Regulatory reform in European banking*

Xavier Vives

Universitat Autònoma de Barcelona, 08193 Bellaterra, Barcelona, Spain

A stylized model of the role of banks in a context of imperfect financial markets where the potential for market failure exists is proposed. The specificity of banking is analyzed and the need of regulation explained. The study of regulatory responses highlights the importance of their associated side effects. Particular attention is devoted to the interaction of regulation and competition in a strategic context. The effects of deregulation and European integration of financial markets on banking competition are dealt with in the proposed framework.

1. Introduction

Regulatory reform in European banking is linked to EC financial integration. The study of this process requires to understand the interaction of regulation and competition in banking and financial markets.¹

Regulatory reform is a mixed process of deregulation and re-regulation² which, when coupled with European integration, will translate in a substantial increase in competition in banking markets. The issue arises as to whether this increase in competition will put in jeopardy the stability of the financial system.

The main objective of regulation in banking is the preservation of the solvency and stability of the system. The recent U.S. experience, with the thrift crisis in particular, indicates that regulatory failure is not only a theoretical possibility in today's changing financial world. Several questions emerge:

(1) Will deregulation and integration induce excessive (that is, destabilizing) competition?
(2) How much will competition increase?
(3) Is the EC integration program in banking consistent?

The analysis of these issues is by no means easy due to the lack of a

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¹This paper is based partly on Vives (1990b).
²As argued by Kay and Vickers (1988), for example.
satisfactory theoretical model of financial intermediation, not to say of
competition of financial intermediaries facing different regulatory regimes.3

The role of financial intermediation and the sources of market failure are
examined in section 2. Regulation and regulatory failure are taken up in
section 3.4 Section 4 reviews quickly the recent U.S. regulatory experience
with particular emphasis on the crisis of the Savings and Loans. Section 5
concludes with an overview of the integration of the European banking
markets pointing at some potential difficulties.

2. Financial intermediation and market failure

Financial intermediaries emerge as a response to the imperfections and
incompleteness of financial markets. Indeed, in a complete market system à
la Arrow–Debreu, financial institutions are unnecessary and irrelevant. The
principal source of market failure in banking comes from asymmetric
information: moral hazard and adverse selection problems prevent financial
markets from being complete.5 Financial institutions presumably reduce
market imperfections and improve the allocation of resources performing the
following functions:

(a) Facilitating transactions: the transfer of wealth and payment mechanism.
(b) Portfolio management
(c) The transformation of illiquid assets into liquid liabilities, providing
liquidity insurance and risk sharing opportunities to agents.
(d) The minimization of (incentive) transaction costs: through the monitor-
ing of loans and signalling.

If banks were to realize only the functions (a) and (b) there would not be
any need to regulate a competitive banking sector since, as argued by Fama
(1980), the portfolio management decisions of banks (b) would be subject to
the Modigliani–Miller theorem on the irrelevance of pure financing decisions.
This would be true even if banks were to have a comparative advantage in
providing these services in a competitive market.

The sources of market failure come from (c) and (d). In particular, we
argue that the risk sharing deposit contract leaves banks vulnerable to panic
runs.

The optimal deposit contract between banks and risk averse depositors,
who face private liquidity risks, involves a fixed payment for early with-
drawals. There is a good equilibrium which realizes optimal risk sharing, but
there is also a bad equilibrium in which all depositors panic, withdraw their

3 Useful surveys about the banking firm are Baltensperger (1980) and Santomero (1984).
4 Sections 2 and 3 are based in part on section 2 of Vives (1990b).
5 A classical example is provided by Akerlof’s lemons problem in the credit market [Akerlof
(1970)].
funds and the bank collapses. This may happen to an otherwise sound bank. The root of the problem lies in the asymmetry of information between the bank and its depositors [Diamond and Dybvig (1983)]. A bank run is costly in terms of real resources since the production process is interrupted and assets are prematurely liquidated. Further, there is the danger of a systemic failure due to contagious bank runs, creating a strong negative externality for the real sector of the economy. According to Friedman and Schwartz (1965) the major causes of the recession in the 1930s were the bank runs and the management of the crisis by the Federal Reserve which contracted the money supply.

