



Challenges to competitive banking: a theoretical perspective

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Summary

The increasingly competitive environment poses challenges to bankers. This paper emphasizes relationship banking as a prime source of the banks' comparative advantage. The proliferation of transaction-oriented banking (trading and financial market activities) does, however, seriously challenge relationship banking. We identify two key dimensions. First, competition from financial markets destabilizes (traditional) durable relationships. We argue that, contrary to what many believe, banks may optimally respond by increasing relationship-specific investments. Second, transaction-oriented activities increasingly become an integral part of banking institutions. In the context of the Barings débâcle we illustrate how transaction-oriented banking may undermine the banks' competitive edge in relationship banking.

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1. Introduction

In recent years, banks have been confronted with an ever-increasing competition from non-banking financial institutions and the financial markets. Mutual funds, like Fidelity and Merrill Lynch, compete fiercely for the banks' core deposit base. Commercial paper, medium-term notes and other financial market innovations challenge the banks' traditional lending products. The last 25 years have shown a spectacular proliferation of new financial instruments. Examples of such financial innovations are plentiful: zero-coupon bonds, Collateralized Mortgage Obligations, Eurodollars, warrants, callable bonds, and all kinds of derivatives

(from plain-vanilla interest-rate swaps to collars and caps). Many of these product innovations may have been unfeasible were it not for contemporaneous advances in financial market microstructure and trading practices. The ongoing revolution in information technology has improved information dissemination and enhanced overall market liquidity. Consequently, the business of banking is changing rapidly. “Traditional” relationship banking is under siege. The proliferation of financial innovations, advances in securitization and underwriting push funding to the financial markets. Does this tilt the comparative competitive advantage to the transaction-oriented financial markets?

The challenge for bankers is to draw the right conclusions. Fads need to be distinguished from long-term trends. While banks, on average, have been quite profitable in the last few years, their real competitive strength has been questioned. In particular, many suggest that the banks’ traditional comparative advantage in relationship banking has been diluted by transaction-oriented finance available in the financial markets. This begs the question: what is the future of relationship-based bank lending? And will banks continue (?) to lose market share to the financial markets? We will evaluate the future of relationship-oriented funding. Our basic message is that the fundamentals of banking have *not* changed. For many of the modern “funding vehicles” bankers’ traditional skills are indispensable. In many other cases, bank loans may continue to be the optimal instruments. The threat to banks may therefore come from bankers themselves. They may falsely interpret modern banking (and their own future!) as transaction-, rather than relationship-oriented. As *The Economist* puts it, in the context of the experience of securities firms:

“Perhaps the worst feature of the 1980s—which has subsequently returned to haunt the securities firms—was the abandonment by most of them of the old relationships with their customers. [...] ‘The aim was to do a deal, any deal’ remembers one manager who prefers not to be named”

(*The Economist*, 15 April 1995, special section: “A Survey of Wall Street”, p. 13).

Our evaluation however would be incomplete without considering the internal organization of banks. More specifically, the relationship/transaction dimension also shows up *within* banks. Banks traditionally focused on relationship-based activities, but increasingly combine transaction- and relationship-based activities. Modern universal banks for example engage in bank lending (often relationship-based) but also in proprietary trading (purely transaction-oriented). These mixtures of activities become more and more common; conglomeration seems the current trend.

Also here transaction-oriented activities pose a serious challenge. Some focus on a possible clash of cultures: dynamic (transaction-oriented) traders against traditional (relationship-oriented) bankers. We will emphasize potentially severe free-rider problems in conglomerate banks. Combining banking activities may reduce transparency and therefore reduce the effectiveness of market discipline. The absence of market discipline may result in free-rider problems between divisions, since each division does not fully internalize the consequences of its own actions. In the context of the Barings debacle, we will argue that safer relationship-oriented activities may effectively underwrite risky transaction-oriented activities. As a consequence, transaction-oriented activities may face an artificially low cost of funds and could free-ride on relationship-oriented activities. Relationship banking may then suffer.

The overall focus on the distinction between a relationship and a transaction orientation seems very instructive for evaluating current practices in banking. We will argue that banks' recent strategic choices may have undermined, rather than strengthened, their competitiveness. In particular, banks may have neglected relationship finance and relationship-oriented activities in general. Consequently, relationship banking may have suffered as a self-fulfilling prophecy.

The organization of the paper is as follows. In Section 2 we analyse the economics of banking and seek to identify the comparative economic advantages of banks in the funding of corporations. Our analysis identifies relationship-oriented banking as a characteristic of value-enhancing financial intermediation. Section 3 discusses the future of relationship banking and particularly the desired responses of banks to increased competition. The internal organization—the potential free-riding of transaction-oriented banking on relationship banking—is discussed in Section 4. Section 5 concludes.

