

BANKING COMPETITION AND EUROPEAN INTEGRATION

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ABSTRACT

Banking Competition and European Integration*

We assess how banking competition will be affected by the process of deregulation and integration in European financial markets, drawing on the lessons of recent research in finance, banking and industrial organization. Our central thesis contends that the main effect of integration will be to change the focus of banks' strategic behaviour from collusion and regulatory capture to competition. Nevertheless, competition will be imperfect due to the presence of significant economic barriers to entry, and this means that the upper bound for the benefits of integration is lower than the competitive benchmark. In consequence, integration will not have an impact as large as that associated with competitive or 'contestable' outcomes. The analysis suggests that European banks will seek to offset the increased competition brought about by 1992 by engaging in mergers, acquisitions and cross-participation agreements. Furthermore, different degrees of competition will coexist in a segmented market and the benefits of integration will be unevenly distributed.

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NON-TECHNICAL SUMMARY

The process of deregulation and integration of financial markets in Europe raises many issues. One of the most important involves the benefits that will arise from increased competition. The Price Waterhouse (PW) study for the European Commission on 'the cost of non-Europe' in financial markets concluded that important welfare gains could be achieved by the increase in competition that would accompany financial integration. The PW study has been criticized, however, on the grounds that it overestimated the potential gains, by *assuming* that integration will lead to fully competitive financial markets. Indeed, the crucial issue seems to be the impact of the integration process on the *degree of competition* in banking. Other important questions are strongly related to this basic issue: Will deregulation induce excessive competition? How will the benefits of integration be distributed? What specific predictions can be made concerning conduct and market, trade and direct investment. How will the stability of the financial system be affected? Are the regulations to be implemented consistent?

The recent history of European banking has been characterized by a lack of vigorous competition, particularly price competition: regulatory capture and concerted action have been more the norm than the exception. Our central thesis contends that the main effect of integration will be to change the focus of strategic behaviour from collusion and regulatory capture to competition. Nevertheless, competition will be imperfect due to the presence of important economic barriers to entry, and as a result the upper bound for the benefits of integration will be lower than the competitive benchmark. This means that the magnitude of the impact of integration will be important but it will not attain levels associated with competitive outcomes.

The banking sector needs to be regulated since the liquidity insurance role of banks leaves them subject to runs, which may be very costly in welfare terms. The real and financial crisis of the 1930s are a case in point. Regulation has tried to correct this potential market failure, with deposit insurance schemes and interest rate controls, but has induced problems of its own: regulatory capture and moral hazard. These side effects of regulation are crucial in understanding competition in banking. In particular, regulation in Europe may have provided the anchor on which restrictive practices have consolidated. Attempts to collude suffer from a stability problem, that is, individual firms have incentives to defect from agreements in the absence of mechanisms to control and punish deviants.

A collusive activity needs a focal point to coordinate action: in European banking, restrictive practices have been linked to a heavily regulated environment, but this will be destroyed by the harmonization of regulation that 1992 brings about. The

main effect of 1992 will therefore be to encourage banks to alter their strategies from collusion and regulatory capture to competition. In this sense it is appropriate to say that 1992 will work precisely because it is a state of mind.

Competition among banks in Europe will increase as a result of integration but will not result in the perfectly competitive market for financial services envisaged in the PW report. The PW report assumed that European financial integration will cause the price of each financial service to fall across Europe to the lowest existing level in the EC: producers who fail to match the lowest price will not survive.

This prediction is too extreme. Competition among banks in Europe will increase but will still be imperfect because of the presence of important economic barriers to entry. Banking – particularly retail banking – does not seem to fit the model of ‘contestable’ markets. In a contestable market potential competition disciplines established firms since they are vulnerable to ‘hit and run’ entry. Branch proliferation, the creation of networks (like ATM systems), the presence of switching costs for consumers and reputation effects can serve as effective barriers to entry.

Freedom of capital movements exists already in many European countries and almost all legal obstacles to the establishment of banking subsidiaries have been removed already (with the temporary exception of Spain). Despite this freedom, trade in banking services is limited and tends to be of the intra-industry type (in which a country both imports and exports financial services), and the market shares of foreign banks vary substantially in different European countries. This suggests that there are either hidden restrictions or important barriers to entry.

Our analysis reveals that the integration process will have other effects. Different degrees of competition will coexist in a segmented market and the benefits of the integration will be unevenly distributed. Corporate banking is already subject to strong international competition and integration will have little impact in this segment of the market. There will be a significant increase in competition in retail banking for wealthy individuals and corporate banking for medium-sized firms. Mass retail banking will see a much smaller increase in competition because of barriers to entry and high switching costs for customers. Low-income depositors will probably suffer, since increased competition will reduce the ability of banks to cross-subsidize their activities, in particular the operation of checking accounts.

European banks will seek to offset the increased competition brought about by 1992 by engaging in mergers, acquisitions and cross-participation agreements. Since regulation – hitherto the focus of collusion – has disappeared, collusion will be much more difficult to sustain.

