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COMPETITION IN SPANISH BANKING

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Abstract

The purpose of this paper is to assess the state of competition in the Spanish banking system in the wake of the integration of the European financial market.

Banking in Spain has undergone a strong liberalization process in the last fifteen years; this has accelerated recently, evolving from a situation of tight regulation and protection from competition to a changing sector in which the recent merger attempts are the most visible phenomena.

The work that is reported here is in the spirit of what could be called the Industrial Organization of banking. This is certainly a developing field since finance and banking theory and Industrial Organization (I.O.) have evolved quite separately. Probably the most important contribution that I.O. can make to banking theory is the consideration of previously-neglected strategic aspects by providing a box of tools for analytical purposes. In financial markets, the weight of the competitive example is still very great, even in situations where the capacity of individual players to influence market outcomes is not negligible. It should be pointed out also that the very existence of financial intermediaries is linked to market imperfections.

* This paper is part of a larger project, under the direction of Xavier Vives, to study the banking sector in Spain. The paper has been presented at the "Conference on European Banking after 1992" held at INSEAD (Fontainebleau, February 1989) and at the Solomon Brothers Center for Research in Financial Institutions (New York, May 1989). We are grateful to Xavier Freixas, Rafael Repullo and Joan E. Ricart for helpful comments and to Josep Comajuncosa, Marisa de la Torre, Belén Mateos, Xavier Ramírez and Jesús Saurina for research assistance.

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COMPETITION IN SPANISH BANKING

1. Introduction

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The work that is reported here is in the spirit of what could be called the Industrial Organization of banking. This is certainly a developing field since finance and banking theory and Industrial Organization (I.O.) have evolved quite separately.[1] Probably the most important contribution that I.O. can make to banking theory is the consideration of previously-neglected strategic aspects by providing a box of tools for analytical purposes.[2] In financial markets the weight of the competitive paradigm is still very great, even in situations where the capacity of individual players to influence market outcomes is not negligible. It should be pointed out also that the very existence of financial intermediaries is linked to market imperfections.

When trying to study competition in Spanish banking two types of problems are encountered. Firstly, the lack of a fully developed theoretical model of banking competition that takes into account the complexities of banking as a multiproduct concern in a strategic framework.[3] Secondly, the lack of a corpus of empirical evidence on the Spanish financial sector and on banking in particular.

With these limitations our objectives are rather modest: provide basic evidence, pose some fundamental issues and problems, survey, and extend wherever possible the existing work, and try to draw a coherent picture of Spanish banking.

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[1] This is not to say that there are no counterexamples. For instance, the competitive analysis of investment banking in the United States by Hayes, Spence and Van Praag (1983).

[2] See Neven (1989) for an exposition of the lessons for banking competition that can be derived from Industrial Organization.

[3] For a survey of existing models of the banking firm see Baltensperger (1980) and Santomero (1984).

The structure of the paper is the following. In section 2 we describe the Spanish banking system and its recent evolution, making some international comparisons. Section 3 collects more systematic and theoretically based empirical evidence on the main issues.

Section 4 attempts a competitive analysis of the sector, and we conclude with some speculative remarks.

2. The Spanish Banking System in the Wake of European Integration

Spanish banking has been traditionally, and until recently, a closed system, heavily regulated, protected from external competition, conservative in terms of innovations and controlled by the large banks, who also own large portions of industry. The Spanish financial system and private agents being very unsophisticated, banks would receive their main input, deposits, at a very low (deposit rate) cost and were required to cheaply finance public expenditure through investment requirements. In exchange, large banks were allowed to coordinate their market actions in a context of complete interest rate regulation.

The banking system underwent a strong shock due to the long industrial crisis that Spain suffered after the oil price increases in the seventies. Many banks failed and had to be rescued. The banking crisis temporarily reversed a trend towards lower concentration and slowed down the deregulation process started in the mid seventies (since authorities were worried about the solvency of the system). After the crisis concentration went down again until two of the largest banks decided to merge.

The outcome is a banking system with concentration and profitability levels roughly similar to European standards, which does not look very efficient but is nevertheless capitalized, and a country which looks, perhaps paradoxically, overbanked.

We will now try to back the above claims by describing the main facts about regulation and the evolution of competition (with particular emphasis on the crisis and the changes in concentration), and comparing the Spanish system with international standards. Before that we briefly describe the state of the financial system.

2.1. The Financial System

At the end of 1988 the characteristics of the Spanish financial system, at least compared to other EC countries, is peculiar. On the one hand, the relative weight of the banking industry is very important,[4] although declining. On the other hand, there is a sophisticated organized market for public debt and money markets, in clear contrast with an underdeveloped stock market (although currently under reform, as we will see later). Organized option and future markets are nonexistent, although there are projects to develop them, and there is a scant over-the counter market for both instruments.

The market for *public debt* has developed very quickly in the last five or six years partly because of the needs of public debt financing and partly because of monetary reasons. In 1984 the government decided to obtain a large part of its financial resources at market rates. Given the high and volatile inflation rates prevailing in that period the demand was oriented towards short-term Treasury notes ("Pagarés del Tesoro") which, in addition, offered an attractive fiscal

[4] In 1983, about 80 % of households' financial wealth was held in the form of bank liabilities plus cash, while in the United Kingdom or Germany this ratio is about 50%.

opacity.[5] Precisely because of that, these bills were not apt for monetary control purposes and, in 1987, a new instrument appeared: Treasury bills ("Letras del Tesoro"). At the same time it was crucial to make the market deeper to allow for the volume of transactions required by the intervention of the Bank of Spain.

Thus, in April 1987, the new market is organized around a centralized compensation system ("Central de Anotaciones en Cuenta"), run by the Bank of Spain. "The Central de Anotaciones" issues the Treasury bonds and makes payments by a simple accounting settlement. Also, it registers all exchanges of bonds, without the need of a public notary (a role played by the "agentes de cambio y bolsa"). Thus, transaction costs are drastically reduced. Besides, the system of continuous bidding reduces the interest rate spread and increases the liquidity of these bonds.

The Spanish *interbank market* originated in 1971 after the setting of a reserves requirement two years earlier, but it is only in the last decade that the volume of transactions in this market has grown at a dramatic pace. Three main elements have contributed to this fact:

a) The evolution of monetary control policy

b) High interest rates in the 80's, implying a high opportunity cost for idle resources

c) The entry of foreign banks after 1978, with important limitations in the deposits market.

Traditionally, the Spanish stock market has been very thin, lacking transparency and inefficient, with a highly protected system of stock broking dominated by a small number of families. Stockbrokers ran a very lucrative business; they needed no capital backing since they were not allowed to act as market makers, but collected high proportional commissions: share transactions could only be validated by a licensed stockbroker. Insider trading has not been regulated until very recently and was considered standard behavior in the market coupled with very little information disclosure on the part of the firms.

The inefficiency of this system of stock broking was exacerbated by problems of liquidity, price manipulation, and crowding out due to public debt financing.

It is very easy to illustrate the thinness of the Spanish stock market. For example, the number of quoted companies in 1986 was a mere 312,[6] of which only about 60 stocks currently listed are considered sufficiently liquid for any major investor to consider buying them; non-bank Spanish firms have obtained only 9% of their financial resources in the stock and securities markets[7] in 1987; and the capitalization of stock listed in the four "Bolsas" (the stock exchanges in Madrid, Barcelona, Bilbao and Valencia) at the end of 1986 was about 11% of GDP, as compared to about 65% in the United Kingdom, 25% in Germany, or 17-18% in France and Italy.[8] The composition of traded assets is also very significant: in 1987 about 75% of traded assets were those of banking firms and public utilities. With trading concentrated in a relatively small number of stocks and an even smaller number of sectors the market is inevitably volatile with a lot of room for large-scale shareholders to manipulate prices.

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[5] These T-bills became the reference point in terms of maturity and return for other privately-issued money market assets.

[6] In 1977 the figure was 522.

[7] Trujillo et al., 1988, p. 125.

[8] OECD (1988), p. 61. Capitalization for Spain in 1987 is substantially higher.

The large accumulated public deficits in the 80's and their financing needs have also contributed to preventing the development of an efficient stock market.

In the 80's several changes were introduced, like credit transactions (through "Sociedades instrumentales de agentes de cambio y bolsa") which increased the market's liquidity, and a second market for small and medium-sized businesses which has not been very successful. A drastic reform of the stock market is currently under way (see the Appendix).

