inadequate. 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 (see Berger [1997] and Berger, Hunter and Timme [1993]). Moreover, ample research in corporate finance points at the existence of a “diversification discount”. On average, diversification seems to destroy value. There is substantial evidence that improvements in operating performance and stock returns have been experienced by firms that have refocused (see John and Ofek [1995] and Comment and Jarrell [1995]). Therefore, the important question is why are there so many mergers and acquisitions taking place in the industry? This question becomes even more relevant considering the media and analyst reports that increasingly challenge the broad focus that characterizes most financial institutions.²

This study aims to address this question and other related issues. I will examine the existing empirical evidence on scope and scale economies in banking. In a recent survey paper, Berger, Demsetz and Strahan [1999] evaluate the extensive, primarily, US evidence. Their findings are, if anything, quite sobering about scope and scale economies. However, most studies that they report on are quite dated. An important question therefore is whether this empirical evidence is suitable for explaining the current consolidation wave. While I will conclude that the existing evidence is of some value (and I cite some newer evidence that is of greater value), I doubt that it is really helpful for understanding the current restructuring in banking. Several issues play a role here. Apart from econometric and sample-selection issues, and possibly fundamental changes in underlying “state-variables”, *the* important issue is that in my view *strategic* considerations are *the* driving force behind the current consolidation wave. As I will argue, these considerations may have little to do with true scale or scope economies. Rather, learning, first-mover advantages and strategic advantages of market power and associated “deep pockets” may explain the current consolidation wave and the broad scope of many of the players in the industry.

Strategic positioning might for the moment be the rule of the game, and be an optimal response to the uncertainties and rapid (and unpredictable) changes facing financial institutions today. Consolidation might then be an evolutionary phenomenon and be followed by a new type of repositioning when the uncertainties become more manageable. However, as I will argue, the competitive pressures are growing in the financial services industry. Margins are eroding, and costly scope expanding strategies may become unsustainable. The viability of a broad “wait and see” strategy may soon be over.

The organization of this study is as follows. In section 2, I start out with a discussion of the growing research in the field of financial intermediation. This research - mainly theoretical in nature – sheds light on the costs and benefits of bank funding vis-à-vis direct funding in the financial market. While primarily focused on the funding role of banks and financial markets, it provides valuable insights into the economics of banking. In this context, I also discuss the growing importance of securitization, and the impact of competition on the value of relationship banking. These insights provide a foundation for understanding the role of financial institutions in the future. Subsequently, section 3 discusses the extensive empirical literature on scale and scope economies in banking. Here, I will particularly look at scale and scope considerations that may become important in the future. 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. Section 4 introduces strategic considerations, in particular, the importance of *strategic positioning*; see the discussion above. In that section, I will also discuss in some detail the relevance of these insights for the ongoing restructuring in the European financial services industry. Finally, in section 5, I conclude by offering some thoughts on the (to be expected) disaggregation of the value chain, with a more prominent role for alliances and joint ventures. I will also discuss some political considerations, particularly in the European context, that may have an important impact on the future path of the ongoing restructuring.

² See for example a recent report by Oliver Wyman & Company in collaboration with Morgan-Stanley [2002] that has the illuminating title, “The Need to Differentiate”.

2. Fundamentals: The Economics of Banking

2.1 Introduction

What does economic theory tell us about the role of financial institutions? The relevant field of financial intermediation offers some guidance in uncovering the value-added of financial institutions. The literature has primarily focused on three issues: the role of banks in funding real activities, the value of relationships in intermediated finance vs. transactions in financial markets, and the prospects of liquefying bank assets, e.g. securitization.

We will examine what economic theory has to say on each of these issues. Of particular interest also is what the impact is of the ever more competitive environment on the value of relationship banking. This will shed some light on the competitive positioning of financial institutions and their possibly changing role. While these insights will be primarily theoretical, they provide in my view a valuable foundation for understanding the ongoing restructuring in the financial services industry.

2.2 Traditional versus modern banking

Traditional commercial banks hold non-marketable 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 liquefying 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 informational advantages 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 (IB) – generally considered a prime example of modern banking – facilitate a firm's access to

public capital markets. The IBs role could be interpreted as that of a broker; i.e. matching buyers and sellers for the firms' securities. In this interpretation IBs just facilitate transactions, which would confirm the transaction orientation of modern banking. The IBs' added value would then be confined to their networks, i.e. their ability to economize on search or matching costs. As a characterization of modern banking, this would describe their economic role too narrowly. IBs do more. They – almost without exception – *underwrite* those public issues, i.e. absorb credit and/or placement risk. This brings a IBs 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 lending³.

In lending, a bank manages and absorbs risk (e.g. credit and liquidity risks) by issuing claims on its total assets with different characteristics than those encountered in its loan portfolio. In financial intermediation theory this is referred to as *qualitative asset transformation* (see Greenbaum and Thakor [1995]). Underwriting of an IB can be interpreted analogically; risk is (temporarily) absorbed and is channeled through to the claim holders of the IB. The role of IBs is therefore more than just 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 typically 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 [1999]).

It is important to note that the relationship aspect does not only involve funding but includes also various other financial services, e.g., letters of credit, deposits, check clearing and cash management services. I 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

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, they had the debt capital market activities

banks obtain by offering multiple services to the *same* customer may be of value in lending (Degryse and Van Cayseele [2000]). For example, the use of checking and deposit accounts may help the bank in assessing a firm's loan repayment capability. Thus, the scope of the relationship may affect a bank's comparative advantage.

2.3 Are bank loans special?

Some see public capital market financing as a potentially superior substitute for bank lending. This, however, stated as such, is unwarranted. Bank lending has distinct 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.⁴

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.⁵ 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* – non-enforceable – 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 of information may rule out long-term access to alternative capital market funding sources as well as *explicit* long-term commitments by

typically linked to equity capital market operations (within their investment banking divisions). The commitment to equity-linked IB activities is being reduced or even dismantled by many players in the industry.

⁴ Diamond [1984] introduces intermediaries as delegated monitors. See Chan, Greenbaum and Thakor [1986] for a discussion on information reusability, and James [1987] and Lummer and McConnell [1989] for empirical evidence. For a nice illustration supporting the special role of banks, see Berlin [1996].

⁵ See e.g. Simon [1936] and Boot, Greenbaum and Thakor [1993].

banks. Therefore, both bank and borrower may realize the added value of their relationship, and have an incentive to foster the relationship.⁶

Another feature is that relationship banking could accommodate an intertemporal smoothing of contract terms, 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* corporations may reduce the moral hazard problems and information 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 [1998]. 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 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 (the 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.⁷ 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. This is because the borrower realizes that the bank cannot credibly enforce its demands. The bank could threaten to call the loan, but the borrower – anticipating the dreadful consequences not only for

⁶ Mayer [1988] and Hellwig [1991] discuss the commitment nature of bank funding. Boot, Thakor and Udell [1991] address the *credibility* of commitments. Schmeits [2002] formally considers the impact of discretion (flexibility) in bank loan contracts on investment efficiency.

⁷ See Dewatripont and Maskin [1995] on the issues of soft-budget constraints. Diamond [1993], Berglöf and Von Thadden [1993], and Gorton and Kahn [1993] address the priority structure.

himself but also for the bank – realizes that the bank would not carry out such a threat. However, when the bank has priority, the prioritized claim may insulate the bank from these dreadful consequences. It could now *credibly* threaten to call the loan, and enforce its wishes upon the borrower. This then identifies an important advantage of bank financing: *timely intervention*.⁸

These observations highlight the complementarity of bank lending and capital market funding. 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.⁹ 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 funding¹⁰. Diamond [1991] shows that borrowers 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 information¹¹. While not universally valuable, this suggests a benefit of relationship-oriented banking¹².