Rate regulation in Europe, which prevents competition among banks on the basis of price, has led banks to compete through quality of service by opening 'too many' branches in order to locate near their customers. When banks are free to compete, this 'overbranching' will lead to very sharp competition, which banks may seek to avoid by buying rival firms. In this case, concentration in local markets would increase, as has happened in the United States as a result of deregulation. In addition, the overextension of branch networks may mean that the only means of entering the market is through the acquisition of an existing bank.

Finally, the EC directives on integration set the ground for a contest among national regulators, which will not necessarily yield an efficient outcome. The application of the home-country principle to solvency and to the approval of banking services, coupled with the application of the host-country principle for deposit insurance schemes, will create incentives for national authorities to be very liberal in setting standards to give their national banks a competitive edge abroad. If a disaster occurs, foreign taxpayers will foot the bill. At the same time an increase in deposit insurance in one country may make it more attractive to depositors but also encourage entry by risky foreign banks. The EC directives call for minimum standards but the system does not give national regulators the correct incentive to internalize costs.



1. Introduction

European Integration poses a challenge to the study of competition in banking and financial markets. The Price Waterhouse (PW) study for the European Commission on the "costs of the non-Europe" in financial markets concluded that important welfare gains could be attained by the increase in competition which would accompany financial integration. This study has been much debated and criticized on the grounds that it overestimates the gains to be obtained by assuming that integration will lead to a competitive market.

The crucial issue seems to be the impact of the process under way on the degree of competition in banking, and more in particular in retail banking, where the effects are likely to be larger. Many other questions revolve around the above issue:

Will deregulation induce excessive competition ?

How will the benefits of integration be distributed ?

What specific predictions on conduct and market structure, trade and direct investment can be made ?

How will the stability of the financial system be affected ?

Are the regulations to be implemented consistent ?

In the present paper we try to draw the lessons from recent research in finance, banking and industrial organization and assess how competition will be affected by the integration process. This is not an easy task since at a theoretical level financial intermediation is still not well understood, not to say competition among financial intermediaries.¹

Any attempt to understand the way financial institutions compete must start isolating the role of financial intermediaries, the potential for market failure and the need of regulation. It is argued that the distinctive role of financial intermediaries is the provision of liquidity insurance and risk sharing opportunities to agents and the minimization of transaction (incentive) costs associated to monitoring and signalling in a context of asymmetric information. The liquidity insurance role of banks turns out to be central since it leaves

¹ Useful surveys about the banking firm are Baltensperger(1980) and Santomero(1984). A useful introduction to strategic competition is Tirole (1988).

them subject to runs, which may be costly in welfare terms. The real and financial crisis of the thirties are a case in point.

The possibility of runs, and the existence of economies of scale in monitoring and screening, under asymmetric information, substantiates the need of regulation to correct market failures. Nevertheless regulation has induced problems of his own: regulatory capture inducing monopoly rents, distortion of investment incentives, inefficient provision of services, and moral hazard problems in the form of too high risk taking. These side effects of regulation are crucial in understanding competition in banking.

The recent history of European banking has been characterized by a lack of vigorous competition: regulatory capture and concerted action have been more the norm than the exception. Our central thesis contends that the main effect of integration will be to change the focus from collusion and regulatory capture to competition. "1992" will make regulatory capture more difficult by introducing a harmonized system of regulation. "1992", being a state of mind, will change the focal point towards noncooperative behavior, destroying the anchor on which restrictive practices are bound. A collusive activity needs a focal point to coordinate action. The weight of the history of the industry, with its restrictive practices linked to a heavily regulated environment, is being erased by the "1992" idea.

Competition among banks in Europe will increase as a result of integration, but will not result in the perfectly competitive market for financial services envisaged in the PW report. Competition will increase, but will still be imperfect because of the presence of important economic barriers to entry. Banking, and particularly retail banking, does not seem to fit the model of "contestable" markets. In a contestable market potential competition disciplines established firms since they are vulnerable to hit and run entry. Branch proliferation, the creation of networks (like ATM systems), the presence of switching costs for consumers, and reputation effects can serve as effective barriers to entry. In fact, although freedom of capital movement exists already in quite a few European countries and almost all legal obstacles to the establishment of banking subsidiaries have been removed already (with the temporary exception of Spain), trade in banking services is limited and tends to be of the intra-industry type (in which a country both imports and exports financial services) and the market shares of foreign banks vary substantially in different European countries. This suggests that there are either hidden restrictions or important barriers to entry.

In summary, competition will be imperfect due 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 the impact of integration will have an important magnitude but will not attain levels associated to competitive or "contestable" outcomes.

Further predictions follow from our analysis:

Banks will react to the increase in competition trying to soften rivalry via mergers, acquisitions and cross-participation agreements. Nonetheless, this will happen in an essentially noncooperative framework where collusion will be much more difficult to sustain.

The increase in competition will be unevenly distributed. Different degrees of competition will coexist in a segmented market and integration will have a differential impact according to classes of bank customers.

2. Financial intermediation, regulation and side effects

Financial intermediation and market failure

We take as starting point of our analysis the consideration that 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 our context comes from asymmetric information: moral hazard and adverse selection problems prevent financial markets from being complete. A classical example is provided by Akerloff's lemons problem in the credit market (Akerloff (1970)). A widely accepted thesis asserts that financial institutions reduce market imperfections and improve the allocation of resources.