Banks are also subject to failure because of insolvency. In general, there is no perfect diversification of the risk to banks assets since their investment projects are large and the monitoring technology they use is limited. Therefore there is a potential risk for bank depositors and banks will be subject to fundamental or information-based bank runs.

In a panic run depositors withdraw because they fear that others will withdraw first. In a fundamental run depositors realize that the value of assets in the bank is low and that withdrawing is a dominant strategy. Fundamental runs may be based on information about the returns of the bank [Jacklin and Bhattacharya (1988)] or about the behaviour of other depositors [Postlewaite and Vives (1987)].

The role of banks in minimizing transaction costs in an asymmetric information context (monitoring loans and evaluating projects, and signalling the quality of an investment portfolio, based on cost advantages like economies of scale in monitoring and diversification possibilities)\(^6\) points at the potential inefficiency of the market solution with unregulated active financial intermediation.

In summary, we have highlighted asymmetric information as a major source of market failure which is at the root of the existence of financial intermediaries and which originates an externality problem (runs among depositors and among institutions with consequences in the real sector of the economy). Further, the economies of diversification may lead to an increasing returns situation with its associated market power problems.

3. Regulation and regulatory failure

Regulation has tried to provide stability to the banking system and to avoid the important negative consequences of panics while protecting small investors. The non-bank financial services industry (portfolio managers, brokers, dealers, advisers) does not face the strong externality problems

associated with runs and, therefore, regulation is aimed at solving the basic imperfect information problem of investors.\textsuperscript{7}

Two basic types of regulation have been used to provide stability to financial systems: structure and conduct regulation. Examples of the first are functional separation of institutions (like the separation between commercial and investment banks of the Glass–Steagall act in the U.S.), entry requirements (like minimum capital requirements), deposit insurance and the existence of a lender of last resort. Examples of the second are information disclosure rules, and pricing rules or rate regulation.

The regulatory response to the U.S. banking crisis of the 1930s was the establishment of a deposit insurance system. This system has been quite successful in stabilizing the financial and banking markets. Runs have been very limited since the Second World War. In Europe deposit insurance systems have been created more recently, typically in the late 1970s. Their coverage is different according to the country and may involve full or partial insurance usually for deposits up to a certain size.\textsuperscript{8} The most striking feature of deposit insurance in Europe is that it remains largely unknown to the public. This is probably because it is common knowledge in Europe that banks in trouble will be bailed out by the government and taxpayers, and not depositors. This, obviously, leaves unexplained the introduction of the insurance systems.

Regulation is not free from side effects since the second best principle applies: it is very difficult to be sure of improving welfare through intervention when the first best cannot be attained. In other words, regulation has the potential of introducing new inefficiencies. Regulatory failure must be studied along with the market failure.

Present regulatory theory does not give clear-cut recommendations owing to the complexity of the welfare analysis. For example, runs could be eliminated by a simple structural regulation requiring banks to invest the proceeds of deposits on risk free liquid government securities. The reason why this may not be such a good idea is that the cost of intermediation would probably go up because of the substantially higher yields of longer term investments (the liquidity transformation role of banks) and the lost economies of scope between deposits and credits. Similarly, information disclosure requirements could make banks more vulnerable to information-based runs. Deposit insurance and the existence of a lender of last resort

\textsuperscript{7}See Mayer and Neven (1990). In addition, the money creation role of banks has given a monetary policy dimension to regulation, for example, reserve requirements as an instrument of monetary policy. It has been argued recently that reserve requirements may be an ineffective tool to control the money supply. As Baltensperger and Dermine (1987) argue there is no clear-cut case for regulation based on macroeconomic/monetary policy considerations. Further, several regulations, like compulsory investment requirements, have been aimed at providing subsidies to some sectors of the economy.

\textsuperscript{8}See Baltensperger and Dermine (1989).
prevent the occurrence of bank runs but induce a potential *moral hazard problem*. Banks may have an incentive to assume too much risk through risky investments, or to compete by raising deposit rates, thus forcing central bank intervention. This problem is compounded by the reduced incentives that depositors have to monitor the solvency of the bank under a deposit insurance system. As a consequence, sometimes only partial deposit insurance is offered, or central bank intervention is made discretionary. Nevertheless, particularly for large institutions, whose failure can have a domino effect, an important credibility problem for policy remains.\(^9\)

Another side effect of protecting the banking system against runs may be the *unwanted protection of inefficient and/or badly managed or fraudulent banks*. A very high percentage of bank failures are due to mismanagement and fraud.