⁸ One could ask whether bondholders could be given priority and allocated the task of timely intervention. Note that bondholders 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.

⁹ 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) or subordination features can be priced out. That is, as much as senior debt may *appear* cheaper (it is less risky), junior, or subordinated debt will appear more expensive.

¹⁰ Empirical evidence provided by James [1987] and Slovin, Sushka and Hudson [1988] support the certification role of banks. Other evidence can be found in Houston and James [1996].

¹¹ See e.g. Petersen and Rajan [1994] and Houston and James [1995] for empirical evidence.

¹² The relationship feature of (primarily commercial) banking has also drawbacks. There are two primary costs to relationship banking: 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 like this may have perverse incentives ex ante (Bolton and Scharfstein [1996] and Dewatripont and Maskin [1995]). The seniority structure of bank loans, as discussed above, may mitigate this. The hold-up problem has to do with the information monopoly the bank generates in the course of lending, that may allow it to make loans at non-competitive terms in the future to the borrower. More specifically, the

2.4 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? Let me first evaluate the economics of securitization.¹³

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 the asset-backed securities would provide funding. Asset-backed securities rather than bank deposits would then fund dedicated pools of bank-originated assets. As I will emphasize, securitization does not signal the demise of banks, even if it becomes an economically 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, guarantees or with a letter of credit. Effectively this means that the originating bank continues to bear part of 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

proprietary information about borrowers that banks obtain as part of their relationships may give them an information 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 information 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.

¹³ Gorton and Pennachi [1995] provide an economic rationale for bank loan sales and securitization. See also Stone and Zissu [2000].

information in possession of the originating bank, the market requires assurances that the bank will truthfully reveal 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.¹⁴

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 risk 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.¹⁵

How important will securitization become? I can only give a very tentative answer. So far, the securitization market is still small in Europe, but growing. The US is much more developed. For example, the total volume of mortgage linked securitization issues in Europe amounts to just 8% of that in the US, where it stood at US\$ 1621 billion (source: The Bond Market Association). In the US, securitization has spread rapidly in the last two decades 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.

What can be said about 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.

¹⁴ 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.

¹⁵ See also Boyd and Gertler [1994]. They argue 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 bank's value added in the primal activities would be preserved.

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 (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.¹⁶

As my discussion of the economics of securitization suggests, even if securitization would become prevalent, banks could continue to play an important role for most of the primal activities that were previously combined together 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 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 would make this a difficult proposition. Some structuring skills, however, and a better feeling for the financial markets might become indispensable.

2.5 Is relationship banking at risk?

I have argued that relationships may facilitate a continuous flow of information between debtor and creditor that could guarantee uninterrupted access to funding. Some, however, believe that more competition threatens these relationships, while others have recently argued the exact opposite. The question then is: how does elevated interbank competition or more intense competition from the financial market affect relationship banking?¹⁷

Let me first consider the viewpoint that more competition means less relationship banking. The argument here is that with more competition borrowers might be tempted to switch to other banks or

¹⁶ As a caveat, some of this activity in securitization is undoubtedly induced by capital arbitrage, and the new Basle II capital requirements may mitigate this somewhat.

¹⁷ A second trend is the better dissemination of information. This, by itself, could reduce the value of (previously) proprietary information in the hands of banks, and possibly reduce the value of relationship banking.

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.

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. 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 the discussion in section 2.3 – may no longer be sustainable in the face of sufficiently high competition. This indicates that excessive interbank competition *ex post* may discourage bank lending *ex ante*.^{18, 19}

An alternative view is that competition may elevate the importance of a relationship-orientation as a distinct competitive edge. It may mitigate somewhat 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 a relationship banking orientation can make a bank more *unique* relative to competitors. 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

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 interbank competition may very well elevate the value of relationship banking. Pure price competition

¹⁸ Berlin and Mester [1998] 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 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. The effects on small business lending are, however, not clear-cut (see Berger, Saunders, Scalise and Udell [1998]).

²⁰ Boot and Thakor [2000] distinguish generic (information-extensive) transaction lending by banks from relationship lending. Transaction lending is most similar to direct funding in the financial market. Boot and Thakor’s analysis attaches two dimensions to relationship lending: volume and intensity or quality. That is, banks can choose to offer more relationship loans (at the expense of transaction loans) but also have to decide on the *intensity* of their relationship loans. Intensity points at, for example, sector specialization: how much does a bank invest in specific knowledge of a firm or industry? The more the bank invests, the better it can fine-tune its services to the needs of its relationship borrowers. Boot and Thakor’s main finding is that competition induces banks to make more relationship loans at the expense of (generic) transaction loans. However, the quality (or intensity) of the relationship loans is lower when interbank competition heats up.

is an unattractive alternative. However, truly creating an added value in relationship banking may require skills that many banks do not (yet) have. Without those skills a retreat from relationship banking (including for example downsizing of the branch network) might be unavoidable.

2.6 Conclusions

The overall picture emerging from the overview of economic theory is that banks play an important role in the process of financial intermediation. Banks process information, often proprietary. I extensively discussed the role of banks in lending, and concluded that they will continue to have a distinct role in this activity. Securitization of bank loans has some impact but will not fundamentally affect the relationship-oriented role of banks, but obtaining some debt capital market capabilities might become necessary.

While most of the arguments in this section focus on the banks' role in lending, the applicability of the analysis is broader. Banks facilitate a fine-tuning of intermediation services, and capitalize in this way on their relationships. The growing competitive pressures in the industry will more than ever force banks to search for comparative advantages. Offering tailored, relationship-oriented financial services is only possible for those institutions that can capitalize on distinct skills. The optimal scale and scope has not been addressed. This is next.

3. Scale and Scope Issues in Banking

3.1 Introduction

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 this section we first summarize the empirical evidence on scale and scope economies. Existing empirical evidence is quite generic. One of my conclusions 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.

After discussing the empirical evidence and the main barriers to realizing scope and scale economies (sections 3.2 through 3.4), I seek to identify the main sources of scope and scale economies (section 3.5). I conclude with some observations on the activities that I consider most susceptible to scale and scope economies (section 3.6).

3.2 Early empirical evidence on scale and scope economies

Scale and scope economies in banking have been studied extensively. A recent survey paper by Berger, Demsetz and Strahan [1999] concludes that in general the empirical evidence cannot readily identify substantial economies of scale or scope.²¹ Scale economies could not readily 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 largely involves US studies only. Contrary to banking in many other countries, US banking has historically been quite fragmented.²² The mergers and acquisitions that were included in most studies took place in an environment where severe constraints existed on the type and geographic dispersion of activities. It is conceivable that these restrictions made it difficult to benefit from scale and scope economies (see also Calomiris and Karceski [1998]). Moreover, most studies use data from the 70's and 80's. Since the structure,

²¹ See also Shaffer and David [1991], Cornett and Tehranian [1992], Mester [1992], Mitchell and Onvural [1996] and Clark [1996].

²² This is not really surprising. U.S. banks faced substantial regulatory constraints on their activities concerning both the type of their activities (e.g. banks could engage in commercial banking or investment banking, not both) and their location (e.g. limits on interstate banking). More recently, however, regulatory constraints have become less binding. This undoubtedly partially explains the surge in mergers and acquisitions.

technology and environment of banking has changed dramatically over the last decades, it is not clear whether insights from those studies readily apply today.

In any case, most empirical researchers in the area of industrial organization will acknowledge that scale and scope economies are very difficult to measure. So, at best, very modest conclusions could ever be drawn from these empirical studies. The presence of largely inconclusive results should then not really be surprising. Moreover, inefficiencies in managing larger organizations may mitigate possible scale and scope benefits. This would be in line with the sizable literature on the “diversification discount”. 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 percent (of the costs of the average bank), while cost scale economies in the 1980’s were not more than 5% but possibly more today. Berger also argues that managerial ability may have an equally big impact on revenue efficiency.