The main functions of financial intermediaries (banks) can be summarized as follows:

- a. Facilitate transactions: the transfer of wealth and payment mechanism.
- b. Portfolio management
- c. Transformation of illiquid assets into liquid liabilities, providing liquidity insurance and risk sharing opportunities to agents.
- d. Minimization of (incentive) transaction costs : monitoring of loans and signalling.

If banks were to realize only the first two 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 if the market is competitive.

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

The optimal deposit contract between the banks and risk averse depositors, who face private liquidity risks, involves a fixed payment to early withdrawals and has a good equilibrium which realizes optimal risk sharing, but also has a bad equilibrium in which all depositors panic, withdraw their funds and the bank collapses. This may happen to an otherwise sound bank (Diamond and Dybvig (1983)).² 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) a major cause of the thirties recession were the runs and the management of the crisis by the Federal Reserve which made contract the money supply.

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

In a panic run depositors withdraw by fear of others withdrawing.³ In a fundamental run depositors realize that the value of assets in the bank is low and that withdrawing is a

² Three conditions are necessary to make panics possible (in the absence of any regulation): (1) Banks must satisfy a sequential service constraint (that is, withdrawals tenders are served sequentially till the bank runs out of assets). This creates incentives to run and get the money before other people. (2) The investments of the bank can not be totally illiquid. Otherwise by withdrawing early it is not possible to gain anything. (3) Depositors must have a high enough degree of risk aversion.² Otherwise the optimal risk sharing contract involves a face value lower than the liquidation value of the bank assets.

³ There is a problem in the theoretical foundation of panic runs. If depositors have rational expectations they will anticipate the run and will not deposit in the bank. Runs would never be observed in equilibrium. A possible way out is to select the good or bad (run) equilibrium according to a sunspot, then agents would deposit in the bank provided the probability of the good outcome is

dominant strategy. Fundamental runs may be based on information about the returns of the bank (Jacklin and Bhattacharya (1988)) or about the behavior of other depositors (Postlewaite and Vives (1987)).⁴

Further, 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)⁵ does not presuppose that the market solution with unregulated active financial intermediation is optimal. Competition among financial intermediaries may introduce additional complications: intermediation may not emerge even when banks have an advantage in monitoring loans, and intermediation may not be welfare improving because of excess competition among fund seekers (banks and entrepreneurs) which increases the incentive costs associated to bankruptcy.⁶

In summary, we have insisted on asymmetric information as a source of market failure. Nevertheless other classical sources are present: the standard deposit contract leaves banks subject to runs creating a negative externality and the economies of diversification may lead to an increasing returns situation with its associated market power problems.

Regulation

The response to the potential market failures has been regulation, with the aim of improving efficiency and protecting small investors and depositors. The regulation has tried to provide stability to the system and avoid the important negative consequences of panics. In addition, the money creation role of banks has given a monetary policy

high enough. Another possibility to obtain the emergence of runs in equilibrium, which does not rely on sunspots, is to consider "fundamental" or information-based runs.

- ⁴ The welfare analysis of information-based runs is complicated. They can be seen to be welfare decreasing when the long term investment of the bank is irrevocable and depositors are not very risk averse. If the long term investment is liquid then they are beneficial since all early demands can be met and the project is liquidated when bad news about returns occur. If depositors have a high degree of (relative) risk aversion then the reception of bad news does not induce depositors to run since consumers would like to invest more in the uncertain future (Jacklin and Battacharya (1988)).
- ⁵ See Diamond (1984) and Leland and Pyle(1977).
- ⁶ See Yanelle(1989).

dimension to regulation, using, for example, reserve requirements as an instrument of monetary policy.⁷

Several regulations have been proposed and used to give stability to the system. Two basic types of regulations can be distinguished: 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 US), entry requirements (like minimum capital requirements), deposit insurance and the existence of a lender of last resort. Examples of the second, which involves usually a principal-agent relationship with its associated incentive costs, are information disclosure rules, and pricing rules or rate regulation.

The regulatory response to the US banking crisis of the thirties was the establishment of a deposit insurance system (FDIC). These systems have been quite successful in stabilizing the financial and banking markets. Runs have been very limited after the Second World War. In Europe deposit insurance systems have been created more recently, typically in the late seventies. Their coverage is different according to the country and may involve full or partial insurance usually for deposits up to a certain size.⁸ The most striking feature of deposit insurance in Europe is that it remains largely unknown to the public. The explanation relies probably on the fact that it is common knowledge in Europe that banks in trouble will be bailed out by the government and taxpayers, and not depositors, will foot the bill. This, obviously, leaves unexplained the introduction of the insurance systems.

Side effects of regulation

Some of these regulations are better founded than others in terms of an efficiency analysis. But, in any case, what is important to understand is that regulation falls into the second best principle: we can never (or it is very difficult to) be sure of improving welfare through intervention when the first best can not be attained, as it is usually the case. In other words, regulation has its side effects, among them the potential introduction of new inefficiencies and a careful cost/benefit analysis must be performed in each case.

⁷ 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.

⁸ See Baltensperger and Dermine (1989).