2.2. Regulation

The Spanish banking system has traditionally been heavily regulated in terms of interest rates, entry, branching and investment and reserve requirements. Furthermore these regulations have put different constraints on different institutions, such as banks and savings banks. Liberalization advanced significantly in the seventies and has accelerated recently, transforming banking into a free-market business.

2.2.1. From complete regulation to liberalization

In 1962 the "Ley de Ordenación Bancaria" allowed the establishment of new banks and tried to separate commercial from so-called "industrial banks". Nevertheless, banks tended to follow the tradition of universal banks. During the 1960's deposit and loan rates were regulated and so were the investments of financial institutions through investment requirements. Spanish banks have been required to provide loans to specific priority sectors (traditionally agriculture, housing, export-oriented activities, etc.) or to hold public debt, both at below-market rates.

In 1969 the process of liberalization of the financial system began: the discount rate of the Central Bank becomes the reference rate to fix deposit and credit rates according to certain margins, with the exception of deposits of more than two-year maturity at industrial banks, loans of more than three year maturity, deposits in foreign currency and interbank transactions, which are freed, and checking accounts, which have a fixed rate. *Reserve requirements* for the purposes of monetary control are introduced in 1970 and 1971 for banks and savings banks. In 1974 the process receives a big push with the authorization of *new banks and free branching* (backed by enough capital), making the operations that industrial, commercial and savings banks were allowed to perform more homogeneous, reducing the investment coefficients and completely liberalizing interest rates for operations of more than two-year maturity. Monetary control is rationalized using reserve requirements, credits from the Central Bank to the banking system and open market operations.

In 1977 interest rates of more than one-year maturity are freed and the process of setting all banking institutions on the same footing continues, tending to equalize investment (down) and reserve coefficients across institutions, and allowing savings banks to increasingly perform the same operations as others (including participation in the Central Bank money auctions). Nevertheless savings banks have been until very recently restricted to invest mostly in their own geographical region, cutting down diversification possibilities.

Savings banks have traditionally suffered stricter regulations in terms of geographic limits to their operations, higher investment coefficients and distribution of profits. It is only after 1973 that they can operate in the market for time deposits of more than two years; since 1975 they have been allowed to expand in terms of branches but only within their geographical region.

Foreign bank entry was regulated in 1978 with a view towards restricting participation in the retail market. Foreign banks were subjected to three restrictions: they could not get financing (through deposits, for example) in the country for more than 40% of the credits given to Spanish residents (the interbank market was excluded from this restriction); they could not open more than three branches, including the main office; and their portfolio of securities had to be of government issues. These restrictions remained in place until 1986.

In 1981 several interest rates are liberalized; among them, loan rates of all maturities and the deposit rates of more than six month maturity above one million pesetas. Dividends of banks are also liberalized. In 1985 freedom of branching is complete except for foreign banks and for the geographical limits imposed on savings banks (which disappeared recently). In 1987 all interest rates and service charges are liberalized.

2.2.2. The present situation and EC regulations

Entry. As we know, Spanish regulations discriminate against foreign banks. After joining the EC in 1986 Spain volunteered to immediately suppress the foreign bank requirement of holding exclusively public assets. It also established a gradual adjustment schedule for the period 1986-1992 to deregulate the number of branches an EC bank could open and the composition of its liabilities:

a) The upper bound on the ratio of domestic liabilities to loans to Spanish residents increases 10% every year, from 50% in 1988 to 90% in 1992.

b) Foreign banks will be able to open an extra branch in 1990 and two more in 1992.

Spanish regulations with respect to authorizing *new banks* are more concerned with guaranteeing the solvency of the entrant than on the degree of competition in the market. Thus, financial regulators not only require a set of objective conditions to the potential entrant (national or foreign) but also keep a large degree of discretion. In particular, the candidate is required to convincingly argue the necessity of the new bank in terms of showing that its activities are needed in a certain geographical area, according to its population, economic characteristics, existence of other banks, etc. This discretionary power was already forbidden by early regulations of the EC ("First Coordination Directive", December 1977), and even more clearly by the proposed Second Coordination Directive, January 1988, which laid down the basic principle that any bank authorized by its home member state will be able to provide a wide set of banking services in any country of the EC – the so-called "single banking license" provision.[9] Therefore, after 1992, Spanish authorities will have to authorize any bank, Spanish or EC, as long as the candidate satisfies the established conditions, and their discretionary power will be abolished.

Reserves requirements. As of this writing, Spanish private and savings banks are required to keep 18% of a subset of their liabilities as deposits in the Bank of Spain. A share of this deposit, 11.5%, receives a rate of return of 7.75%. The level of the coefficient as well as its return has been changed by the Bank of Spain quite frequently. This requirement plays an important role in financing public deficit since a high coefficient allows a high rate of growth of the monetary base (and higher seigniorage) for the same rate of growth of a broader monetary aggregate. This requirement will not be affected by EC regulations, as other measures related to monetary

[9] The directive permits host countries to enforce their own rules on liquidity, business conduct and investor protection rules.

policy. However, since the return on banks' reserves is much lower than the market return (currently the interbank rate is about 15%) and the reserves requirements of other European countries are much lower, maintaining these numbers in the near future could jeopardize the competitive position of Spanish banks. The government plans by 1992 to lower the reserve coefficient to about 5 or 6%, essentially suppressing the 11.5% with yield.

Investment requirements. Since 1987, they almost exclusively affect public debt holding. In October 1988 the investment coefficient was 11% (10% devoted to public debt). The government has recently committed itself (January 1989) to a gradual phasing out of the coefficients, which will disappear completely by January 1st 1993.

Capital requirements. Since May 1985, Spain regulates the solvency of financial intermediaries in a similar way to the Basle Agreement with respect to the recommended procedure. However, the level of the coefficient is substantially higher, 5% of equity oven average assets in 1987 (see Termes, 1988), and is one of the highest in the world. Also, the 1985 legislation eliminated the discrimination among different types of financial intermediaries, establishing a uniform solvency coefficient for all types ("coeficiente de garantía"). This coefficient required a certain level of capital depending on a risk-weighted measure of total assets; the weights considered not only solvency risk but also interest rate and exchange rate risk. It distinguished six risk classes: from assets without solvency risk (to which applies a weight of 0.25%) to fixed tangible assets (to which applies a weight of 35%). Similar to EC regulations, the solvency coefficient applies to the consolidated financial group; that is, to the set of financial intermediaries (excluding insurance companies) that constitute a decision unit. In 1987, Spain adapted to the EC recommendations by requiring that no risk could exceed 40% of capital. Loans to group firms (or board members) are penalized.

2.3. Crisis

From 1978 until 1983-1985 the banking system suffered a severe crisis. Between 1978 and 1983, 51 banks (representing 46% of the existing banks in 1977) involving 20% of total 1983 non-equity liabilities were affected. The peak of the crisis was in 1982 (12 banks failed) and 1983 (21 banks, largely the Rumasa group of 20 banks). Five more banks were affected through to 1985.

The causes of the crisis are diverse but coincide in general with the experience of other countries.[10] First of all, the industrial crises following the rise in oil prices in 1973 and 1979; Spain suffered the impact of the crisis more severely than other industrialized countries. The consequences for the banking system were more profound also due to the close links between banks and industrial firms. The industrial portfolio of banks was substantial and not well diversified – banks usually control several firms to which lines of credit were extended because, leaving market criteria aside, they were part of the "group".

Secondly, bad management and fraud. Apart from the phenomenon of risk concentration, banks in a bad situation, as is well known, have a tendency to take too much risk (attract deposits with very high rates and make very risky investments) due either to limited liability constraints or to the belief that the government will come to their rescue. And this brings us to the third cause, the lack of monitoring of banks in trouble by the central bank. In fact, in Spain a Deposit Guarantee Fund ("Fondo de Garantía de Depósitos", FGD) was instituted only in response to the crisis, being

[10] Theoretical analysis of banking crises, and regulatory measures to avoid them, are provided in Diamond and Dybvig (1983), Postlewaite and Vives (1987) and Baltensperger and Dermine (1987).

consolidated in 1980. It has two main functions: a) insurance of deposits up to 1.5 million pesetas, and b) intervention in case of trouble. The FGD will not be affected by the EC recommendation of December 1986, which encouraged those EC countries that at that time did not have a Deposit Guarantee Fund to create one according to certain criteria.

The crisis had its effect on the structure of the market leading to a noticeable increase in concentration over the period 1980-1984 and slowing down the liberalization process, since authorities were worried about the solvency and stability of the system.

2.4. Evolution of Competition

The evolution of competition in banking is marked by the slow loosening of the heavy regulatory environment and the disintermediation process.