A complication in the empirical studies is also that increasing scale and scope may facilitate market power and thus elevate profitability in *absence* of scale and scope economies. This effect might be less important in inter-geographic market mergers. Moreover, alternative distribution networks (e.g., direct banking) and the proliferation of financial markets may have reduced the effective market power of locally concentrated financial institutions, and elevated the contestability of markets. This points at a more general issue: the level of concentration may no longer be a good proxy for the (non-) competitiveness of a market.

Another issue is that the level of aggregation in most studies is high and may obscure benefits to scale and scope. In particular, one should look at what *type* of mergers and acquisitions involve scale and/or 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.²³ 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?²⁴

²³ An important issue is whether this only points at market-power benefits or whether also true efficiency gains could be at work.

²⁴ 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 obscure Glass-Steagall regulation in the U.S. (see Kroszner and Rajan [1994] and Puri [1996]). See Ramirez [2002] for some evidence on the scope economies in pre-Glass Steagall Act US banking.

A final concern relates to the effect of mergers on the valuation of financial institutions. A popular methodology is to look at the announcement effect of a merger. A problem with this approach is that mergers may change the structure and dynamics of the industry. If this were the case, the announcement effect could measure all kinds of other effects, including changes in expectations. Some of these and other concerns are summarized in Table 1.

Table 1: Some problems with the existing empirical studies on scale and scope economies

Subject	Issues
Market power analysis: effect on prices and profits → Static → Dynamic (effect of M&A)	<ul style="list-style-type: none"> ◦ Is concentration the right measure? What about contestability of markets? ◦ Combined effect of market power and efficiency changes difficult to disentangle, <ul style="list-style-type: none"> - Profitability ratio's affected by market power - Cost ratio's via costs of deposits linked to market power. Operational costs affected by relative importance of deposits versus purchased funds ◦ Event studies affected by "signaling". That is, the immediate effect of a merger announcement on stock prices incorporates all types of changes in expectations
Efficiency consequences → Static → Dynamic	<ul style="list-style-type: none"> ◦ How to measure scope economies? ◦ Lack of data points for mega-institutions ◦ Little differentiation between type of mergers and/or type of activities

3.3 Further evidence on scope and scale economies

Let me first focus on scope economies. In “earlier” work (up to the mid-nineties), scope economies were measured by comparing the costs of a specialized single product financial institution to a financial institution producing multiple financial services. A typical study along these lines is Ferrier, Grosskopf, Hayes and Yaisawarng [1993]. They consider possible scope benefits of five closely related bank services, i.e. demand deposits, time deposits, real estate loans, installment loans and commercial loans. In their sample 575 banks are represented that participated in the 1984, Federal Reserve’s Functional Cost Analysis (FCA) program. The authors compare the costs of the more specialized corporations to those of the more diversified corporations. The authors conclude that less than 3 percent of the banks in the sample showed scope economies, while 79 percent had scope diseconomies. Other contemporary studies come to similar conclusions (Berger, Hanweck and Humphrey [1987] and Pulley and Humphrey [1993]). Ferrier, Grosskopf, Hayes and Yaisawarng [1993], also showed that diseconomies of scope were most likely for the larger banks in the sample.

More recent studies have focused on different efficiency concepts, in particular profit efficiency. Again the results are inconclusive at best. In a typical study, Berger, Humphrey and Pulley [1996] focus on the joint “consumption” benefits of deposits and loans, in a sense the benefits of one-stop banking. Theoretically, various benefits could be envisioned, e.g. lower transaction and search costs, and lower information costs. However, no profit efficiency enhancement could be discovered. Observe that this does not necessarily imply that scope economies do not exist. It is (theoretically) possible that competition between financial institutions prevents banks from retaining the benefits. That is, the surplus that scope expansion creates might be passed through to the consumers. But as a general conclusion, it is fair to say that scope economies are hard to realize. Illustrative in this respect is Saunders [2000]. He lists 27 studies, of these 13 find diseconomies of scope, 6 find economies of scope and 8 are neutral.

However, also in these studies “old” data dominate. Recently DeLong [2001] has looked at the shareholder gains - that is, the immediate announcement effects - from focused versus diversifying bank mergers in the US between 1988 and 1995. What he found was that focused mergers, both on the level of activity and geography, had positive announcement effects. Moreover, focus in activities was shown to be more important, than geographical focus, albeit the latter was important as well.²⁵ Activity-diversifying mergers had no positive announcement effects. These results point at the presence of scale rather than scope economies.

²⁵ Geographical expansion in the US 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,

While this study (again) focuses on relatively small US banking institutions (market cap acquirer approximately 2 billion US dollars, and target less than 100 million), recent European evidence on much larger institutions confirms the desirability of geographical focus. 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. The distribution of the value gains is however often tilted against bidders. Especially in cross-border bank mergers bidding banks suffer a severe value loss (and targets come out extremely well).

The importance of geographical focus may point at problems with managing (and improving) foreign acquisitions, but also highlights the market power effect. Domestic consolidation often facilitates market power, and this is present with both scale and scope expanding mergers and acquisitions.²⁶

These (and related) studies focus on stock market responses to acquisition announcements. While these announcement effects reveal the market's expectation of future cash flow, we should keep in mind that actual performance may differ from market expectations. As DeLong [2001] puts it, "Although the prior conditions to predict successful mergers may exist, their presence may be difficult to discern." This is particularly true for some of the mega-mergers that are observed today. A lack of data points and potentially radical and unprecedented shifts in the structure of banking give us (and the market) little guidance in interpreting the value consequences of these mergers. As an example, the reported significant positive announcement effects associated with bank-insurance mergers may be difficult to reconcile with the current market sentiment.

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

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 US evidence.

²⁶ In an interesting recent paper Focarelli, Panetta and Salleo [2002] contrast the motivation for mergers to that of acquisitions. They conclude, based on Italian data, that mergers often have a strategic, revenues enhancing objective (cross selling) while acquisitions often aim at improving the credit policy (and thus the loan book quality) of the target.

Vander Venne [2002] has looked at this in this 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 or scope economies.

3.4 Problems with realizing economies of scope and scale

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. An interesting account on this very issue is the integration of Citicorp and Travelers. A quote from the New York Times:

“Citibank and Travelers say their deal is mainly about finding ways to grow rather than cutting costs. But the challenge will be finding common ground between Citicorp’s traditional emphasis on advanced technology and Traveler’s preference for low-cost, no frills systems”

(New York Times, April 13, 1998, Business Day section).

In the same article it is stated that Citicorp has a backlog of past integration issues before it can even think of making its systems compatible with those of Travelers. These issues point at the potential frictions that severely hamper the realization of scale and scope benefits. For example, ultimately, technological benefits might also include the cross-use of databases from the insurance and banking side. The realization of this scope benefit might have to wait till systems are finally made compatible. The bottom line is that technological frictions may severely hamper the realization of scope (and scale) benefits.

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

combined under one corporate roof. In many other countries, regulations are (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 earlier reported evidence shows there are enormous differences between the best practice and “average practice” financial institutions. Managerial ability may play a crucial role.

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 2 summarizes the main barriers to realizing scope and scale economies.