Present regulatory theory does not give clear cut recommendations due to the complexity of the welfare analysis, as we have seen in the bank runs case. 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 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). Similarly, information disclosure requirements may make banks more vulnerable to information-based runs. Even the rationale of such well-established practices like reserve requirements and the discount window is not completely obvious.⁹

Deposit insurance and the existence of a lender of last resort prevent the occurrence of bank runs but induce a moral hazard problem on banks that have an incentive to assume too much risk through risky investments, or maybe competing raising deposit rates and 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 which failure can have a domino effect, an important credibility problem for policy remains. Interest rate regulation and prudential measures, like capital and liquidity requirements and restrictions on asset concentration, have been implemented to reduce the moral hazard problem. 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.

The deregulation process started in the seventies, principally the money market fund revolution offering high deposit rates, coupled with deposit insurance and the guarantee of the lender of the last resort, has induced excessive risk taking and an increase in failures. The most conspicuous example being the important thrift crisis in the US.¹⁰

It is clear that some of these regulations, rate regulation namely, induce further distortions. Rate regulation suppresses price competition and induces financial

⁹ The rationale for reserve requirements and the discount window is discussed in Bhattacharya and Gale (1986). Private liquidity shocks of banks (with private information about their portfolio) induces the need of interbank lending to insure depositors. The optimal mechanism involves banks borrowing and lending at a subsidized rate (discount window) and there is underinvestment in reserves (with respect to the full information situation).

¹⁰ Losses are currently estimated at \$300 billion over thirty years.

institutions to compete on a non-price basis, through quality or services, and to cross-subsidize products, for example. Although rate regulation may serve as a prudential measure, substituting for equity creating a rent for the bank, it is dominated by a stricter capital ratio requirement.¹¹

These distortions can be examined in the context of the classical Klein-Monti model¹² of banking competition where the banking firm is a price taker in the bond or interbank market and competes in both the deposit and loan markets with some market power. The model was originally build for a monopolistic bank but the approach has been readily extended to Cournot competition. If the costs of the bank are separable (between deposits and loans), and if the loan and deposit demand functions are independent, then a standard separation result emerges for pricing in the deposit and loan markets. The bank equates the marginal revenue from loans and the marginal cost from deposits to the competitive bond rate. The introduction of a services variable that affects positively the demand for deposits and for which the bank can set a price (a zero price means a complete subsidy for the services) allows the examination of the effects of deposit rate regulation. With a regulated rate a bank will invest in services to equate the marginal cost of investment to the financial margin: the bond/interbank rate (discounted by the percentage of free reserves) minus the regulated deposit rate. This will generally imply to subsidize services. A lower deposit rate, a higher margin, implies that the bank has more incentives to invest in services. Deregulation and price competition that imply a lower margin will induce the provision of a lower level of services. It is worth noting that the subsidization of services only arises when the bank has some monopoly power.¹³

Interest rate and services pricing regulation and entry requirements pose a more fundamental problem for regulation: the possibility of "regulatory capture" in favor of the regulated financial institutions.

In Europe rate regulation has been very popular till recently. Only in Italy, Switzerland and the UK were market rates paid on demand and savings deposits according to a recent OECD survey (Bingham (1985). 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

¹¹ See Baltensperger-Dermine (1987).

¹² Klein (1971) and Monti(1972).

¹³ See Faig(1987).

make easier the control of the banking sector.¹⁴ Different forms of "concerted pricing" exist in Belgium, France, the Netherlands and Switzerland.¹⁵ Baltensperger and Dermine (1987) give evidence of the effect of rate controls in raising profitability and margins. Banking tends to have also a higher rate of return on equity than the industrial sector. All of this is consistent with the capture theory of regulation.

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

In summary, the main side effects of regulation are induced moral hazard and the possibility of regulatory capture. In any case, conduct type regulation, with its associated principal-agent relationship in an asymmetric information world, generates information rents.¹⁶

3. Deregulation and integration

European banking

Until recently different forms of concerted pricing and collusive agreements have maintained in Europe prices for financial services above competitive levels. This is consistent with the evidence gathered so far, the Price Waterhouse (PW) study and with available data on margins.¹⁷ Regulated prices have induced competition on services and cross-subsidization. There is evidence also that higher margin countries have denser branch and ATM networks.¹⁸ The PW study also uncovered large price differences

¹⁴ 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 Dassesse and Isaacs (1985).

¹⁵ In Spain, and until very recently, the heads of the large banks would meet once a week for lunch to "conduct business".

¹⁶ The classical analysis of this issue is Baron and Myerson (1982).

¹⁷ See Baltensperger-Dermine (1989).

¹⁸ See Neven (1989).

among countries. Although these differences can be attributed to differences in costs¹⁹, reserve requirements or bundling (in which case the price of a standard bundle may still be the same across countries), differential degrees of competition can not be discarded. Market structure could be characterized as a system of national oligopolies. Concentration does not appear to have a positive relationship with profits. This should not be surprising given the possibility of regulatory capture. Further, there is evidence of rent sharing with labor.²⁰

Towards a single market

The program for the integration of the financial sector calls for freedom of capital movement and freedom of establishment as essential tools. Still several European countries have controls on capital movements (Germany, UK, France and Benelux countries have liberalized capital flows already). Trade in banking services in Europe is limited, tends to be of the intra-industry type (a country both imports and exports) and most of it seems to be with the rest of the world.²¹ Legal obstacles to the establishment of banking subsidiaries have been practically 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 either hidden restrictions or economic barriers to entry.