This process has been going on for a long time, particularly since 1982 when the public sector started competing with financial institutions to finance the growing deficit through the public auction of Treasury notes ("Pagarés del Tesoro"). Large firms followed suit, issuing commercial paper. Banks nevertheless have kept control over the process by acting as underwriters of most of the issues. Savings banks have been less affected.

After the liberalization of branching in 1974 there was a big geographic expansion of banks competing through proximity with the customer and service instead of prices, which are regulated[11]. In two years the number of branches doubled: from 5,600 in 1975 to 10,200 in 1977. From 1982 to 1985 they kept growing at a annual rate of 8%. Savings banks expanded more moderately since they were constrained by the higher investment coefficients they had to meet. As coefficients eased they increased the number of branches, and caught up with the banks in 1984. In 1987 there were about 16,500 bank branches and 11,750 savings bank branches. In any case it seems that their expansion has been more cost effective than those of banks.

2.4.1. Assets, liabilities and the disintermediation process

The development of securities markets, mainly public debt but also commercial paper, together with the (slower) development of the stock market and the role (minor up to now) played by new non-bank financial institutions (like mortgage societies and SMMD)[12] has substantially increased the supply of substitute products of the traditional bank offer. In this way bank liabilities with respect to the private sector have evolved from being 84% of total private financial assets in 1981 to 68.4% in 1987.[13]

Banking institutions have reacted by putting products (liabilities) in the market to match the competition of the public sector and firms, and have acted as underwriters for those securities in a massive way. The increased competition nevertheless shows mainly in the upper segment of customers (who are the ones who have access to the new instrument) and does not have a

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[11] Nevertheless it was not unusual to give higher-than-allowed rates ("extratipos") to large depositors. This practice was followed particularly by new banks in order to attract deposits, but the extent of competition in this sense was very limited.

[12] Sociedades Mediadoras del Mercado del Dinero.

[13] Gutiérrez and Campoy (1988).

drastic effect on margins. On the other hand the endorsement and intermediary activity of banks gives them control of the market and has increased revenues for services and fees.

As for the evolution of the asset structure (see Table 1), the percentage of financial investment in loans decreases dramatically for private banks and moderately for savings banks. The portfolio of securities decreases a lot for savings banks but only a little for banks. Investment in the interbank market and in monetary assets increases for both. In particular, after 1984, investment in Treasury notes ("Pagarés del Tesoro") increases substantially, even above what is compulsory due to the lack of other investment opportunities. The disintermediation process is underway.

Table 1

Asset structure for private and savings banks (in %)

	Private Banks		Savings Banks	
	1982	1987	1982	1987
Bank of Spain and monetary assets	7.2	22.0	9.3	25.4
Interbank market	5.1	14.1	9.2	11.3
Loans	74.7	51.4	52.3	46.2
Securities	12.9	12.6	29.2	17.1

Source: Trujillo, et al., 1988, p. 301. Figures do not add up to 100 due to rounding.

On the liability side the most important fact is the decrease in the proportion of cheap deposits (see Table 2). Long term deposits are practically stable for savings banks and decrease 20 points for banks. At the beginning (1980-1983) they increase somewhat as customers try to get a higher return. In a second period, 1983-1985, there is a movement towards negotiable liabilities ("pagarés bancarios") and finally, 1985-1987, from those to endorsements of mainly Treasury notes ("cesiones de pagarés del Tesoro.") Changes are drastic for banks and moderate for savings banks. These movements have tax explanations and are also linked to the recovery in the demand for credit from 1985 on. Since then, institutions, instead of financing the government (purchasing Treasury notes), have been financing the private sector transferring the notes to their clients.

Table 2

Liability structure for private and savings banks (in %)

	Private Banks		Savings Banks	
	1982	1987	1982	1987
Checking and saving accounts	41.1	37.5	57.6	50.3
Term deposits and CDs	48.4	28.9	40.6	36.7
Negotiable liabilities	4.2	5.5	0.1	0.6
Asset endorsement	-	23.3	-	6.2
Other	6.4	4.8	1.5	6.2

Source: Trujillo, et al., 1988, p. 303. Figures do not add up to 100 due to rounding.

2.4.2. Players and lines of business

Banking institutions are of three main types: private banks, savings banks and credit cooperatives. The first have lost ground in aggregate terms consistently in favor of the second. In 1976, in percentages of total assets, the proportions were 71.6/25.9% while in 1987 they were 64.3/32.5%.[14] Credit cooperatives account for the rest (around 3%) and we will not deal with them further here. One of the reasons for the relative decline of banks is that they are more affected by the disintermediation process.

Banks are multiproduct businesses but some institutions concentrate more on retail banking and others more on wholesale. Typically, savings banks concentrate on the retail business while industrial banks and foreign banks concentrate on wholesale. Commercial banks do both.

Indicators of bank specialization[15] show quite different behavior of market participants. In 1987 total assets per branch in millions of pesetas were 1,682 for private banks, 16,644 for foreign banks and 1,359 for savings banks. Loans to individuals as a percentage of total assets are 4.6% for banks while 15.8% for savings banks. Another difference is that savings banks undertake very few operations in foreign currencies. This is due to the fact that they could not expand abroad before 1984. In 1987 private banks had about 14% of their assets in financial instruments in foreign currencies, compared to 2% for savings banks.

Savings banks are net lenders while banks, particularly foreign banks due to their restrictions, are net borrowers in the interbank market. Loan and discount operations, particularly with variable interest rates, are more important and the portfolio of securities held and mortgage credits less important for banks than for savings banks. Part of this situation is due to the now-abolished increased restrictions in the operation of savings banks (the larger portfolio of securities, for example). Savings banks have a higher proportion of short-term deposit liabilities (checking and savings accounts) while banks have a larger proportion of temporary endorsement of assets.

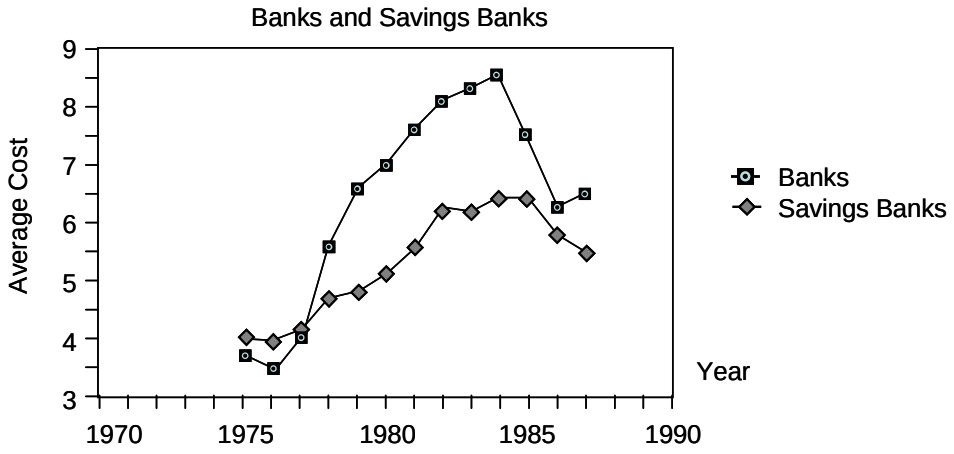
The average financial cost per deposit for savings banks has been lower since 1978, remaining at a two point differential for a few years, and then narrowing down in the last few years (see Figure 1). This might reflect the convergence in the operations of both types of institutions. For several years savings banks could not compete on prices but rather had to attract clients by proximity to customers and offering services to a traditionally less price-conscious clientele.

[14] See Trujillo, et al., (1988), p. 294.

[15] Ibíd., pp. 296-297.

Figure 1

Average Financial Cost of Deposits



It is worth remarking that, due to regulations, savings banks concentrated their expansion in their regions of origin. Savings banks show consistently, at least since 1980, higher profits (both in terms of returns on assets and returns on equity), and higher net interest income and do not show the tendency of banks to decrease their operating expenses (mostly labor) as a proportion of assets (see Table 3). In fact, the tendencies in staff costs seem to be behind this process.