Prudential measures, like capital and liquidity requirements and restrictions on asset concentration, have been implemented to reduce the moral hazard problem. Capital requirements nevertheless have the side effect of restricting entry.

Monitoring and auditing to uncover the actual net worth position of an institution, and rate regulation\(^10\) are other means of controlling excessive risk taking. For this purpose a regulatory agency is needed, introducing new problems: the possibility of *regulatory capture* (by which regulation responds to the interests of the industry and not the public interest)\(^11\) with its associated influence costs and the need to provide *incentives* to bureaucrats to do their job properly and avoid potential problems associated with the limited tenure of agency appointments (short termism). All this highlights the importance of the *political economy of regulation* of banking institutions.

The design of an appropriate regulatory mechanism, with complex hierarchical relationships between the banks, the regulating agency, the committee of a representative body (Parliament) in charge of the specific regulation, consumers and society (represented maybe by the whole representative body), is by no means a simple task. In the terminology of Laffont and Tirole (1988), banks would have 'power' in the regulatory game because they are interested in the regulatory agency hiding information from the representative body. In this vein banks could 'collude' with the regulatory agency to hide information about the quality of their assets or their net worth position, for example. This state of affairs need not arise out of bribes, it may simply be the consequence of poor incentives given to the agency bureaucrats. In

\(^9\)Similarly, schemes to make the banking community bear the bail-out cost of insolvency have been proposed. Then bankers would act as a club with appropriate incentives to monitor its members.

\(^10\)Although rate regulation could serve as a prudential measure, substituting for equity creating a rent for the bank, it is dominated by a stricter capital ratio requirement. See Baltensperger and Dermine (1987).

\(^11\)Through the use of 'revolving doors' or bribes, for example.
any case, a regulatory agency, in the presence of asymmetric information about the types of firms, faces an incentives/rent extraction trade-off: by giving incentives to perform to the bad types the rents to good types (who have to be induced to tell the truth) are increased.\(^\text{12}\)

The political economy of regulation of banking is complicated by the fact that banking is usually considered a 'strategic' industry from the national point of view, influencing the policy of government towards entry, mergers and acquisitions. In particular when they involve foreign institutions.

*Rate regulation* introduces further distortions suppressing price competition and inducing financial institutions to compete on a non-price basis, through (over)investment in quality or services, and to cross-subsidize products. The guaranteed financial margin diminishes the competitive pressure to reduce cost and management inefficiencies.

Until recently, rate regulation has been very popular in Europe. According to an OECD survey [Bingham 1985], market rates were paid on demand and savings deposits only in Italy, Switzerland and the U.K. Other countries were subject to regulation or cartel-type agreements that distorted rates. National authorities and regulators have allowed financial institutions in some countries to coordinate their market actions, or to collude, in the belief that this would benefit the stability of the system, and that it would make it easier to control the banking sector.\(^\text{13}\) Different forms of 'concerted pricing' exist in Belgium, France, the Netherlands and Switzerland.\(^\text{14}\) Baltensperger and Dermine (1987) give evidence of the effect of the rate controls in raising profitability and margins.

4. Regulatory reform in the U.S. and the stability of the system

The crisis in the 1930s induced a regulatory system aimed at avoiding the concentration of financial power, protecting small investors and controlling 'excessive competition'. The system was based on the prohibition of interstate banking, the separation of commercial and investment banking, deposit insurance and regulated deposit interest rates (regulation Q).\(^\text{15}\) The Federal Deposit Insurance Corporation (FDIC) is established in 1933 and Federal Savings and Loans Insurance Corporation (FSLIC) in 1934. The deposit insurance system prevented bank runs from occurring and there were few failures (which were mostly due to fraud) between 1940 and 1980.

\(^{12}\)The classical analysis of this issue is Baron and Myerson (1982).