Table 2 Possible barriers to realizing scope and/or scale economies

Barrier	Examples
<ul style="list-style-type: none"> • Technological barrier 	<ul style="list-style-type: none"> ◦ incompatible computer systems ◦ conflicting distribution channels
<ul style="list-style-type: none"> • Regulatory barrier 	<ul style="list-style-type: none"> ◦ explicit limitations on activities ◦ regulatory-induced Chinese walls
<ul style="list-style-type: none"> • Managerial barrier 	<ul style="list-style-type: none"> ◦ lack of leadership ◦ cultural differences
<ul style="list-style-type: none"> • Political considerations 	<ul style="list-style-type: none"> ◦ ‘national flagship’ attitude

3.5 Sources of scope and scale economies

After having presented the mixed empirical evidence, I will now seek to uncover the main sources of scale and scope economies. I see the following sources for scale and scope economies:

- i. Information-technology related economies;
- ii. Reputation and marketing/brand name related benefits;

- iii. Financial-innovation related economies;
- iv. Benefits of diversification.

3.5.1. Information-technology related economies

The first source, information technology, is most likely of great importance. Recent developments in information technology facilitate 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 related client needs. Scope economies therefore apply to all products that could be sold to the same client group. Examples for bank-insurance conglomerates 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 sizable 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.

Observe also that the developments in information technology may affect the scope of control; information technology could facilitate the management of a bigger organization. This means that information technology could result in scale and scope economies. The implication is also that sizable investments in information technology are needed to truly benefit from scale and scope economies.

3.5.2 Reputation and brand name/marketing

The second source of 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 linked 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 success of modern “virtual” distribution channels (Internet) may depend crucially on reputation. Under certain conditions, increasing scale and scope allows financial institutions 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).²⁷

3.5.3 Financial innovation

The next source of potential scale and scope economies is financial innovation related economies. Financial innovation as a source of scope and scale economies is a two-edged sword. Some suggest that larger institutions are less likely to innovate due to the inherent bureaucracy. This might be true but that is a governance issue. *Ceteris paribus*, larger 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. Financial innovation related economies could also be directly related to product/client databases (see also the first two sources of economies). Wider product and client databases can provide superior information for the design of financial innovations.

Bank-insurance combinations could potentially be successful in leveraging each other’s product skills. For example insurance subsidiaries could benefit from derivative-innovations coming from the banking arm. Similarly, securitization skills developed in banking are heavily cross-used, and, more

²⁷ The ING example also shows the possible sharing of marketing expertise between insurance and banking subsidiaries. Banking subsidiaries have generally benefited from the extensive direct marketing expertise of the insurance arm. In the case of ING, the Postbank (an ING subsidiary) skills in direct banking were also relevant.

recently, several securitization innovations have been motivated by particular needs in the insurance operation.

3.5.4 Diversification

The fourth potential source of scale and scope economies is the benefit of diversification. Several products might be close substitutes, for example pension-, life insurance- and saving products. Combining these products and services within one organization mitigates the effects of demand substitution over these products/activities. This *could* be interpreted as a diversification benefit, but may also point at cross-selling benefits (see section 3.5.1).

From a corporate finance perspective, diversification is a controversial argument. After all, investors (shareholders) could diversify and why would a financial institution itself need to do this (unless of course there are synergies, and thus scope benefits)? However, various frictions may explain the value of diversification. For example, diversification facilitates an internal capital market where cash flow generating businesses could help fund other activities that need funding. If raising external funds is costly, this may add value. Nevertheless this might be a mixed blessing. Often the presence of internal capital markets invites cross-subsidization of marginal or loss making activities that could wipeout potential benefits. This is also the finding of Berger and Ofek [1995] who find an average diversification discount of 13-15 percent. Having said this, it is true, that a low volatility in returns is considered very important in banking. This points at some benefit of diversification.

A link can also be made to the proliferation of off-balance sheet banking, see for example the analysis of securitization in section 2.4. These activities involve all kinds of guarantees that lead to contingent liabilities. For such activities, the credibility of the bank in being able to honor such guarantees is crucially important. One measure of this is a bank's credit rating. With the proliferation of off-balance sheet banking, ratings have become more important. If diversification helps in getting a better rating, a stronger argument for diversification can be made.

3.6 Further observations and conclusions

The various sources that I have discussed point at potential *revenue* (output) and *cost* (input) synergies.

In Table 3, I have summarized the discussion so far.

Table 3 Revenue- and cost synergies

Source	Type of synergy	Example(s)
Information technology related economies	Revenue	◦ cross selling potential
	Cost	◦ fixed cost of IT ◦ re-usability of information: cross sectional and inter-temporal ◦ scale economies in running distribution network
Reputation and marketing/brand name related benefits	Revenue	◦ acceptance new distribution channels (internet) ◦ cross-selling potential
	Cost	◦ fixed cost of marketing, branding
Financial innovation related benefits	Revenue	◦ superior innovations based on broader information set ◦ better rent extraction due to bigger network
	Cost	◦ fixed cost of innovation
Benefits of diversification	Revenue	◦ avoid loss of turn-over to substitutes ◦ benefits linked to off-balance sheet activities
	Cost	◦ internal capital market

Looking at Table 3, we see that most potential sources of economies of scale and scope are related to distribution. The importance of the distribution network is clear and should be considered a primary source of scope and scale benefits.

The possibility for scope economies is generally present. For example, on the demand side, the proliferation of saving 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. Consider for example IT investments. 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. However, the IT developments offer very good possibilities for focused single-product players as well. Also interfaces (may) come up that help bundle the product offerings of specialized providers, thereby becoming a substitute to an integrated provider. Only very well managed 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 vertical disintegration of the value chain. 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 the other players. But ultimately, it does not seem unrealistic to expect the emergence of, for example, product specialists without distribution network (see also McKinsey & Co [2002]). This would fit a situation where financial intermediaries become supermarkets that sell products from a variety of suppliers.²⁸ The scale economies and benefits coming from focus could be substantial.

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 big. 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 (and possibly they are, see below), an independent asset management operation is a credible alternative.

Similarly, people argue that bank-insurance combinations have a distinct benefit 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 liability on the bank's balance sheet (short-term funding, long on the asset side) might be the reverse from that of an insurer (long term obligations). Again corporate finance theory is skeptical about the validity of these arguments.

²⁸ 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/consumer focused and have vertically integrated distribution systems.

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 passive spin-off from other (feeding) activities. Thus, synergies are present, but not necessarily dominant. This is not 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 that I discussed in subsection 3.5.1.

However, as I discussed in section 3.4, other factors may undermine the possibility for realizing scope 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.

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 operation (see also Smith and Walter [1997]).

4. Scope as a Strategic Advantage

4.1 Introduction

The analysis so far has solely focussed on scope and scale economies. This in itself is inadequate for predicting or explaining the positioning of financial institutions. The actual positioning will depend on quite a few other factors as well. In particular, a financial institution that has to position itself today will take the following factors into account:

- i.* What are my core competencies? And what is my current position and financial strength?
- ii.* How do I expect the market for financial services to develop? Can I distinguish various scenarios?
- iii.* What market structure do I expect in the various scenarios? In particular, what do I expect the competition will do?

And only at this stage, the potential for scope and scale economies enters:

- iv.* What are the scope and scale economies in the delivery of financial services?

What this implies is that scope and scale economies are just one input, albeit an important one, for the positioning today. It is also worth noting that the decision about scale and scope (involving choices about clients, products and geographic presence) is not final. For example, the choices being made today could seek to keep options open anticipating further restructuring once more information becomes available. This is important for interpreting the restructuring that we observe. The current restructuring is motivated by strategic considerations (e.g. positioning) and may not give a good indication about what the future structure of the financial services sector will be. Current decisions might be “posturing” vis-à-vis competitors that might be undone in the future. In this section, I develop this strategic rationale for the restructuring in the financial services sector.