2. The economics of banking

2.1 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 liquifying claims, banks facilitate the funding of projects that might otherwise be unfeasible.

The banks' assets are illiquid largely because of their information

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

One might be tempted to interpret modern banking as trading-oriented, or rather transaction-oriented. So does an investment bank—generally considered a prime example of modern banking—facilitate a firm's access to public capital markets. The investment bank's role could be interpreted as that of a broker, i.e. matching buyers and sellers for the firm's securities. In this interpretation, investment banks just facilitate transactions, which would confirm the transaction orientation of modern banking. The investment banks' added value would then be confined to their networks, i.e. their ability to economize on search or matching costs. As a characterization of modern banking, however, this would describe their economic role too narrowly. Investment banks do more. They—almost without exception—*underwrite* those public issues, i.e. absorb credit and/or placement risk. This brings an investment bank's role much closer to that of a commercial bank engaged in lending; the processing and absorption of risk is a typical intermediation function similar to that encountered in traditional bank lending.

In lending, a bank manages and absorbs risk (e.g. credit and liquidity risks) by issuing claims on its total assets with different characteristics from those encountered in its loan portfolio. In financial intermediation theory this is referred to as *qualitative asset transformation* (see Greenbaum and Thakor (1995)). Underwriting by an investment bank can be interpreted analogically; risk is (temporarily) absorbed and is channeled through to the claim holders of the investment bank. The role of investment banks is therefore more than just purely brokerage. Underwriting requires information acquisition about the borrower which is supported by a relationship orientation. Thus, characterizing financial market funding as transaction-oriented and bank lending as relationship-oriented is too extreme.

2.2. ARE BANK LOANS SPECIAL?

Some see public capital market financing as a superior substitute for bank lending. Bank lending, however, has some distinctive

comparative advantages. In particular, it may support enduring close relationships between debtor and financier that may mitigate information asymmetries. This has several components. A borrower might be prepared to reveal proprietary information to its bank, while it would have never disseminated this information to the financial markets (Bhattacharya and Chiesa (1995)). Furthermore, a borrower's main bank may gain unique information on the borrower through the observation of its checking account activity. 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.†

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. This is in line with the important ongoing discussion in economic theory on rules vs. discretion, where discretion allows for decision making based on more subtle—potentially non-contractible—information.‡ 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 would rule out long-term alternative capital market funding sources as well as *explicit* long-term commitments by banks. Therefore, both bank and borrower realize the added value of their relationship, and will seek to foster their relationship.§

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

† 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. See also the recent “stories” provided by Berlin (1996) supporting the special role of banks.

‡ See e.g. Simon (1936) and Boot, Greenbaum and Thakor (1993).

§ Mayer (1988) and Hellwig (1991) discuss the commitment nature of bank funding. Boot, Thakor and Udell (1991) address the *credibility* of commitments. Schmeits (1997) formally considers the impact of discretion (flexibility) in bank loan contracts on investment efficiency.

a soft-budget constraint: the borrowers may realize that they can renegotiate *ex post*, which could give them perverse *ex ante* incentives. Granting priority to bank loans may help.† With priority a bank may strengthen its bargaining position and thus become tougher.‡

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

2.3. SECURITIZATION: A THREAT TO BANK LENDING?

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

Securitization is a process whereby assets are removed from a bank's balance sheet. Asset-backed securities, rather than deposits, would then fund dedicated pools of bank-originated assets. Securitization is an example of the “unbundling” of financial services. More specifically, banks would no longer fund those assets, instead the investors buying the asset-backed securities would provide

† See Dewatripont and Maskin (1995) on the issue of soft-budget constraints. Diamond (1993), Berglöf and Von Thadden (1993) and Gorton and Kahn (1993) address the priority structure.

‡ The bank could then credibly intervene when it believes that its long-term interests are in danger. For example, the bank might believe that the firm's strategy is flawed. Could the bank push for the restructuring? If the bank has no priority, the borrower may choose to ignore the bank's wishes (i.e. the bank could threaten to call the loan, but the borrower—anticipating the dreadful consequences not only for himself but also for the bank—realizes that the bank would never carry out such a threat). When the bank has priority, the prioritized claim may insulate the bank from these dreadful consequences. It could now *credibly* threaten to call the loan. This identifies an important advantage of bank financing: *timely intervention*. One could ask whether bond holders could be given priority and allocated the task of timely intervention. Note that bond holders are subject to more severe information asymmetries and are generally more dispersed (i.e. have smaller stakes). Both characteristics make them ill-suited for an “early intervention task”. These observations highlight the complementarity of bank lending and capital market funding. Prioritized bank debt facilitates timely intervention, and this 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. Consequently, the borrower may reduce its total funding cost by accessing both the bank-credit market and the financial market.

§ See e.g. Petersen and Rajan (1994) and Houston and James (1995) for empirical evidence.