Table 3

Comparative Analysis of Commercial Banks and Saving Banks in Spain

	1981		1983		1985		1986		1987	
	Commercial banks	Saving banks	Commercial banks	Saving banks	Commercial banks	Saving banks	Commercial banks	Saving banks	Commercial banks	Saving banks
Net interest income/Assets	4.15	4.73	3.95	5.28	3.57	4.28	3.73	4.68	3.89	4.87
Operating expenses/ Assets	3.42	3.55	3.09	3.61	2.80	3.39	3.00	3.83	3.04	3.51
Profit before Tax/Assets	0.75	1.03	0.65	1.06	0.72	1.04	0.81	0.91	1.00	1.22
STAFF COSTS/ ASSETS	2.31	2.36	2.08	2.35	1.88	2.20	2.10	2.65	2.12	
EQUITY/ ASSETS (1)	6.48	6.04	5.94	5.82	5.52	5.51	5.68	5.38		
PROFIT BEFORE TAX/EQU1TY	11.54	17.10	10.94	18.19	13.04	18.92	14.36	16.89	16.69	22.27
Corrected of inflation	-3.0	2.5	-1.2	6.0	4.2	10.1	5.6	8.1	11.5	17.1
Rates of inflation used	14.6		12.2		8.8		8.8		5.2	

(1): Equity = Capital and Reserves - Provisions (Arithmetic average of years n - 1 and n).

Sources: Bank Profitability. Statistical Supplement. Financial Statements of Banks 1982-1986, OCDE Paris 1988, and Boletín Económico, Banco de España (March 1988).

As we know, foreign banks have severe legal restrictions to expand in the retail market and, probably due to the strong position of national institutions in this market, have not exhausted even these limited possibilities. Foreign banks get financing mainly in the interbank market (60% versus 16% for national banks with data for 1987) and give credit mainly to big corporate clients, specializing in variable rate credits (up to 35% of the market) and merchant banking type activities. Their market share in the deposits market is small but increasing. Similarly, they have increased their share in terms of assets until 1986, getting 6.85% in 1985, going down afterwards, to 6.4% in 1987.[16] The reason seems to be the increased competition faced from national banks in the markets for loans with variable rates, in syndicated loans and because of the lower fixed rates given for other loans. The high levels of the interbank rates in 1987 have also contributed to this relative decline.

2.4.3. Concentration

We will use as concentration measure the Herfindahl index (H), the sum of the square of market shares of firms in a market. The index H goes from 1 in the monopoly case to 0 in an atomistic market with many small firms.[17] Concentration in a market may increase because of a decrease in the number of firms or because the size distribution is more unequal. It helps to think about the levels of H in terms of the equivalent number of symmetric firms that corresponds to a particular value of H, that is n=1/H.

For many years concentration in the industry had been going slowly down. Considering deposits in private banks, the H index (multiplied by 100) and the associated equivalent number of symmetric firms went from 9.9 (10) in 1959 to 6.5 (15) in 1973 and 6.2 (16) in 1980. Recent data (see Figures 2 and 3) indicate that in terms of deposits[18] concentration has kept on falling reaching 5.5 (18) in 1987, possibly reflecting the growth of medium sized banks and foreign banks. The picture is somewhat different in terms of loans[19] where we observe somewhat lower concentration levels over the period, stabilizing around 4.9 (20) after 1981.[20] The trend towards decreasing concentration of individual banks has been reversed by the recent merger of two large banks, Bilbao and Vizcaya, to form the new BBV. We see how in 1988 the index moves to 6.45 (15.5) in deposits and 5.85 (17) in loans.

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[16] This considers only foreign banks allowed into the country under the 1978 regulation. Previously existing foreign bank branches have a different legal regime and, if included, the foreign bank market share rises to around 11%.

[17] Sometimes the H index is presented multiplied by 10,000. This is the case if market shares are expressed in percentage terms. In this paper we multiply the index by 100 to present the results.

[18] Deposits are taken to be customer resources in pesetas ("Acreedores"), which includes mainly deposits and short term bonds held by the public.

[19] Loans are taken to be "Inversiones Crediticias". Data from "Anuarios Estadísticos de la Banca Privada". Published by the Consejo Superior Bancario.

[20] The same sort of results are obtained if we add saving banks to private banks, considering all of them individually. Other concentration measures, like Concentration ratios, also give the same picture of the situation.

Figure 2

Herfindahl Index

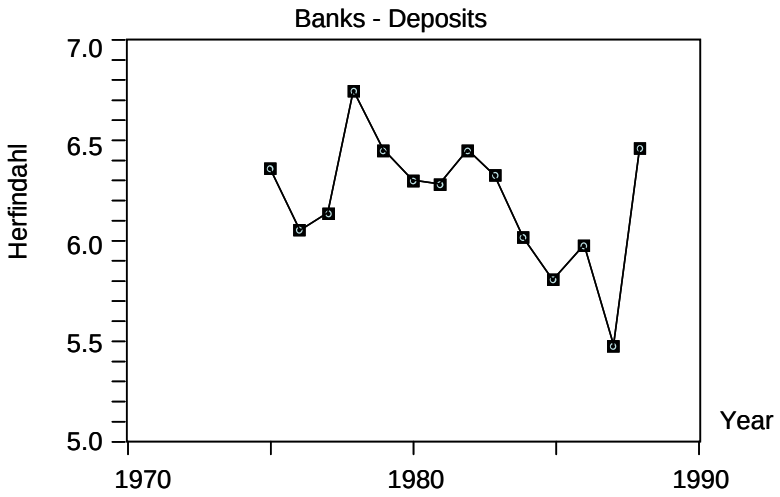
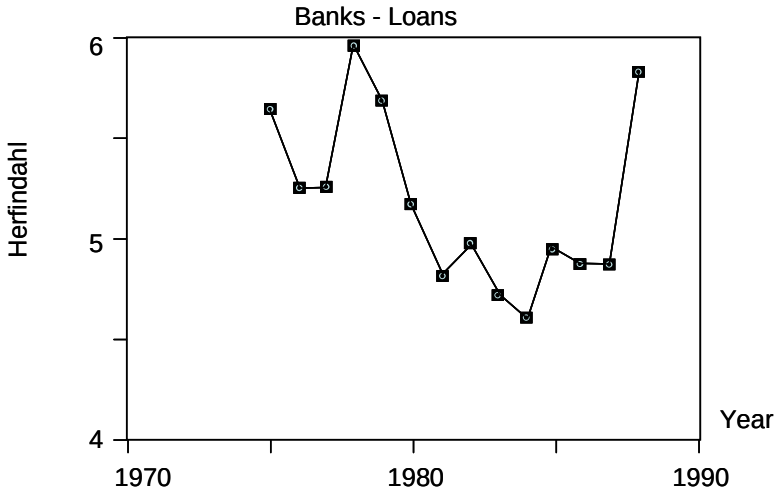


Figure 3

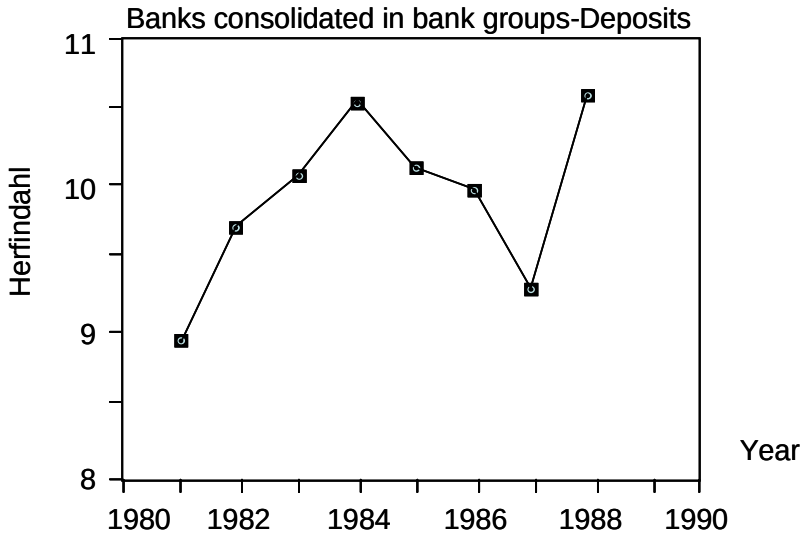
Herfindahl Index



Nevertheless, it seems much more relevant to look at concentration in deposits (or loans) by *groups of banks* since this is the strategic decision unit.[21] Data before the 80's is scarce, but we have made an effort to present figures for the recent years.[22] The market share for deposits of the eight largest groups does not vary much up to 1982: 79.4 in 1967, 78 in 1980 and 81.2 in 1982 conveying the idea of a stable concentrated sector.[23] In this period two new groups emerge: Rumasa with 18 and Catalana with 6 banks. Nevertheless the Rumasa and the Catalana groups (8th and 10th in the 1982 ranking) fail and are absorbed in 1983 causing an increase in concentration. This is shown in Figures 4 and 5 where we can observe that the decline in concentration of single banks in 1981-1984 is matched by an increase in concentration by groups, showing the results of the banking crisis as banks in difficulties were absorbed by the main groups. In any case concentration by groups is substantially higher than for individual banks. The H index is around 10 for deposits and 7.6 for credits in the period 1981-1987, corresponding to 10 and 13 firms.