In order to facilitate market access the European Commission has established the single banking license and the home country and mutual recognition principles in its second banking directive. Authorization for a financial institution to operate in one European country would entail the ability to supply or establish financial services elsewhere. The EC second directive calls for home country control on solvency and large exposure, requiring nevertheless a minimum harmonization: setting a floor on equity levels, putting limitations on risk concentration, setting standards on investor protection and other accounting and ownership measures. With respect to monetary policy issues (reserve coefficients, for example) and deposit insurance the national or host country principle is

¹⁹ Maybe because of differences in factors prices, scale and scope economics or just plain inefficiency. The different mix of retail versus wholesale and corporate banking in different countries could play a role also.

²⁰ See Steinherr and Gillibert (1988).

²¹ See Neven (1989).

called for. This way, for instance, a foreign bank should join the deposit insurance scheme of the host country.

The benefits of integration and competition

The PW study predicts substantial benefits of integration of financial markets. The study simulates the impact on consumer surplus of the decrease in prices of financial services to the lowest levels found in the EC. The basic idea is to assume that post-integration a competitive financial and banking market will prevail. Then producers that do not set competitive prices will not be able to survive since business will flow to the lowest priced firms. This accords with the classical competitive view of international trade (although the bundling problem may indicate an overestimation of the attainable price decreases). The study also contemplates existing imperfect competition features, economies of scale, differentiation and associated noncompetitive pricing, but seems to assume that integration will be so powerful to induce perfect competition, exhausting the potential economies of scale. This is certainly too extreme to be taken literally. Probably it would be more appropriate to interpret the post-integration situation, according to PW, as a "contestable" market, where, even in the presence of economies of scale or product differentiation, potential competition disciplines established firms and enforces a competitive outcome.

The PW study has been much debated. We offer now a qualitative assessment of the effects of integration on competition.

4. From collusion and regulatory capture to imperfect competition

Our first and central thesis contends 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 due to the presence of important economic barriers to entry, yielding an upper bound for the integration benefits lower than the competitive benchmark.

This means in particular that integration of financial markets will produce, or is producing already, substantial benefits which will be less than those which would follow from a final competitive structure.²²

²² We are assuming therefore, and this is an empirical judgement, that moving from collusion to imperfect competition will improve welfare.

In order to substantiate our claim we will explain why the potential for collusion looms large, how "1992" can change things and the limits to competition in banking.

Collusion, focal points and "1992"

The theory of dynamic games has illuminated the factors that tend to hinder or foster collusion among firms. The basic idea is that the fear of future retaliation may deter cheating from a collusive agreement. In this respect low discount rates, a small number of firms, symmetry of firms in the market and the possibility of detecting quickly a deviator have been shown to be facilitating factors. Two other factors, multimarket contact and building a reputation of cooperation, may apply with force to banking. Multimarket contact, typical in banking, facilitates collusion since a noncooperative attitude in one market can be punished in others and the fear of spoiling one market may deter deviations in all markets.²³ In a situation on incomplete information, where firms do not know relevant information that influences the behavior of their rivals, there are incentives to build a reputation for friendly and cooperative behavior. In this respect the history of the industry, an intangible, plays a crucial role, yielding "focal points" and "usual practices" to firms to coordinate their actions and avoid price wars. On the other hand, in a multimarket competition context, market power may be protected building a reputation for toughness threatening effectively to fight entrants.²⁴

It is well known that tacit collusion, that is, without legally binding agreements, may be difficult to sustain when the above mentioned factors are weak. Nevertheless, in the banking industry in Europe the collusive factors have been reinforced by regulations that have made life easy for banks.²⁵ 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.

A history of cooperation needs a turning point to develop a competitive attitude. It is our contention that 1992 will provide it.

²³ See Bernheim and Whinston (1986).

²⁴ See Kreps and Wilson (1982) and Milgrom and Roberts(1982).

²⁵ Evidence of market power in the US market is not conclusive. Positive evidence of the association between concentration and profitability is given in Rhoades (1977) but Smirlock (1985) argues that it can not be attributed to market power.

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 banks decisions. The deregulation and integration process will move the focus towards noncooperative behavior destroying the anchor on which restrictive practices are bound.

The case of high yield accounts in Spain serves to illustrate our thesis. Since 1987 there is total freedom of interest rates, nevertheless only foreign banks and some secondary trademarks of the large national banks, all with a limited network, were offering openly high return accounts. There seemed to be a tacit agreement between the large banks not to engage in a costly rate war over deposits, trying to prolong the low regulated deposit rates of the past. The strategy also tried to discriminate between informed and uninformed consumers. This situation was upset by a large, and efficient, bank that finally deciding to launch a very aggressive campaign to attract deposits offering a new account with high returns and offering to pay for part of the switching cost of consumers (change of all automatic payments through the account). The bank seems to have increased its deposits substantially triggering a generalization of the new high-yield accounts.²⁶

The limits to competition

Noncooperative behavior is not to be confused with competitive behavior. The lack of concerted action and a deregulated market does not mean that a competitive outcome emerges if there are economic barriers to entry.