4.2 General framework

The explanation developed in this section is that strategic uncertainty about future exploitable core competencies may dictate broadening of scope. The basic idea is as follows. Suppose a financial institution knows that – perhaps due to deregulation – it can participate in another market at some time in the future. The problem is that this is a new market, so the financial institution is highly

uncertain about whether it has the skills to compete effectively in that market.²⁹ It has two choices. It can wait until that future time to find out whether it has the capabilities and “core competencies” (as defined by Hamel and Prahalad [1990]) for this new market. Or it can enter the market “early” and discover what its skills are prior to making costly resource allocation decisions. The advantage of the second approach is that it permits the institution to “experiment” with a new business and learn whether it has the skills to compete in that business. This learning permits better decisions when competition commences. In particular, having better knowledge about its own skills allows the institution to be more aggressive in its output decisions and gain market share when it knows that its skills are superior to those of its competitors, and to exit the market when its skills are inferior.

One could explain scope expansion as the financial institution reserving the right to play in a variety of “new” activities. By making incremental investment today, the institution puts itself in a privileged position through the acquisition of superior information by learning. This allows it to wait until the environment becomes less uncertain before determining whether to compete in the new market and if so, how aggressively; see also Courtney, Kirkland and Viguerie [1997] for the link between strategy and uncertainty. In a recent paper (see Boot, Milbourn and Thakor [2002]) a formal model has been developed that formalizes these ideas and incorporates scope as a potential competitive advantage. The framework in that paper is as follows. It starts out with a financial services sector with narrowly defined existing activities and asks whether financial institutions should expand into a “new” activity. A key feature of the analysis is that there is strategic future uncertainty about the demand for this new activity, i.e. the activity has prospects only in the long run and demand may not materialize. The institution must decide whether or not to expand in this activity, and if so, whether to enter early or late. Early entry is costly because the activity becomes important only later. Demand may not materialize, and entering early requires investments to be made prior to the resolution of demand uncertainty. Moreover, the scope expansion associated with investing in strategic options could reduce the competitiveness of existing operations (say due to dilution of focus). However, early entry offers potential strategic advantages. In particular, early entry could lead to the discovery of skills that would allow for a more efficient delivery of the new activity and hence make the financial institution a more credible competitor once the prospects of this activity become clear.

The question is: when will the benefits of early entry outweigh the costs? The uncertainty about skills plays a key role here. If this uncertainty is substantial, early entry may be beneficial. The other key factor is the competitive environment of the financial services sector, and the anticipated competition for the new activity. Suppose that the new activity can also be offered by a specialized provider (a

²⁹ Note that these are strategic investments in activities that are “uncertain”. What I mean by this is that the investment is in an activity with uncertain profit potential, or that the fit between the new activity and the existing activities is uncertain. In both interpretations, the profit potential is “uncertain”.

“boutique” specializing in this activity). If the financial institution enters (early or late), one could consider the market for this activity as a Cournot duopoly game. Early entry is beneficial because it would then learn its skills in the new activity. This allows the institution to compete more aggressively when it has favourable information about its skills and more cautiously when it has poor information about its skills. The benefits of early entry also depend on how likely it is that a specialized provider will come along. Whether early entry is optimal will thus crucially depend on the competitive environment.

4.3 Importance of the competitive environment

Also the competitive environment of the existing activities enters the analysis because of the investment and risk associated with early entry in the new activity. If the existing activities face “too much” competition, financial institutions would be unable to absorb the investment and risk that come with early entry in the new activity. An immediate implication is that investments in strategic options and thus the adoption of broader, less-focused strategies will be observed in less competitive industries, whereas firms in competitive industries will embrace more focused strategies. This could explain why Continental European financial institutions generally follow broad strategies. Their local market power allows them to afford the “widening of scope” strategy and benefit from its potential future strategic advantages.

Moreover, as stated earlier, the anticipated future competitive environment for the new activity matters as well. If the financial institution anticipates facing little or no competition in this activity in the future, early entry – with its accompanying cost and dilution of focus – is unnecessary because a competitively unchallenged institution can operate successfully in this market without the benefit of early entry. At the other extreme, when the anticipated competition for the new activity is very intense (perhaps due to many potential future competitors), early entry is not an attractive proposition and is once again sub-optimal. The analysis thus leads to the prediction that moderate anticipated competition in the new activity together with not “too much” competition in the existing activities facilitates early entry. In Table 4, I have summarized the main insights.

Table 4 Optimal scope as function of the competitive environment

Anticipated competitive environment in the strategic option (new activity)	Current competitive environment in existing financial services activities	
	Little competition	High competition
Little competition	Narrow	Narrow
Medium competition	Broad	Narrow
High competition	Narrow	Narrow

(Narrow - no early investment in new activity, Broad - early investment in new activity)

The analysis shows that, starting from a situation with strategic uncertainty, the competition the financial institution faces in its current activities together with the competition it anticipates in the future in the new activity lead to predictions about early entry and hence optimal scope. Scope expansion is seen to be optimal when there is high strategic uncertainty, moderate competition expected in the new activity, and low-to-moderate competition in the existing activity.

In this context also the benefits of consolidation could be explored. Now assume that there are multiple competing institutions at the outset. Consider two of these contemplating a merger. The question before them is whether consolidation (merging) today gives them a competitive advantage in undertaking the new activity tomorrow. The answer is affirmative. Merging helps create “deep pockets”, and possibly also reduces the degree of competition, making investments in strategic options more affordable. It should be clear that these effects have little significance in an environment without strategic uncertainty. The analysis thus predicts greater consolidation in industries with more strategic uncertainty.

4.4 Is strategic uncertainty special to financial services?

Why does this model of strategic uncertainty fit financial institutions so well? There are at least three reasons. First, deregulation in financial services sector is opening doors to new activities at a rate that is unprecedented since the Great Depression. Second, the swirling tides of technological and regulatory changes are generating a level of uncertainty about the skills needed to operate successfully in the future that is perhaps greater in the financial services sector than in any other industry. Lastly, banks and to some extent insurers have traditionally faced limited competition in their home markets. This has created “deep pockets” across the industry, and serves to support the broad strategies observed particularly in banking. The combined validity of these arguments makes the model especially suited for the financial services industry.

The precise interpretation of the model of strategic uncertainty could be amended to fit financial institutions even better. In particular, one could interpret the institution's problem as it not knowing what combination of activities will give it a competitive edge in the future. In this interpretation, a financial institution is not contemplating to enter new activities but possibly "old" activities that it traditionally chose to abstain from. Early entry, or better, choosing a wider set of activities, would let the institution discover what activities optimally fit together.

4.5 Relevance of strategic options in the European context

I will now highlight a broader interpretation of the strategic option explanation in the context of the restructuring of the European financial services industry. Industry practitioners strongly believe that a strong position in the home market is crucial for a successful expansion in foreign markets. Generally, this seems to be the case. I will give a few examples in the context of banking. Belgian banks generally have weak foreign operations. One reason is that the Belgian political situation (the split between the French and Dutch speaking regions) did not allow for strong domestic powerhouses. Swedish and other Scandinavian banks suffered from a financial crisis in the late eighties, early nineties, inhibiting their foreign aspirations. Spanish banks started to consolidate "late". However, once it started, multiple mergers rapidly led to two big banks, BBVA and SCH. Their foreign aspirations are largely limited to the South American market, but by now (and after running into problems in South America) also involve other Southern European countries. The Dutch, Swiss and – to a lesser extent – French powerhouses have strong franchises in their home markets and all have foreign aspirations.³⁰

In the interpretation of the Boot, Milbourn and Thakor [2002] analysis, strength in the home markets allows financial institutions to invest in strategic options. An important one is investment banking (IB). While Continental European banks traditionally dominated the domestic activity in investment banking, they have had a more marginal role in IB in foreign markets and now also face severe competition in their domestic IB activity. Many of them feel that a presence in IB might be important for their existence as powerful banks in the future. They are willing to accept – for the moment at least – relatively low returns on those activities. The potential but uncertain vital role of these activities in the future defines them as a strategic option.