\(^{13}\)Before 1981 the European Commission viewed interbank rate agreements made under the auspices of national authorities falling in the domain of monetary policy instruments and therefore not subject to the competition articles of the Rome Treaty. This position has been revised recently. See Dussesse and Isaacs (1985).

\(^{14}\)In Spain, and until very recently, the heads of the large banks would meet once a week for lunch to 'conduct business'.

\(^{15}\)The basic legislation is contained in the Pepper–McFadden Act (1927) and in the Banking Act (known as Glass–Steagall) (1933).
In the 1970s entry of money market funds in the banking industry, offering high deposit rates, and the disintermediation process, with the increasing importance of commercial paper, set the ground for regulatory reform in the 1980s. Deregulation of interest rates, the progressive permissiveness of interstate mergers and the expanded capabilities of thrifts were some of the reforms undertaken.

The 1980s have seen a substantial increase in the number of bank failures, the most conspicuous example being the thrift crisis, with a consequent distortion in the safety net of the financial system. It is worth examining with more detail the S&L crisis.\textsuperscript{10}

The crisis of the Savings and Loans industry can be traced back to the rising interest rates of the late 1970s and early 1980s which induced capital losses in an industry based on fixed-rate mortgages. Deregulation expanded the lending powers of S&L, becoming more liberal than commercial bank charters, and lowered their effective capital requirements. When interest rates declined again the industry split in two groups: those institutions that managed to recover their margins, and those that deteriorated further taking excessive risk – using a ‘go-for-broke’ strategy facilitated by a deregulated environment with deposit insurance and a low level of supervision. Indeed, deposit insurance allowed institutions in bad shape to offer high interest rates (which would be paid by the institution with low probability) and keep attracting deposits, driving out healthy competition. Failures are better accounted for by the moral hazard problem which induces excessive risk taking than by a process of rapid entry into unfamiliar product lines by S&L. Regulators used a ‘capital forbearance’ strategy, allowing insolvent institutions to continue operations in the hope of (an unlikely) recovery. Furthermore, supervision was inadequate. Incentive problems associated with regulatory agencies discussed in section 3 are partly responsible for this regulatory failure.

The outcome of the crisis is the insolvency of the FSLIC, which has been taken over by the FDIC, and a very high bill for U.S. taxpayers to rescue the industry. Further, insurance premiums have increased (both for banks and S&L) and higher risk-based capital requirements have been imposed on savings institutions. Other solutions and precautionary measures have been proposed, chiefly among them an increase in supervision and risk-based premiums for deposit insurance.

5. Regulatory reform and financial integration in Europe

Regulatory reform in European banking cannot be dissociated from

\textsuperscript{10}See the Journal of Economic Perspectives Symposium on Federal Deposit Insurance for S&L Institutions (1989).
European financial integration. The starting point for the integration process was a banking system of national oligopolies heavily regulated and with limited trade in financial services. Until recently different forms of concerted pricing and collusive agreements in Europe have maintained prices for financial services above competitive levels. Part of the rents generated have been captured by organized labor.\textsuperscript{17} Regulated prices have induced competition on services and cross-subsidization.

The programme for the integration of the financial sector calls for \textit{freedom of capital movement} and \textit{freedom of establishment} as essential tools, but several European countries still maintain controls on capital movements (Germany, U.K., France and Benelux countries have liberalized capital flows already). Legal obstacles to the establishment of banking subsidiaries have been virtually removed (with the temporary exception of Spain) and there are still restrictions to the acquisition of domestic institutions by foreign banks (need of approval by supervisory authority and other restrictions in some countries like Spain, France and Italy). Nevertheless, market shares of foreign banks vary substantially in different European countries, suggesting the possibility of hidden restrictions or economic barriers to entry.

In order to facilitate market access, the European Commission has established the \textit{single banking license} and the \textit{home country and mutual recognition principles} in its second banking directive. Authorization for a financial institution to operate in one European country would be enough for it to supply or establish financial services elsewhere. The EC Second Directive calls for home country control and supervision\textsuperscript{18} on solvency and large exposures, and for a \textit{minimum harmonization} across countries on prudential supervision and consumer protection: minimum equity levels, industrial risk concentration, fitness and properness, disclosure of information to clients, Guarantee Funds, and other accounting and ownership measures. With respect to monetary policy issues (reserve coefficients, for example) and deposit insurance, the \textit{national or host country principle} is called for. Thus, for instance, a foreign bank should join the deposit insurance scheme of the host country.