A market with no barriers to entry and exit is termed contestable.²⁷ In a contestable market entry and exit is costless and potential competition disciplines the behavior of incumbents, even if there is a monopoly. This is so since this type of market is vulnerable to hit-and-run entry. If a firm were to charge a price so as to make a positive profit an entrant could come in, undercut the established firm, get his business, and exit before he could react. The price charged by the incumbent would not be sustainable. Sustainable configurations have very desirable properties: firms make zero profits, if more than one firm is active prices equal marginal costs, the industry configuration is cost-minimizing and there is no cross-subsidization of one set of products by others.²⁸

²⁶ See Caminal et al (1990) and Vives (1990) for an overview of banking competition in Spain.

²⁷ See Baumol, Panzar and Willig (1982).

²⁸ That is, the revenues of any set of products exceed their incremental cost.

Two conditions are needed for contestability: there can not be sunk costs and there must be some price rigidity, the quantity adjustment of entrants and the switch of consumers to the new offer being faster than the reaction of incumbents.

Are these conditions, abstracting from regulation and collusion, satisfied in banking ?

Bain identified several sources of barriers to entry: economies of scale, product differentiation advantages and absolute cost advantages. A barrier to entry is an incumbency advantage: a cost or demand asymmetry which favors the incumbent and allows a supranormal return (rent).

Barriers to entry are present at different levels of the banking business. Leaving aside the legal ones, entry and capital requirements, for example, there are many economic barriers and sources of market power. Investment in physical capital, branches, computer equipment, ATM systems, and in 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.

It is well understood from location models that an extensive branch network may crowd space and prove to be an important barrier to entry yielding the bank local monopoly power in the retail market. An incumbent (or a cartel of incumbents) has (have) an incentive to deter entry through branch proliferation.²⁹ This is so since a monopoly incumbent has more incentive to open new branches than an entrant. The monopoly, if successful, will keep its monopoly position, while the maximum payoff for the entrant are the profits associated to a duopoly.³⁰ Furthermore, the branch and ATM system involves also a network externality situation. For the consumer the size of the network is an important consideration and therefore an individual consumer must anticipate the total number of consumers who will join the bank. This poses a coordination problem which may have multiple equilibria, not necessarily optimal from the social point of view. The bank has then an incentive to enlarge his customer base to elicit growth expectations in the consumers, facing at the same the problem of whether to make compatible or not his ATM system with those of competitors. In general a smaller or weaker bank will have

²⁹ See Schmalensee (1978) and Bonano (1987).

³⁰ Nevertheless, if exit costs are low and there is product substitution, proliferation may not be credible. An established multiproduct (multiplant) firm may have more incentive to exit a location where it faces competition than a single product (location) competitor. The former by exiting will soften price competition (Judd (1985)).

more incentives than larger ones to make their ATM systems compatible. With an integrated network all banks gain since consumers prefer it but a smaller bank obtains a larger benefit free riding on the larger network of the competitor. A larger bank will tend to prefer an incompatible system, nevertheless this increases price competition to capture a larger customer base (with penetration pricing, for example) and may not be worthwhile.³¹ In any case denying access to a well-established network poses an important barrier to a potential entrant.

Another important source of market power are switching costs.³² Consumers face a substitution cost of moving from one bank to another. This cost may be associated to the physical change of accounts, bill payments ... to lack of information, or even to bounded rationality. Switching costs are not the same for all customers. It is reasonable to assume that they are decreasing with wealth. This would rationalize the idea that rich people have more alternatives. Banks know it and are able to segment the market price discriminating. This way, for example, high return accounts require large minimum balances or even they are not publicized and are kept for "informed" people. Someone asking for this type of account reveals himself as an informed customer.³³ Switching costs may yield collusive outcomes once firms have established a customer base which remains captive. Nevertheless they also induce intense competition for customers to enlarge the base. Banks would have an incentive to offer introductory pricing, a high deposit rate, to attract customers and after, once customers are locked-in, decrease it. In fact, introductory pricing has been used by banks with special accounts for young people and in the launching of high yield money market accounts. Obviously, if this type of behavior is anticipated by consumers they will refrain now from accepting these offers out of fear of being "exploited" later. The result is that switching costs make demand less elastic both now and in the future and, with no change in the tastes of consumers, increase the profits of banks.

Last but not least, reputation effects in banking may prove to be crucial barriers to entry. As we have seen confidence in a bank and in the banking system is a delicate matter. The "quality" of a bank is very much related to the perception of customers about its solvency and probability of failure (think of Swiss banks !). The solvency of the bank will depend

³¹ See Katz and Shapiro (1986 a and b) and Farrell and Saloner(1985).

³² See Klemperer (1987). See also Caminal and Matutes (1989) for an analysis of endogenous switching costs.

³³ For example, in Spain it has been a usual practice of large financial institutions not to publicize high yield accounts and not to offer them to customers unless asked for.

obviously on the wiseness of its investments and good management, but also on its customer base. A large base gives stability, because of switching costs and allows a high level of diversification. A problem is that the quality of the bank is related to the expectations of depositors. With imperfect deposit insurance an interest rate offer may mean different things depending on the evaluation of the solvency of the bank.