Figure 4

Herfindahl Index



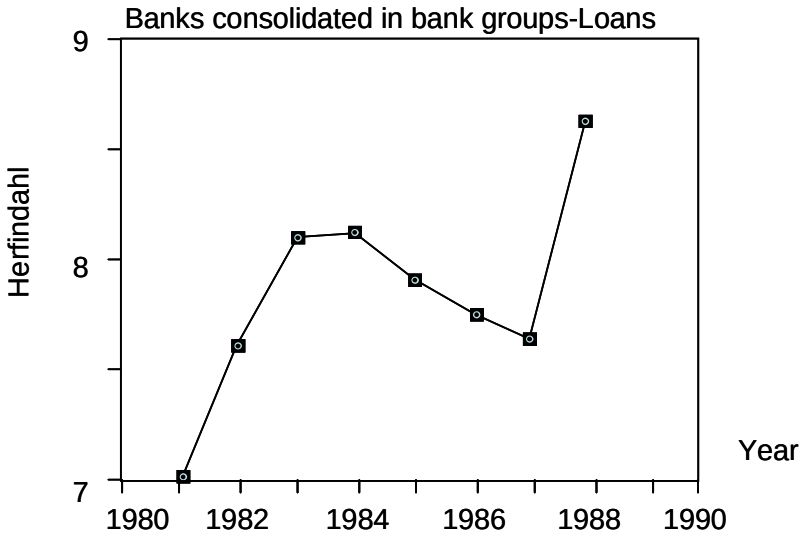
[21] A group of banks usually includes the parent bank, regional banks, secondary trade marks (geared to different segments of the market) and investment banks, which are kept separate in general.

[22] Figures on bank groups should be taken with caution because they have been computed simply by adding up individual bank figures. Nevertheless a limited check due to data availability shows that the differences between the native aggregation procedure and data from consolidated accounts for the big seven banks are not large in general except in the case of the Banco Popular and, to a lesser extent, Banco Santander.

[23] See Fanjul, O. and A. Maravall (1985), pp. 76-77.

Figure 5

Herfindahl Index



The tendency towards decreasing concentration until the beginning of the 1980's is explained by the higher rate of growth of small- and medium-sized banks which tends to decrease the inequality in the size distribution of banks. This factor more than offsets the increase in concentration due to mergers in the period. However, concentration goes up in the beginning of the 80's, particularly in terms of groups up to 1984-1985, as a result of the crisis, with several absorptions of smaller banks by the big seven banks. Thereafter, concentration declines again as the result of renewed growth of medium-sized and foreign institutions. In 1988 concentration increases, the H index moving to 10.57 in deposits and to 8.66 in loans with the equivalent number of firms decreasing to 9.5 and to 11.5, respectively. The reversal of the trend in concentration is clear.

The effect of the merger of Bilbao and Vizcaya is moderated by changes in three middle-sized banks: Bankinter and Guipuzcoano, which are spun-off from the Santander and Banesto groups respectively, and Urquijo-Unión, which changes hands from the Hispano group to the smaller March group. The uncompensated effect of the BBV merger is reflected in a hypothetical H index computed as if Bilbao and Vizcaya had merged in 1987. In deposits (credits) this hypothetical index reaches 11.43 (9.36) representing 8.7 (10.7) equivalent firms.

Private banks nevertheless compete with savings banks in the retail market, both in loans and deposits. Deals with firms are concentrated on private banks but increasingly banks and savings banks perform the same operations and compete openly. A final and more relevant index, therefore, includes both groups of banks and savings banks and gives a global picture of the evolution in the 80's. Here we see that concentration levels are now slightly higher in the loan market. Again, we observe increased concentration up to 1984 with a decline thereafter both for loans and deposits (see Figures 6 and 7). For deposits the index goes from 4.2 in 1981 up to 4.6 in 1984, falling thereafter to 4.1 in 1987. These represent the equivalent number of firms moving from 24, down to 22 and up again to 25, in the last seven years. For loans these numbers are 23, 21 and 25. To explain the even stronger decline in concentration in recent years we would have to add to the growth of medium sized and foreign banks, and the above-average growth of savings banks, which in general are smaller than banks, that steals market

share from private banks. In 1988 concentration goes up moderately with the equivalent number of firms falling to 24 in the case of deposits and to 23 in the case of loans[24].

Figure 6

Herfindahl Index

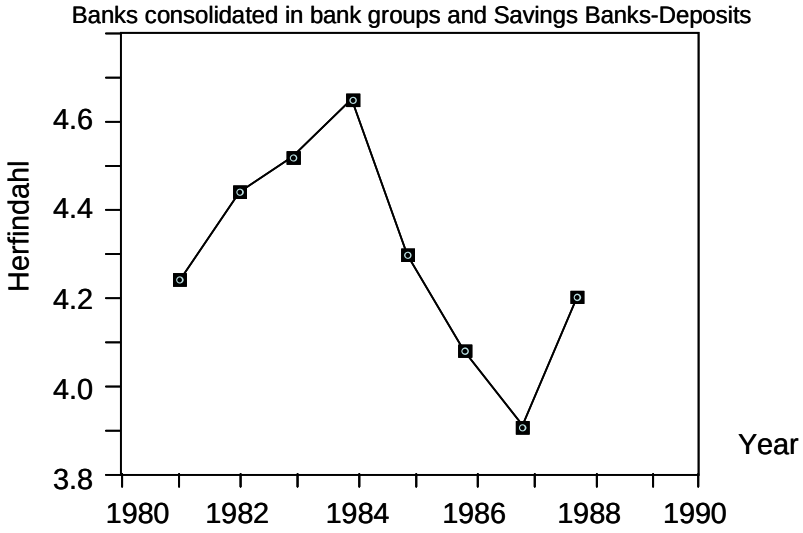
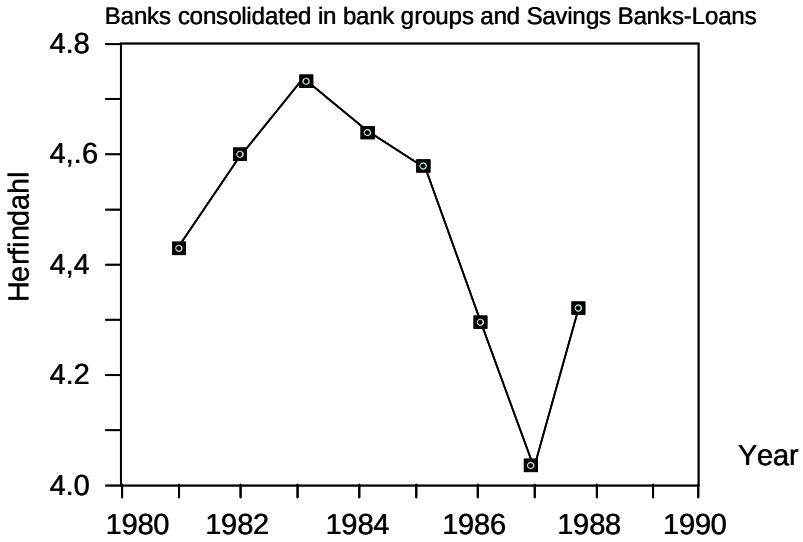


Figure 7

Herfindahl Index



[24] Saving Banks include the public Caja Postal. Data taken from "Balances Estadísticos" published by the CECA.

Concentration figures are not very high overall, not even after the 1988 merger. For example, taking the 1984 United States Department of Justice Merger Guidelines as benchmarks a market is deemed un-concentrated if H (multiplied by 100) is below 10, highly concentrated above 18 and moderately concentrated in between. Post-merger levels below 10 are not challenged since implicit coordination among firms is supposed difficult, and explicit collusion can be dealt with directly (through Section I of the Sherman Act). Only for deposits when considering competition among groups of banks does H get above 10 in Spanish banking. In this case the BBV merger could have been challenged in the deposits market (according to the Guidelines, since it increases the H index by more than one point) *only if* the relevant market did not include savings banks.