¶ Gorton and Pennacchi (1995) provide an economic rationale for bank loan sales and securitization. See also Boot and Greenbaum (1995).

funding. As we 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 analyse 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 funding activity; banks would no longer fund securitized assets.

The economics of securitization dictates that the originating bank *credit enhances* the issue. Credit enhancement is typically achieved through the provision of excess collateral or with a letter of credit. Effectively this means that the originating bank continues to bear the consequences (losses) if the securitized assets do not perform. The credit enhancement reduces the riskiness of the asset-backed claims from the investors' perspective, but more importantly it addresses conflicts of interest rooted in the originating bank's proprietary information. With private information in possession of the originating bank, the market requires assurance that the bank will not exaggerate the quality of the assets it seeks to sell. As with a warranty in product markets, credit enhancement discourages misrepresentation by requiring the originator to absorb a portion of the losses owing to default. Similarly, credit enhancement signals to 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.

Securitization could lead to a *reconfiguration* of banking. But even with widespread securitization, the incremental value of banks would largely be preserved.† They would originate and service assets, while also processing the attendant risk in order to sustain these activities. Banks would therefore continue to screen and monitor borrowers, design and price financial claims, and provide risk management services.

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

How important will securitization become? We can only give a very tentative answer. So far, securitization barely exists in Europe. In the U.S. securitization has spread rapidly in the last decade, but almost exclusively 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 does this imply for the larger, more customized and heterogeneous commercial loans? These tend to be more information sensitive. Their quality is therefore more dependent on the rigor of initial screening and subsequent monitoring. Hence, the pooling of commercial loans does less to dissipate their information sensitivity, attenuating the benefits of securitization.

These considerations, however, do not preclude the securitization of business credits. They merely elevate the cost. For example, with more information-sensitive assets, the originating bank may need to retain a larger portion of the credit risk; credit enhancement becomes more important. If the information sensitivity is too severe, credit enhancement, short of total recourse, may not overcome the private-information problem. Thus, the potential advantages of securitization would largely be lost, and traditional bank lending would continue to dominate. However, for an increasing array of moderately informative-sensitive assets, securitization might become the preferred intermediation technology. As our discussion of the economics of securitization suggests, banks even then continue to be indispensable 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 would be preserved.

3. Relationship banking: the strategic challenge

Many believe that a competitive environment may threaten relationships. Borrowers might be tempted to switch to other banks, or to the financial market. Increased credit market competition then imposes constraints on the ability of borrowers and lenders to intertemporally share surplus (Petersen and Rajan (1995)). When parties 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 re-usability of information, and thus diminish the value of information. Banks may then find it less worthwhile to acquire (costly) proprietary information, and relationships suffer. Paradoxically, shorter or weaker relationships actually become a self-fulfilling prophecy.

These arguments highlight the negative spiral that may undermine relationship banking. An important observation is that this negative spiral might be self-inflicted. While competitive banking challenges relationships, the bankers' response—cutting back on information acquisition—may actually damage relationship banking most.

Relationships facilitate a continuous flow of information between debtor and creditor which may guarantee a smooth access to funding. These relationships may give banks a comparative advantage. But also borrowers need to invest in relationships; relationship banking after all is a mutual commitment. Borrowers, however, face an equal challenge: how to benefit from competitive pricing without jeopardizing the benefits of relationships (see Rajan (1992))? This is the *relationship puzzle*.

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

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

A less competitive financial system may thus *preserve* relationships more. Competition threatens relationships, but it may

† The informational monopoly on the “inside” lender's side may be smaller if a borrower engages in multiple banking relationships. This would mitigate the possibilities of rent extraction by informed lenders and induce more competitive pricing (see Sharpe (1990) and also Petersen and Rajan (1995)).

‡ A fascinating academic literature is emerging on the design of financial systems. See Allen (1993), Allen and Gale (1995) and Boot and Thakor (1997). One objective of this literature is to evaluate the pros and cons of bank-dominated and financial market-dominated systems.

simultaneously elevate the importance of relationships as a distinct competitive edge. This is the *relationship paradox*. A relationship orientation can alleviate competitive pressures. Thus, a more competitive environment should encourage banks to become client-driven, and customize services. Since a relationship orientation may earn banks a substantial added-value, banks would then isolate themselves from pure price competition.†

4. Internal organization and relationship banking

4.1. A NEED FOR TRANSPARENCY

Banks have increasingly become (somewhat) opaque institutions. Some degree of opaqueness is an unavoidable consequence of the business of banking. Relationship-oriented finance goes hand-in-hand with proprietary information. Opaqueness of bank loan portfolios is therefore unavoidable. For our discussion here, it is important to note that the very nature of loan portfolios causes opaqueness, rather than *deliberate* policies of banks. Much of the banks' opaqueness, however, seems to be "self-inflicted", and thus deliberate.