³⁰ The German banks face difficulties in their home market (see also section 5.2). Across the Channel, HSBC and Royal Bank of Scotland (RBS), have strong positions in their home markets, and seek focused international expansion.

From a shareholder value maximization point of view, investing in strategic options might be desirable (if at least potentially sufficiently lucrative). However, how can we distinguish the “strategic option” explanation from a simple managerial entrenchment explanation? That is, managers (and governments!) may just want powerful institutions for their own sake. Distinguishing between those explanations is difficult. As the experiences of the (no longer independent) French bank Credit Lyonnais teach us, banks that are not accountable, and even worse, operate as playground for government-appointed “cronies” are unlikely to follow value-maximizing strategies. Growth then becomes a managerial entrenchment strategy.

Banks themselves are ambivalent too. The struggle of European banks in investment banking is a perfect example: while some see it as a strategic option, others (NatWest -- now RBS -- and Barclays) have retreated. Also the recent partial retreat of ING from investment banking is consistent, and also the problems that Dresdner bank faces with investment banking under the umbrella of Allianz. While IB might be a valuable strategic option, lack of profitability and/or deep pockets may dictate a retreat. Obviously, opinions may also differ on the viability and importance of investment banking as a strategic option. Just last year, many analysts argued that the lending capacity of commercial banks could give them a competitive edge in the IB market. More recently, particularly considering the high losses on telecom-related debt incurred by some of these players, this “synergy” looks much less convincing.

I see similar ambivalence vis-à-vis insurance activities. Some think that it is perfectly complementary to commercial banking activities (e.g. to economize on the distribution network) and have embraced it – see ING and Credit Suisse-Winterthur – others choose to stay out of it (e.g. AEGON). Also here players may differ in their assessment of the viability and importance of insurance activities as strategic option. But here, at least in terms of distribution to targeted customer segments, some agreement exists on the complementarity and synergies between commercial banking and insurance. The strategic consideration might be a different one. For example, AEGON may envision that its “elbow room” in taking part in the ongoing consolidation in the insurance industry would be hampered by linking up to a banking institution now. After the consolidation phase is over, it may actually subscribe to the bank-insurance model. However, it may also believe that more focus and choosing for alliances/joint ventures are superior (see section 3.6 and also the observations I will make in section 5.2).

Nevertheless, I do believe that scale and scope economies are present in banking. Simultaneously, however, I observe that much of the consolidation in the European financial services sector is defensive. Consolidation has increased scale and scope mainly in domestic markets and facilitated local market power. Size has reached proportions that seriously questions whether any more benefits

of scale are present. And is the wider scope truly sustainable? Will it not cause dilution and loss of focus? If so, it will clearly limit the desirability of investing in strategic options. Instructive in this respect is that the operations of European financial institutions in foreign markets (where they face more competition) are generally well focused.

4.6 Summary

Strategic considerations play an important role in the restructuring of the financial services industry. The arguments developed in this section help to give a prescription about where scope and (to some extent) scale become important from a strategic perspective.

What activities are most readily subjected to these considerations? The primary deciding factor is strategic uncertainty, with the degree of competitiveness as complementary factor. In my view the development of alternative distribution channels (e.g. Internet) is a primary source of strategic uncertainty. Also the developments in IT have potentially substantially broadened the feasible scope of control. This has induced uncertainty about the desirable scale and scope of operations. For the moment, bigger and broader seems the safest option.

However, the arguments developed in this chapter are subtler. Also the degree of competitiveness plays an important role. “Deep pockets” are important for the broad scope strategy. Here the competitive environment comes in. In particular, “too much” competition would dilute the “deep pockets” and prevent or limit scope expansion. Up to recently, however, the relative protected position of institutions in their home markets has allowed institutions to choose a broad positioning. As markets become more open, both to foreign competitors and inter-sector entry, this choice will be reconsidered, and actually that phase we have, in my view, now entered. More focus becomes rapidly inevitable.

5. The Future: Concluding Observations

5.1 Value of alliances

A potentially important alternative to consolidation is the concept of an alliance. This concept is underdeveloped in the context of banking. This is to some extent surprising. Banks did, and still do, engage in correspondent banking, particularly in the context of cross-border payment services. But correspondent banking is losing its importance. In particular, with the advent of information technology international payment and settlement systems have become available (e.g. the emergence of TARGET and settlement systems like Cedel and Euroclear). These developments reduce the need for correspondent banking. More importantly, correspondent banks may have become competitors in the areas they were cooperating in before. For example, some banks seek to gain a competitive edge by offering proprietary cross border payment facilities. This points at an important consideration for the feasibility of correspondent banking, or alliances for that matter. It only works if the interests of the participating institutions are sufficiently aligned.³¹ But why may alliances become important?

The fundamental reason I see is that vertical disintegration in the value chain will gain in importance (see also Berlin [2002]). This allows for greater specialization and hence focus, with potential scale economies as well. Alliances could play an important role in this process. They may introduce more 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, and 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, I would like to take issue with this point of view.

³¹ Observe that correspondent banks could traditionally not enter each other's markets. Interests were therefore more readily aligned.

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 partners all have a limited exposure to these activities, which helps them 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.³² Obviously, the alliance model does not come without cost. The important task is to define 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. This would facilitate the information technology investments that allow the partners to capitalize on scale economies. 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 alliance model is indeed observed (e.g. Credit Suisse – Winterthur before the merger). It is possible to distribute insurance products via a bank’s distribution network based on a license agreement.³³ However, at least up to recently, the perception in the market was that the integration of IT is only assured with an outright merger. Thus, the desired synergy in distribution (and also the complementary feeding of asset management operations) would then seem to favor integration.

A key question is whether this will remain so. I tend to believe that joint ventures and alliances will gain importance in the future. It will also help if the level of uncertainty in the industry comes down a little. Vertical disintegration now may create an unpredictable dependence on other parties in the value chain. Developments in IT actually help provide smooth transitions between the different parties in the value chain. Economies of scale and benefits from focus could be obtained in this way (see also section 3.6).

³² The experience of some Western banks is that top management gets fully distracted by the investment banking activities and spends disproportionately little time on the often more profitable non-investment banking activities.

³³ Very recently, ABN AMRO announced that it would put its (limited) insurance operations in a joint venture with Delta Lloyd. It hopes that the alliance will promote a more effective cross selling of insurance products via its own distribution networks.

In the end, alliances seem only feasible if the activities that are part of it can be run as a more or less separate (jointly-owned) business unit with considerable independence from the “mother institutions”. This is for now probably most likely for (smaller) regionally specialized financial institutions that may want to join forces in for example investment banking and asset management. For bigger institutions alliances are for now, less prevalent, but when these institutions will (finally) choose to focus, alliances will “mushroom”.

5.2 Political considerations and national identity important: Europe vs. US

The more consolidated financial sector observed in Europe gives a clear hint about what can be expected in US banking when regulatory constraints become less binding (as they have become in recent years). But what can be said more fundamentally about the *diverse* European experience? I will discuss political considerations in the context of differences between the banking industry in Europe and the US.

Let me first focus on the arguable superficial common European experience as it may relate to the US. Europe and the US share some similar dynamics. In particular, the relaxation of constraints on interstate banking in the US is reminiscent of the European Union banking directives liberating cross-border banking. However, immediately, a fundamental difference between US and Europe surfaces. The domestic banks in Europe were – and are – protected as domestic flagships. A fundamental belief that foreigners should not control financial institutions has (so far) almost prevented any cross-border merger.