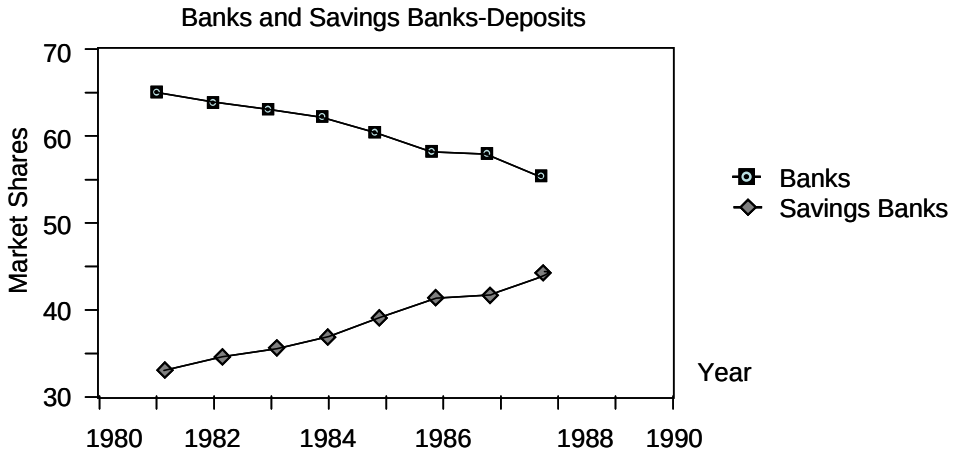
2.4.4. Market share

The changes in concentration are better understood in relation to the evolution of the market share of the different types of institutions involved. The large private banks (Bilbao, Vizcaya, Central, Banesto, Hispano, Santander and Popular, with the first two merging in 1988), the middle-sized banks (Bancotrans, Herrero, March, Pastor, Sabadell and Zaragozano, with the addition of Bankinter and Guipuzcoano in 1988), the foreign banks[25] and the rest, the two largest savings banks ("la Caixa" and Caja Madrid) and the rest.

Figures 8 and 9 confirm the already mentioned fact that private banks are losing overall market share to savings institutions whether in capturing deposits or in the loan market.

Figure 8

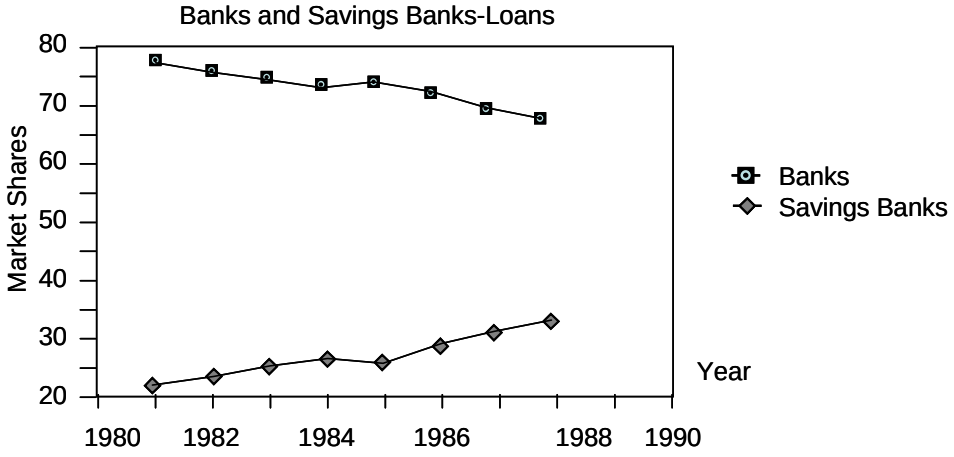
Market Shares



[25] Banco Atlántico is included in the foreign banks since 1984.

Figure 9

Market Shares



Figures 10 and 11[26] show how the large banks start losing market share after the absorption of banks in crisis is completed (notice the large loss in market share of the rest of the banks between 1981 and 1984) and when the process of financial liberalization in Spain speeds up. In deposits they lose 6% of the market from 1984 to 1987. In loans the loss is of 5 points in the same period. A large part of this performance in the deposits market is due to the gain in market share of the two leading savings banks ("la Caixa" and Caja Madrid), accounting for more than two points, the rest of the savings banks, two points, and the foreign banks, more than a point. In loans, foreign banks do not perform so well, facing stronger competition from national players, and most of the business lost by big banks and foreign banks goes, in the aggregate, to savings institutions with the smaller ones doing particularly well (4 point increase in the period 1984-1987). Middle-sized banks hold better positions in both markets. In 1988 large banks show sharper reductions in their market shares, benefiting the middle category, due to the spin-off of the three middle-sized subsidiaries mentioned before.

[26] Market shares on loans have been computed excluding the public Banco Exterior.

Figure 10

Market Shares

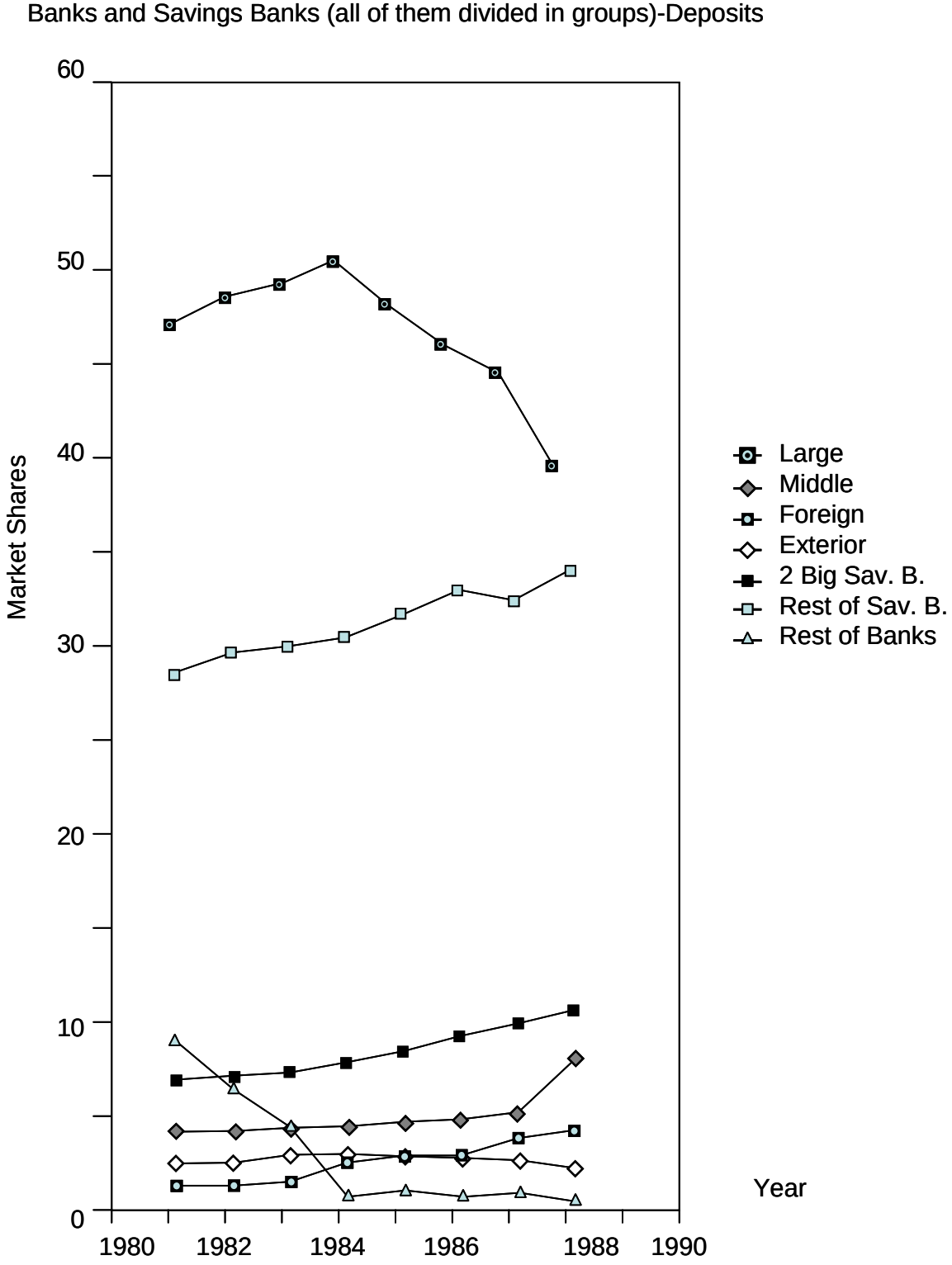
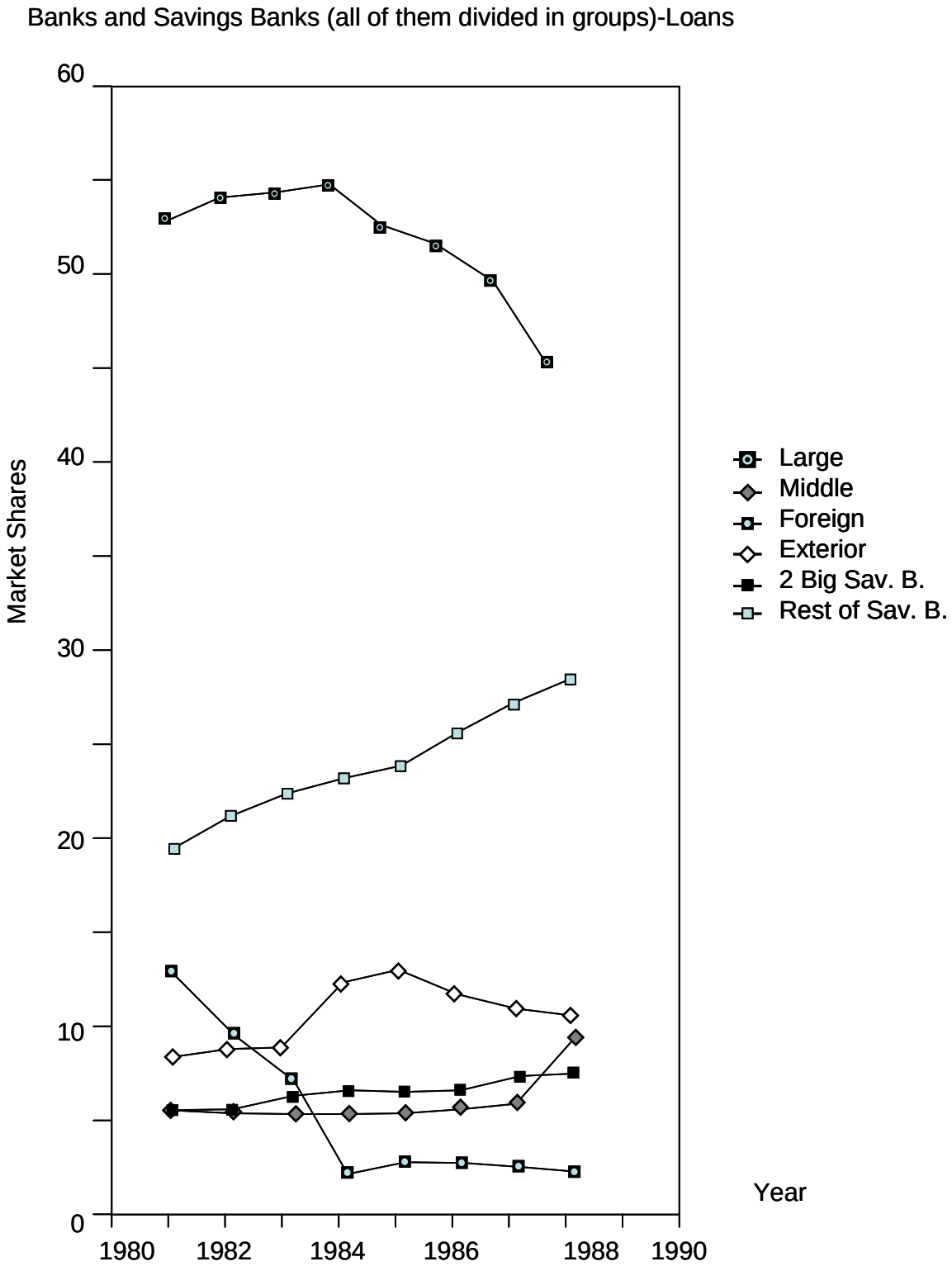