Identify now the "reputation" of a bank with its perceived probability of failure. This introduces vertical differentiation in banking competition: if all banks were to offer the same rates, and there are no other differentiation elements, depositors would prefer the safer ones. It is not difficult to imagine a situation where low risk (high quality banks) banks enjoy larger margins, profits and market shares attracting (highly risk averse customers). Further, vertical differentiation may give banking a natural oligopoly structure, that is, independent of entry costs, a concentrated structure will prevail.³⁴ If the diversity of the consumers is low (in terms of risk aversion), or the initial advantage of safer banks is large, the market may not sustain riskier banks (even if entry costs are small).³⁵

The natural oligopoly structure may be reinforced by a snowball effect. Suppose for example that two banks are already established in a large market and that bank A is larger and better diversified than bank B. A new market is opened and consumers form (rational) expectations about the different failure probabilities of the two banks. Bank A will capture a larger market share than bank B, snowballing its initial advantage.

Deposit insurance and the lender of last resort tend to provide stability to the system but nevertheless some residual uncertainty remains. This seems particularly true in Europe where deposit insurance systems are ignored and intervention rules are not transparent at all. Reputation for solvency and good management takes time to build but once established it stabilizes a clientele. For example, in some European countries Savings Banks have had and still have a premium for being safe. The premium translates in lower deposit rates paid to customers.

³⁴ It is worth to remark that the condition for the emergence of a natural oligopoly seems to be satisfied in banking: The burden of the increase in quality (increase in the customer base) falls basically on fixed costs (investment in the branch network, ATM systems and promotion). See Gabszewicz and Thisse (1979) and Shaked and Sutton (1983) for an analysis of vertical differentiation.

³⁵ See Matutes and Vives (1990).

In summary, the increase in competition will be limited. Freedom of establishment will be confronted by economic barriers to entry. In fact, we have seen how there are practically no legal barriers in place but investment and entry abroad does not seem to have surged.³⁶ With regulated rates banks have an incentive to overinvest in services, mainly through an overextended branch system. This overextended network can yield effective protection against entry. One effect of the past rate regulation is thus to create an important barrier to entry once deregulation takes place ! Freedom of capital movements will be limited, from the point of view of depositors, by switching costs. The prevailing system of national oligopolies does not seem doomed to disappear.

5. Segmentation and the benefits of integration

Our second thesis asserts that the banking market will remain segmented, with different degrees of competition, and the benefits of integration will be unevenly distributed.

Large corporate banking is already an international business with strong competition. Integration will not have here therefore such a large impact. Retail banking for wealthy consumers and corporate banking for medium sized firms will see a substantial increase in competition. Mass retail banking will see a much moderate increase in competition fundamentally due to high switching costs for consumers and barriers to entry. In fact, low income depositors will probably suffer since the increase in competition will tend to diminish the subsidization of the operation of accounts.

Segmentation can be structural or induced by strategic reasons.

Banking is a multiproduct industry segmented structurally, both from the demand and the supply sides. Retail banking and the corporate international banking are very different lines of business indeed. Different because customers are very different, and because delivering the products calls for different skills and resources. This is one of the reasons why it is so difficult to talk and to find convincing evidence about economies of scale and scope in banking. Global economies of scale in banking seem to face the same problems that the classical problem of the returns of aggregate production functions. Econometric studies yield (global)economies of scale that are exhausted at low levels of output and

³⁶ In Spain, the only country where there are still restrictions to entry, foreign banks have not even exhausted the limited possibilities they have. This is an indication of the existence of important economic barriers.

there is evidence that average cost dispersion is higher in the same size class of banks than across different sizes, indicating that the issue of scale economies can not be very crucial.³⁷ The theoretical arguments for the existence of banks seem to point at the greater relevance of economies of scope. Nevertheless there is not still conclusive evidence on their importance.³⁸

Segmentation of customers is very important from the strategic viewpoint, as we have seen in our discussion of price discrimination and switching costs. Banks can also specialize in catering to certain segments of the population. For example, a bank can invest in a large network of branches to have a large and stable (risk averse) clientele, with not many outside options, and gain a reputation for solvency. This will allow the bank to be soft in pricing, a fat cat, and enjoy a large margin. Otherwise a bank may decide to have a small network, price aggressively and cater to less risk averse and better informed clients. The bank will be then a puppy dog by committing to be small.³⁹

It is worth emphasizing here that some aspects of the barriers to entry we have mentioned, strictly speaking, apply only to retail banking based on a branch network. Some banking services for corporate customers and for the wealthy segment of consumers may have some contestability properties due to low switching costs and the alternatives offered by disintermediation. This points also to the consideration of the value of branches as instruments of competition given technological developments and deregulation that lower switching costs. These banking services are good candidates to be supplied by specialized firms unless there are economies of scope with other services provided by banks. Nevertheless, competition in several markets gives a bank the possibility of using the leverage of a monopoly position in one line of business to monopolize another line of business by bundling or tied sales. This way banking institutions may foreclose the entry of non-banks in some threatened segments.⁴⁰ The important issue to retain is the segmentation of the banking market implies that different degrees of competition can coexist.

³⁷ See Gilligan et al (1984), Shaffer and David (1986) and Humphrey (1985 and 1987).