The financial integration process will have an important impact on consumer, bank and social welfare. It is our contention\textsuperscript{19} that the main effect of integration will be to change the focal point of the strategies of banks from collusion and regulatory capture to competition. Nevertheless, competition will be imperfect owing to the presence of important economic barriers to entry, yielding an upper bound for the integration benefits lower than the competitive benchmark. This means that although the integration of financial

\textsuperscript{17}See Steinherr and Gillibert (1988).

\textsuperscript{18}That is, control and supervision by the member state in which the financial institution is based.

\textsuperscript{19}See Vives (1990b) for an expanded explanation.
markets will produce substantial benefits, these will be less than those which would follow from a fully competitive structure.20

In Europe collusive factors, such as multimarket deterrence strategies and building a reputation for cooperation, have been reinforced by regulations that have made life easy for banks. In particular, interest rate regulations and 'concerted pricing' may have provided effective devices to enforce collusion, be it because of regulatory capture or because of improved coordination. In any case the institutional and regulatory framework in many countries seems to have fostered a cooperative attitude and consolidated a tradition of understanding among banks.

Once regulation is harmonized and kept to its prudential role, the possibilities of regulatory capture diminish dramatically. At the same time, the incentives to deviate from a collusive agreement increase since there is no longer an official sanction to individual bank's decisions. The deregulation and integration process will move the focus towards noncooperative behavior, thus destroying the anchor to which restrictive practices are bound.21

Financial markets will not attain 'perfect competition' levels though since barriers to entry are present at different levels of the banking business. Leaving aside legal barriers, for example entry and capital requirements, there are many economic barriers and sources of market power. These include investment in physical capital, branches, computer equipment, ATM systems and intangible capital, building up a clientele and a reputation for solvency. These factors may give a bank an absolute cost or a product differentiation advantage.

Given the EC directives on financial integration, which set the ground for regulatory reform in European banking, two (interconnected) questions emerge relating to the stability of the financial system and the degree of competition.

The U.S. experience demonstrates that deregulation of rates and of capabilities of institutions needs to be accompanied by an increase in supervisory standards, solving agency problems in regulatory management, and a move towards risk-based capital requirements and deposit insurance premiums. The danger of excessive (destabilizing) competition seems to come from inadequate supervision, prudential and consumer protection measures. It would therefore seem inappropriate to restrict competition and entry in the banking industry to attack the stability problem.22

20We are assuming therefore, and this is an empirical judgement, that moving from collusion to imperfect competition will improve welfare.
21The move towards noncooperative behavior is illustrated by the recent explosion of high yield accounts in Spain. See Caminal et al (1990), Vives (1990a,b).
22Nevertheless, theoretically, the occurrence of excessive competition among financial intermediaries and fund seeking in general is possible, even when there is no moral hazard problem (when banks pay the costs of bankruptcy), leading to an increase of the incentives costs associated with failure [See Yanelle (1989)].
In Europe the implicit insurance provided by the lender of last resort poses the moral hazard problem, inducing excessive risk taking, in the forefront. In this respect, a potential problem arises in connection to the strategic incentives of national regulators, given the EC directives on integration. Those set the ground for a contest among national regulators which, in the presence of external effects, need not yield an efficient outcome. The application of the home country principle to solvency and supervision and to the approval of banking services, coupled with the application of the host country principle for deposit insurance schemes, gives incentives for national authorities to be very liberal in setting standards to provide national banks a competitive edge abroad. If disaster happens, foreign taxpayers will foot the bill. It seems therefore that, despite the fact that the directives call for minimum standards (harmonization), the system does not give the appropriate incentives to national authorities to internalize costs.

Another potential problem is the possible restriction of competition and entry induced by national authorities in the name of the (national) public interest. Exclusion clauses exist in the second banking directive which could be used in this sense. For example, the idea that banking is a strategic sector could be claimed to restrict entry of foreign banks via mergers and acquisitions.

23At the same time, an increase in deposit insurance in one country may make it attractive to depositors but also to risky foreign banks, facing national authorities with a trade-off.

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