The political dimension is at the root of this. Even in countries that do not have any direct interference by governments in banking operations and where banks are considered truly commercial enterprises (and have generally been successful, e.g. ABN AMRO and ING in The Netherlands), the political dimension is important. Central banks, ministries of finance and the banks operate in close concert. This is not very surprising: a very homogeneous group of executives is in charge of the financial sector, central bank and government ministries guaranteeing a clear national identity of domestic institutions. In countries with explicit government involvement (e.g. France and Italy), foreign control over domestic institutions is even more unlikely unless banks become so inefficient and weak that involvement of foreigners becomes almost inevitable. To some extent this is happening. For example, in the bidding war for the French bank CIC, ABN AMRO was favored by some because of its excellent track record vis-à-vis competing French bidders, and the UK bank HSBC succeeded recently in buying up Credit Commercial de France.

The primary response to the liberating EU directives has so far been defensive: domestic mergers are generally encouraged to protect national interests. A case in point is Germany. Many have observed that banking in that country is surprisingly dispersed despite the (traditionally!) powerful images of Deutsche Bank, Commerzbank and Dresdner Bank (now part of Allianz). Public policy definitely aims at protecting the interests of these powerful institutions, but the consolidation is played out mainly on the Länder-level (the separate states). Indeed, precisely at the level where the political dimension is at work. This is an important explanation for the regional and *not* national consolidation in German banking.

I would conclude that the national flagship dimension has been of primary importance in Europe. Cross border expansion is rare and consolidation is primarily observed within national borders. For the US this gives little direction. Interstate expansion has been a driving force behind the consolidation in US banking. Politics does now seem to interfere little with interstate expansion. The political dimension in the US seems focused on the demarcations between commercial banking, investment banking and insurance. Powerful lobbies are successful in mobilizing (local) politicians and in this way had been able to obstruct major banking reform in the US Congress, at least up to the passing of the Gramm-Leach Bliley Act of 1999.

In other words, in both the US and Europe vested interests are at work. In Europe there are national authorities preserving their national flagships, in the US, powerful lobbies that seek to preserve traditional demarcations between financial institutions. These observations do not yet answer the question whether national (European) authorities are serving the interests of their constituencies when advocating national flagships. This is a different issue, and may have to be looked at in a game-theoretic context. If *other* countries are following these policies, an individual country may be well advised to follow the same policy. However, all would possibly be better off if none would follow a “national flagship policy”.

5.3 The future

There are powerful forces behind consolidation. I believe that consolidation is only partially driven by value-maximizing behavior. As I have emphasized, also the political dimension cannot be ignored. Consolidation in Europe and the US will continue. The regional expansion that characterizes much of the US merger wave will carry over to Europe. Cross-border acquisitions are coming, particularly with the arrival of the Euro and the European Monetary Union (EMU). The Euro and EMU are

catalysts and will accelerate the integration of national financial markets, and induce a more pan-European view on financial services.

Strategic considerations – as highlighted in this study – have created broad powerhouses. But this will change. Competitive pressures will force financial institutions to discover their true competitive advantages, and choose an optimal configuration of services and activities. The new demarcations between the financial institutions may be very different from the past. The process of restructuring will be a fascinating one. The current developments are just an interesting start.

References

- Allen, F. [1993], Stock Markets and Resource Allocation, in *Capital Markets and Financial Intermediation*, C. Mayer and X. Vives, eds., Cambridge University Press.
- Allen, F. and D. Gale [1995], A Welfare Comparison of the German and US Financial Systems, *European Economic Review*, 39, 179-209.
- Beitel, P. and D. Schiereck [2001], Value Creation and the Ongoing Consolidation of the European Banking Market, Working paper no. 05/01, Institute for Mergers and Acquisitions, University of Witten/Herdecke.
- Berger, A.N. [1997], The Efficiency Effects of Bank Mergers and Acquisition: A Preliminary Look at the 1990s Data, forthcoming in *Bank Mergers and Acquisitions*, Yakov Amihud and Geoffrey Miller, eds, Klumer Academic, Boston, MA.
- Berger, A.N. [2000], Efficiency in Banking: Professional Perspectives, in A. Saunders, *Financial Institutions Management*, McGraw-Hill, NewYork, 300-301.
- Berger, A.N., J.D. Cummins, M.A. Weiss and H. Zi [2000], Conglomeration versus Strategic Focus: Evidence from the Insurance Industry, *Journal of Financial Intermediation*, 9, 322-362.
- Berger, A.N., R.S. Demsetz and P.E. Strahan [1999], The Consolidation of the Financial Services Industry: Causes, Consequences and Implications for the Future, *Journal of Banking and Finance*, 23, 135-194.
- Berger, A.N., G.A. Hanweck and D. Humphrey [1987], Competitive Viability in Banking: Scale, Scope and Product-Mix Economies, *Journal of Monetary Economics*, 20, 501-520.
- Berger, A.N., W.C. Hunter, and S.G. Timme [1993], The Efficiency of Financial Institutions: A Review and Preview of Research Past, Present and Future, *Journal of Banking and Finance*, 17 (special issue on *The Efficiency of Financial Institutions*), 221-249.
- Berger, A.N., A.K. Kashyap and J.M. Scalise [1995], The Transformation of the US Banking Industry: What a Long, Strange Trip It's Been, *Brookings Papers on Economic Activity*, 2, 55-218.
- Berger, P.G. and E. Ofek [1995], Diversification's Effect on Firm Value, *Journal of Financial Economics*, 37, 39-65.
- Berglöf, E. and E.L. von Thadden [1994], Short-Term versus Long-Term Interests: Capital Structure with Multiple Investors, *Quarterly Journal of Economics*, 109, 1055-1084.
- Berlin, M. [1996], For Better and for Worse: Three Lending Relationships, *Business Review Federa Reserve Bank of Philadelphia*, December, 3-12.
- Berlin, M. [2001], "We control the vertical": Three theories of the Firm, *Business Review*, Federal Reserve Bank of Philadelphia, Q3, 13-22.
- Bhattacharaya, S. and G. Chiesa [1995], Proprietary Information, Financial Intermediation, and

- Research Incentives, *Journal of Financial Intermediation*, 4, pp. 328-357.
- Boot, A.W.A. [2000], Relationship Banking: What Do We Know?, *Journal of Financial Intermediation*, 9 (1), 7-25.
- Boot, A.W.A., S.I. Greenbaum and A.V. Thakor [1993], Reputation and Discretion in Financial Contracting, *American Economic Review*, 83, 1165-1183.
- Boot, A.W.A., T. Milbourn and A.V. Thakor [2002], Evolution of Organizational Scale and Scope: Does It Ever Pay to Get Bigger and Less Focused?, working paper, University of Amsterdam
- Boot, A.W.A. and A. V. Thakor [1997], Financial System Architecture, *Review of Financial Studies*, 10, 693-733.
- Boot, A.W.A. and A.V. Thakor [2002], Can Relationship Banking Survive Competition?, *Journal of Finance*, 55 (2), 679-713.
- Boot, A.W.A., A.V. Thakor and G. Udell [1991], Credible Commitments, Contract Enforcement Problems and Banks: Intermediation as Credibility Assurance, *Journal of Banking and Finance*, 15, 605-632.
- Boyd, J.H. and M. Gertler [1994], Are Banks Dead, or Are the Reports Greatly Exaggerated?, working paper, Federal Reserve Bank of Minneapolis.
- Calomiris, C.W. and J. Karceski [1998], "Is the Bank Merger Wave of the 90's Efficient? Lessons from nine Case Studies", working paper, Columbia University.
- Canals, J. [1994], "Competitive Strategies in European Banking", Clarendon Press, Oxford.
- Chan, Y., S.I. Greenbaum and A.V. Thakor [1986], Information Reusability, Competition and Bank Asset Quality, *Journal of Banking and Finance*, 10, 255-276.
- Clark, J.A. [1996], Economic Cost, Scale Efficiency, and Competitive Viability in Banking, *Journal of Money, Credit and Banking*, 28, 342- 364.
- Comment, R. and G.A. Jarrell [1995], Corporate Focus and Stock Returns, *Journal of Financial Economics*, 37, 67-87.
- Cornett, M.M. and H. Tehranian [1992], Changes in Corporate Performance Associated with Bank Acquisitions, *Journal of Financial Economics*, 31, 211-34.
- Courtney, H., J. Kirkland and P. Viguerie [1997], Strategy under Uncertainty, *Harvard Business Review*, November-December, 67-79.
- Cybo-Ottone, A. and M. Murgie [2000], Mergers and Shareholder Wealth in European Banking, *Journal of Banking and Finance*, 24, 831-859.
- Dennis, S.A., and D.J. Mullineaux [1999], Syndicated Loans, Working Paper, University of Kentucky.
- Dewatripont, M. and E. Maskin [1995], Credit and Efficiency in Centralized and Decentralized Economies, *Review of Economic Studies*, 62, 541-555.
- Dewatripont, M. and J. Tirole [1995], *The Prudential Regulation of Banks*, MIT Press, Cambridge, Massachusetts.