³⁸ Some positive evidence is provided by Gilligan et al (1984) although some studies even report slight diseconomies of scope (Berger et al) (1987).

³⁹ It has been shown that smaller firms have an incentive to price aggressively to build a clientele while larger firms would tend to "exploit" their customer base. See Farrell and Shapiro (1987). The animal terminology for strategies is taken from Fudenberg and Tirole (1984).

⁴⁰ See Whinston (1987)

Further, multimarket competition may yield incentives for firms to exit or not to enter a market. This paradoxical outcome, which limits the effects of the integration of markets, comes about because of strategic behavior. In a context of segmented markets a firm by exiting a profitable market may gain a strategic advantage in another market that more than compensates the loss in profits in the first market.⁴¹ Similarly, the prospect of integrated markets may induce a firm not to enter a market to avoid a more aggressive price response of a rival. The reason is that integrated markets imply uniform pricing. Suppose that firm A is in markets 1 and 2 and firm B operates only in 1. The latter may not want to enter market 2 since with the status quo the pricing of firm A is softer because the firm has a monopoly in market 2 and has to charge the same price for both markets.⁴²

6. Mergers and the intensity of competition

Our third thesis is that mergers, acquisitions and cross-participation agreements will tend to soften competition.

Deregulation and integration will make inefficient some structures in place. Rate regulation has induced overbranching and a certain tendency to agglomerate at the center of the market.⁴³ This is easily explained in terms of location theory, since when rates are fixed firms have an incentive to locate "where demand is" and to compete in terms of quality (geographical proximity) with more branches. When rates are free this location pattern makes price competition very harsh. Firms have incentives then to relax price competition by differentiating themselves, locating further apart, for example. This process is costly and a possible way to relax competition is to buy the rival. In this case concentration in local markets would increase (as it has happened with deregulation in the US).

A potential alternative to buying is trying to drive the rival bank out of business. Nevertheless, when depositors have residual uncertainty about the solvency of banks and the banking system predatory strategies may backfire. A bank trying to get rid of a rival, perhaps forcing him into bankruptcy, may provoke a confidence crisis without

⁴¹ This may happen, for example, with decreasing returns to scale and Cournot competition (Bulow et al (1985))

⁴² See Matutes and Regibeau (1989).

⁴³ On theoretical grounds this tendency has been shown in some location models with a uniform distribution of consumers.

appropriate lending of last resort facilities. To the contrary, a sound bank may have incentives to help another bank in trouble precisely to avoid a confidence crisis that will hurt everyone. Failure to do so may signal to depositors that the supposedly sound bank may have problems also.⁴⁴ These considerations indicate that it may be better to merge with a rival than trying to attack him. Merger has the advantage of not having the risk of a confidence crisis and obtaining, at least potentially, an increased market power. Nevertheless a certain level of pre-merger predation, which does not trigger a crisis, may be optimal, since then the buyer may obtain a more favorable price.⁴⁵ In balance it seems that the costs of predation in banking are much higher than in other industries: merger looks better than predation.⁴⁶

On another vein, the overextension of the branch network in some countries may mean that the only entry possibility is by acquisition of an already existing bank. The opportunity may arise since the increased competitive pressure can force inefficient or badly managed banks into insolvency. In this case public and private incentives coincide in the desirability of a rescue merger to preserve the stability of the financial system and the intangible capital of the bank (non-verifiable information about customers and loans for example).

In general a response to increased competition may be to merge with rivals since both collusion is easier to sustain with less firms and margins in noncooperative competition tend to be higher. Another reason to merge is the realization of economies of scale and/or scope. Although we have seen there is no hard evidence in favor of either of them it must be emphasized that measurement and aggregation problems may obscure some potential economies in very specific areas as back office processing, for example.

The effort to soften competition and to penetrate foreign markets gaining access to an established network may promote cross-participation agreements. In this situation an individual bank puts some weight on the profits of the participated bank and cooperative behavior is induced. In any case the establishment of an European market for corporate control should improve the efficiency of banking and the quality of management.

⁴⁴ See Aghion et al (1988).

⁴⁵ See Yamey (1972) and Saloner(1987).

⁴⁶ It could be argued also that lender of last resort schemes may render predation ineffective, protecting institutions against failure.

7. A final remark: the consistency of proposed regulations

We have talked about the strategic incentives of financial institutions on the face of the deregulation and integration process. What about the strategic incentives of national regulators, given the EC directives on integration ?

The EC directives on integration set the ground for a contest among national regulators, nonetheless this contest will not necessarily yield an efficient outcome.

The application of the home country principle to solvency 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. At the same time an increase in deposit insurance in one country may make it more attractive to depositors but also to foreign risky banks. The directives call for minimum standards (harmonization); nevertheless the system does not give the appropriate incentives to internalize costs.

Similarly, monetary policy instruments like reserve coefficients will tend to be equalized at their lowest levels.⁴⁷ Otherwise the country that does not do it will put his banks at a disadvantage. With no harmonization on the taxation of capital the tendency will be similar.

⁴⁷ Reserve coefficients are better seen as a tax. (See Romer (1985)). In some countries with high reserve requirements, like Italy and Spain, harmonization may pose an important problem for the financing of the public deficit.

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