Figure 11

Market Shares



2.5. International comparisons

The Spanish banking system in relation to other industrialized countries appears oversized, sound, less open in terms of foreign trade, overpriced and not very efficient. Profitability and concentration levels do not look so different from the international norm.

The Spanish financial system defined as including credit and insurance institutions appears (see Table 4) to be of an above average economic dimension for EC standards, only surpassed by Luxembourg and the United Kingdom, both well known to be international financial centers. This could be due to either overpricing (either because of inefficiencies and/or market power) or an indication of extensive financial services provided to domestic and foreign clients. The latter seems not to be the case. Table 4 provides some information on observed labor productivity. Column (1) over column (2) gives us the ratio of labor productivity in the financial sector relative to the whole economy. This is 2.29 for Spain and 1.7 for the rest of the EC. This over-performance of Spain could arise because of above-average human and physical capital employed in the industry or by non-competitive pricing.

Table 4

Economic dimensions of the financial sector (1985)

	(1) Gross value-added as a % of GDP	(2) Employment as a % of total employment	(3) Wage bill as a % of total for the economy
Luxembourg	14.9	5.7	12.2
United Kingdom	11.8	3.7	8.5
Spain	6.4	2.8	6.7
Average Rest of EC	5.1	3.0	5.0

Data for Luxembourg correspond to 1982.

Rest of EC includes Belgium, Germany, France, Italy and the Netherlands.

Source: Emerson, M. et al. (1988), "The Economics of 1992," *European Economy*, No 35, March, pp. 91-92.

Column (3) over (2) shows that the Spanish financial sector also enjoys an above average remuneration per employee relative to the rest of the economy. The ratio is close to that of a sophisticated financial sector, like the British one, that employs higher quality human capital and points to the possibility of noncompetitive wages in the industry possibly appropriating some of the oligopolistic rents that could explain high observed productivity.[27]

[27] See Steinherr and Gilibert (1988).

Concentration levels of banking institutions in Spain do not seem to differ substantially from the European norm. They tend to be higher than for large countries like Italy, Germany or the United Kingdom and lower than for smaller countries like Belgium, Holland, Sweden and Switzerland. The market share of the 10 largest institutions (in terms of assets in 1985) in Spain was just above the eight country average (with data of 1984 and adding France to the previous ones): 58.2% versus 57.5%.[28]

With 1986 data, Spanish banking institutions (private banks and savings banks) compare favorably to OECD countries in terms of return on assets but in terms of return on equity they do not fare so well.[29] This is probably due to the higher provisions of Spanish institutions, as a result of the banking crisis, which shows up as a lower leverage. This is shown in Table 5. Spain has tough equity requirements (a minimum of 5% Equity/Assets ratio in 1987).

[28] Taking into account the effect of the two projected mergers (recall that one has failed) the Spanish figure would go up to 62.4%. See Gutiérrez and Campoy (1988).

[29] Three methodological notes. First, a proxy measure of profitability, cash-flow over assets, would probably be more appropriate for the period of the banking crisis since it is more difficult to manipulate. Second, if we were to compare real (adjusted for inflation) returns on equity Spanish institutions would fare very poorly, but the comparison is flawed since, in the balance sheet of banks, real assets are introduced at historical values. Third, comparisons for saving banks are more suspect due to differences in the methodology of collating the data in different countries. For example, in 1986 operating expenses for saving banks in Spain include provisions for pension funds.

Table 5

Comparative Analysis of the Banking Systems (1986)

	Profit before tax/ Assets	Assets/ Equity	Profit before tax/Equity	Operating expreses/ Assets	Net interest income/Assets	Staff cost/ Assets	Credits per branch E (thousands)	Inhabitants per branch	Number of branches	Credit per worker ECU (thousands)	Interest rate spread (1988)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
BANKS											
Spain	.81	17.61	14.36	3.00	3.73	2.10	6,040	2,342	16,498	632	6.1
CEE average ♦	.65	25.02	15.36	2.23	2.56	1.44	29,776	4,988	5,396	1,348	4.1
OECD average ♣	.68	26.63	18.03	2.22	2.40	1.28	---	---	---	---	
SAVING BANKS											
Spain	.91	18.59	16.8	3.83	4.68	2.65	2,782	2,960	13,062	500	
4-country average ♥	.83	23.78	19.97	2.62	3.42	1.65	7,097	5,362	13,769	780	
8-country average ♠	.84	29.18	19.44	2.87	3.23	1.52	13,805	5,758	7,423	1,345	

♦ Columns (a) to (f) include all CEE countries except for Denmark, Greece and Ireland, and columns (g) to (k) include all CEE countries.

♣ Columns (a) to (f) include all OECD countries except for Denmark, Greece, Ireland, Austria, Iceland, Turkey, Australia and New Zealand.