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

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

† Boot and Thakor (1998) develop this intuition further. They show that competition may indeed induce banks to divert resources to relationship-specific activities. In their model, banks choose between "passive" transaction lending and more intensive relationship lending. Transaction lending competes head-on with funding in the financial market. Competition from the financial market (as well as inter-bank competition) will lead to more resource-intensive relationship lending and reduce transaction lending. The *absolute* level of relationship lending is however non-monotonically increasing in the level of competition; too much competition will ultimately shrink total bank capacity and also constrain relationship lending.

This may elevate a bank's cost of funds. As a result, bank lending would be disadvantaged and securitization and/or financial market funding would benefit. Securitization, for example, could be interpreted as a mechanism that seeks to enhance accountability and transparency by giving the market a direct claim to a specific group of assets.†

Banks have so far done little to mitigate opaqueness. The European experience is even that opaqueness has grown; witness the consolidation and despecialization of banking in many countries. Till recently, the opaqueness even meant that bankers themselves did not really know the profitability of many of their activities. Cross-subsidies were the rule and internal cost accounting was rudimentary. Recently some improvements have been made. Banks now have a better understanding of the costs and benefits of different lines of their businesses. Some of the implicit or explicit cross-subsidies are now recognized. While cross-subsidies may sometimes be an optimal competitive response, often they will not be sustainable in a competitive environment.

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

4.2. PROPRIETARY TRADING AND FREE-RIDING

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

† Dewatripont and Tirole (1995) discuss the benefits of securitization in the context of these transparency arguments.

Our analysis will highlight that in the absence of market discipline banks may only arbitrarily allocate capital to their different activities and charge a cost per unit of capital that is even more arbitrary. This line of argument implies that the proprietary trading activity is free-riding on the bank at large. This—as we will show—may have three consequences: (1) proprietary trading appears more profitable than it really is; (2) a proprietary trading unit does not sufficiently internalize risks; (3) other—mainly relationship-oriented—activities of banks face an unfairly high cost of funds. The implications are twofold. First, proprietary traders may operate with little market discipline. Consequently, the only corrective mechanisms are internal controls and external supervision. Second, banks may become less competitive in their relationship-oriented activities. Thus, proprietary trading would undermine the banks' real competitive edge. We now turn to a more detailed analysis of the trading activity.†

Banks' trading activities have been a considerable source of earnings in the last few years. But has it been as profitable as some believe? The trading activity involves substantial risks, therefore establishing the fair risk-adjusted cost of funds is important. Banks try to resolve this by allocating (costly) capital to the trading unit. Thus, the trading unit's funding cost is artificially grossed-up by adding the cost of its "capital at risk". This internal capital allocation process is not only arbitrary, but may also be flawed.

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

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

found in the bank at large, the (non-diversifiable) risks taken in the trading unit dictate a much higher cost of capital.

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

The arguments above explain why proprietary trading has been granted an artificially low cost of capital at the expense of a (potentially) prohibitively high cost of capital for the bank as a whole. This is the free-riding we alluded to earlier. More importantly, other—mainly relationship-oriented activities—are implicitly taxed. Banks may then mistakenly conclude that relationship banking activities are not profitable.

5. Conclusion

This paper highlights *the* major challenges facing “modern” banks: how to identify and protect their true comparative advantages. We believe that relationship banking offers distinct benefits and see it as the banks’ *raison d’être*. However, relationship banking has

† One could counter that much of the banking literature has focused on equity holders’ incentives to engage in excessively risky activities. Note that these moral hazard incentives depend on the possibility of shifting risk to debt holders (or the deposit insurer) without compensating them. The debt holders then effectively subsidize risky activities. While these incentives might be relevant for poorly capitalized institutions (e.g. the U.S. Savings and Loans in the 1980s), they are much less compelling for adequately capitalized institutions.

‡ Another compelling argument is that banks’ credit ratings have become increasingly important due to the proliferation of off-balance sheet banking. The viability of banks in their off-balance sheet activities (e.g. writing guarantees, as in underwriting and securitization) necessitates sufficient capitalization and high credit ratings (see Boot and Greenbaum (1995)).

suffered from the proliferation of transaction-oriented banking along two dimensions.

One is the external dimension. Financial markets have gained market share. Banks find it more difficult to hold on to their clientele. Borrowers might be tempted to switch to other financiers, and traditional relationships suffer. We have argued that the optimal response might be to invest *more* in relationships. Banks then may isolate themselves from pure price competition.

The second dimension is an internal one. Transaction-oriented banking has also become more important *within* banks. Banks tend to broaden their activities; transaction banking (like proprietary trading) co-exists with relationship banking. In the context of the Barings débâcle, we have argued that relationship lending activities may implicitly subsidize transaction-oriented activities. Consequently, also along this dimension, relationship banking may suffer.

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

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