- Diamond, D. [1984], Financial Intermediation and Delegated Monitoring, *Review of Economic Studies*, 51, 393-414.
- Diamond, D. [1993], Seniority and Maturity of Debt Contracts, *Journal of Financial Economics*, 33, 341-368.
- Ferrier, G., S. Grosskopf, K. Hayes and S. Yaisawarng [1993], Economies of Diversification in the Banking Industry: a Frontier Approach, *Journal of Monetary Economics*, 31, 229-249.
- Flannery, M. [1999], Comment on Milbourn, Boot and Thakor, *Journal of Banking and Finance*, 23, 215-220.
- Focarelli, D., F. Panetta and C. Salleo [2002], Why do Banks Merge?, *Journal of Money, Credit and Banking*, 34, 1047-1066.
- Gorton, G. and J. Kahn [1993], The Design of Bank Loan Contracts, Collateral, and Renegotiation, NBER working paper 4273.
- Gorton, G. and G. Pennacchi [1995], Banks and Loan Sales: Marketing Nonmarketable Assets, *Journal of Monetary Economics*, 35, 389-411.
- Greenbaum, S.I. and A.V. Thakor [1995], *Contemporary Financial Intermediation*, Dryden Press.
- Grossman, S.J. and O. Hart [1986], The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration, *Journal of Political Economy*, 94-4, 691-719.
- Hamel, G. and C.K. Prahalad [1990], The Core Competence of the Corporation, *Harvard Business Review*, May-June, 79-91.
- Hellwig, M. [1991], Banking, Financial Intermediation and Corporate Finance, in *European Financial Integration*, A. Giovanni and C. Mayer, eds., Cambridge University Press.
- Hoshi, T., A. Kashyap, and D. Scharfstein [1993], The role between Public and Private Debt: An analysis of post-deregulation corporate Financing in Japan, NBER Working Paper. 4421.
- James, C. [1987], Some Evidence on the Uniqueness of Bank Loans, *Journal of Financial Economics*, 19, 217-235.
- John, K. and E. Ofek [1995], Asset Sales and Increase in Focus, *Journal of Financial Economics*, 37, 105-126.
- Kashyap, A., R. Rajan, and J. Stein [1999]. Banks as liquidity providers: An explanation for the Co-existence of Lending and Deposit-Taking. Working paper. University of Chicago.
- Kroszner, R.S. and R. Rajan [1994], Is the Glass-Steagall Act Justified? A Study of the US Experience with Universal Banking Before 1933, *American Economic Review*, 84, 810-832.
- Long, G.L. [2001], Stockholder Gains from Focusing versus Diversifying Bank Mergers, *Journal of Financial Economics*, 59, 221-252.
- Lummer, S. and J. McConnell [1989], Further Evidence on the Bank Lending Process and the Reaction of the Capital Market to Bank Loan Agreements, *Journal of Financial Economics*, 25, 99-122.
- Mayer, C. [1988], New Issues in Corporate Finance, *European Economic Review*, 32, 1167-1183.

- McKinsey & Co. [2002], Europe's Banks: Verging on Merging, *McKinsey Quarterly*, 3.
- Merton, R.C. [1993], Operation and Regulation in Financial Intermediation: A Functional Perspective, in *Operation and Regulation of Financial Markets*, P. Englund, ed., Economic Council.
- Mester, L.J. [1992], Traditional and Nontraditional Banking: An Information-Theoretic Approach, *Journal of Banking and Finance*, 16, 545-566.
- Mitchell, K. and N.M. Onvural [1996], Economies of Scale and Scope at Large Commercial Banks: Evidence from the Fourier Flexible Functional Form, *Journal of Money, Credit, and Banking*, 28, 178-199.
- Oliver Wyman & Co [2002], The Future of European Corporate & Institutional Banking, collaboration with Morgan-Stanley, March.
- Petersen, M. and R. Rajan [1994], The Benefits of Lending Relationships: Evidence from Small Business Data, *Journal of Finance*, 49, 1367-1400.
- Petersen, M. and R. Rajan [1995], The Effect of Credit Market Competition on Lending Relationships, *Quarterly Journal of Economics*, 110, 407-443.
- Pulley, L. and D. Humphrey [1993], The Role of Fixed Costs and Cost Complementarities in Determining Scope Economies and the Cost of Narrow Bank Proposals, *Journal of Business*, 66, 437-462.
- Puri, M. [1996], Commercial Banks in Investment Banking: conflict of Interest or Certification Role? *Journal of Financial Economics*, 40, 373-401.
- Rajan, R. [1992], Insiders and Outsiders: The Choice Between Informed and Arm's Length Debt, *Journal of Finance*, 47, 1367-1400.
- Ramirez, C.D. [2002], Did Banks' Security Affiliates Add Value? Evidence from the Commercial Banking Industry during the 1920s, *Journal of Money, Credit, and Banking*, 34, 391-411.
- Saunders, A., and I. Walter [1994], *Universal Banking in the United States*, Oxford University Press, Oxford.
- Sharpe, S. [1990], Asymmetric Information, Bank Lending, and Implicit Contracts: A Stylized Model of Customer Relationships, *Journal of Finance*, 45, 1069-1087.
- Schmeits, A. [2002], Discretion in Bank Contracts and the Firm's Funding Source Choice between Bank and Financial Market Financing, working paper, Washington University.
- Shaffer, S. and E. David [1991], Economies of Superscale in Commercial Banking, *Applied Economics*, 23, 283-293.
- Siconolfi, M. [1998], Big Umbrella: Travelers and Citicorp agree to join forces in \$ 83 billion Merger, *Wall Street Journal*, April 7.
- Simon, H.C. [1936], Rules versus Authorities in Monetary Policy, *Journal of Political Economy*, 44, 1-30.
- Smith, R.C. and I. Walter [1997], *Global Banking*, Oxford University Press, Oxford.

- Stone, C.A. and A. Zissu [2000], *Securitization: The Transformation of Illiquid Financial Assets into Liquid Capital Market Securities*, *Financial Markets, Institutions & Instruments*, New York University, Salomon Center, Blackwell Publishers, Boston.
- Vander Venet, R., [2002], Cost and Profit Efficiency of Financial Conglomerates and Universal Banks in Europe, *Journal of Money Credit and Banking*, 24, 254-282.
- Walter, I., and R. Smith [2000], *High Finance in the Euro-Zone*, Financial Times – Prentice Hall, London.