♥ Spain, Germany, Belgium and Italy.

♠ The four above plus Finland, Norway, Sweden and Switzerland.

Sources: Boletín Económico, Banco de España (March 1988), Asociación Española de Banca Privada (March 1988), Bank Profitability. OECD Paris 1988 and Steinherr and Gilibert (1988).

Notes on Table 5:

(1) In using the data for comparative purposes it is worth referring to the methodological country notes published by the OECD.

(2) Equity: Capital and Reserves (Arithmetic average of years n - 1 and n). In the case of Spain "Provisions" are eliminated from "Capital and Reserves".

(3) The figures of columns (g) to (j) for banks have been taken from the report of the "Asociación Española de Banca Privada" (March 1988). The data of Spain, Luxemburg, Netherlands and United Kingdom refer to 1987.

The figures for savings banks have been elaborated using the data from "Bank Profitability" OECD Paris 1988. They refer to domestic branches, foreign branches of domestic banks (in the case of Germany and Belgium) and branches of foreign banks in domestic territory (in the case of Spain, Belgium and Italy).

Source for exchange rates at December 1986: Boletín Estadístico, Bank of Spain.

Source for population: "Labour Force Statistic 1966-1986," OECD, Paris, 1988.

(4) Italian data refer to 1985.

In Spain returns tended to fall during the crisis, in particular in 1982, to recover later on. In fact real returns for banks, inflation adjusted, were negative until 1984 (see Table 3) but still during this period they were much higher than average industrial returns, keeping about a ten point differential from 1981 until 1985. Only in the United Kingdom is there a larger difference in favor of the banks.[30]

Spanish banking institutions have very high intermediation margins, for example as measured by the net interest income to assets ratio. They also have very high ratios for labor costs and about the highest operating expenses. This may be interpreted as evidence of inefficiencies derived from the regulated and protected environment but also it may indicate a retail-oriented banking system.

It is also worth pointing out that the interest rate spread for Spanish financial institutions is almost the highest in the European Community, only surpassed by Denmark. With data of April 1988, the interest rate spread for Spain is 6.1 and the EC-12 simple average is 4.1.[31] This should be corrected by different reserves requirements in different countries, Spain being a country with a high coefficient (now 18%) to which one would have to add the already mentioned investment coefficient (currently at 11%).

Data from Table 5 shows that banking institutions in Spain, particularly private banks, have, relative to those in other countries, a high number of branches of low "productivity" as measured by credits per branch and inhabitants per branch (and also credits per worker). In terms of the density of automated teller machines (ATM) Spain, with 70 ATMs per million inhabitants ranks above Germany and Italy, similarly to Belgium and below the United Kingdom and France.[32]

In terms of size, and according to 1986 data, big Spanish banks are substantially smaller than their European, American or Japanese counterparts. The largest Spanish bank before the recent merger, Central, is 103 in the world ranking in terms of assets and 47 in Europe. It is more than

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[30] See Ballarín et al. (1988), II, 21 and 28.

[31] Prime rates minus bank borrowing rates in percent (deposits or saving certificates of 1 year). Provided by Steinherr and Gilibert (1988). We should be interested in the real interest rate spread, that is the difference between the nominal interest rates on assets and liabilities with the same maturity, say one year, divided by the gross (annual) inflation rate. Nevertheless, performing this computation does not significantly modify the statement made in the text.

[32] According to The Economist Banking Survey of March 1986.

five times smaller than the first in Europe and more than eight times smaller than the first in the world. Relative to GDP big Spanish banks, before the recent mergers, are comparable to German or Italian banks, for example. The largest bank in each of these countries represents, in terms of assets, between 11 and 15% of GDP. The new Bilbao-Vizcaya ranks approximately 80 in the world contest and represents close to 19% of the Spanish GDP.

Spain is one of the least open European countries in terms of trade in banking services, with 1984 ratios of exports over output or imports over apparent consumption of less than 0.6% as compared with 2% ratios for France and Germany, not to mention the much higher percentages of Belgium, Italy and the United Kingdom. Similar to other EC countries, Spain's trade in financial services concentrates mainly on non-EC partners (about two thirds of total trade).[33]

As for the penetration of foreign banks, Spain is not different by European standards despite its protectionist and regulatory tradition. Excluding Luxembourg and the United Kingdom, the simple average market share of foreign banks in EC countries is 11.7% just above the 11% of Spain.[34]

The interpretation of international comparisons must be made carefully. For example, the relative inefficiency of the Spanish system may have different interpretations. It may mean that the same levels and qualities of outputs and services are produced at a higher cost. It may also reflect the fact that Spanish banking is more retail-oriented and that higher quality in terms of convenience (high number of branches) is given to the clients. In which case the composition of output is not the same and costs should be higher. Nevertheless it should also be taken into account that most probably Spanish banks offer fewer financial products, particularly the more sophisticated ones, than their European counterparts. Ideally, to make the relevant comparison, indexes of the composition of output and quality of the different services would be needed.

3. Efficiency, Size and Market Power

The previous section highlighted that, at least by some criteria and in recent times, the Spanish banking industry has shown higher rates of return than other Spanish industries. At the same time it has been argued that this is the case despite the evidence of high transformation costs arising from over-manning and the inefficiencies inherited from past protectionist and regulated environments. In view of the recent merger proposals two issues seem prominent: the relationship between size, efficiency, profitability and the extent of market power.

The purpose of this section is to explore more systematic evidence available on the relation between size and efficiency (economies of scale and of scope), size and profitability and market power for the Spanish banking industry. Other issues will be dealt in a summary way.

3.1. Cost Structures

Even though there is circumstantial evidence to suggest that the Spanish banking industry, in the context of an overly regulated and comfortable business environment, has been fairly

[33] See Neven (1989), Tables 1 and 2.

[34] Data provided by Steinherr and Gilibert, (1988), p. 51, correspond to shares in total assets as of the end of 1987.

inefficient – in the sense of not striving to minimize costs and not operating on the production possibilities frontier – we will not deal here with such non-optimizing behavior.

Nor will we characterize the inefficiency alluded to in the international comparison section. This inefficiency can be understood from two points of view: social and private. It is worth remarking that what may be inefficient from the social point of view may well be efficient from a private perspective. A case in point is the extensive branch network of Spanish banks, potentially a source of social inefficiency, which may serve as a formidable barrier to entry for foreign banks. We will focus in this subsection on the more manageable issue of the presence of size advantages in the industry derived from scale economies.

International research results in this area are not yet conclusive. Most recent studies with United States data do not find economies of scale for banks beyond $100 million, and they even report slight diseconomies of scope.[35] Nevertheless it is well known that economies of scale studies in banking suffer from a series of research design weaknesses. Some of these studies consider the joint production of deposits and credits by banking institutions, but leave out other lines of business (like underwriting, foreign exchange dealing, and so on) and they do not consider banks with more than one billion dollars in assets. An exception is the paper by Shaffer and David (1986) who estimated cost functions for the 100 largest United States commercial banks. They find efficient bank scale to range between $15 billion and $37 billion. This contrasts with earlier findings limited to smaller banks.

There is however a certain consensus that banking is not the sort of economic activity where one expects to find relevant economies of scale, particularly in the retail and small- and medium-sized business. A recent paper by Humphrey (1987) argues that observed average cost variation between different sized banks is much smaller than the existing dispersion of average costs on banks of the same class. Consequently economies of scale cannot be so important in conferring competitive advantages.

In Spain, the most comprehensive analysis of this issue was presented by Fanjul and Maravall (1985).[36] Fanjul and Maravall (henceforth FM) estimate cost functions for the Spanish banking industry. They use a simple Cobb-Douglas approach with cross section data for a sample of 83 banks in 1979. A similar approach is used for savings institutions with a sample size of 54.

The equations estimated by FM use alternative measures of costs: fundamentally, total operating costs (TOC), but also total costs, which include TOC plus financial costs (FC), and share of TOC: labor costs plus general expenses which corresponds to TOC minus depreciation.

Output is the main explanatory variable and in the monetary version is made up of the product of the number of branches (NB), the number of accounts per branch (AB) and the size of deposit per account (DA), as separate regressors. Additional explanatory variables include salary, measures of asset and liability structures and dummies to capture institutional differences in the case of private banks (industrial vs. commercial banking; local vs. national focus).

A second set of regressions are run with a physical definition of output: number of accounts (N). Here, two new regressors are included: deposit per branch and the average value of checking accounts. This is not the case for savings banks where regressors other than output

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[35] See Gilligan, Smirlock and Marshall (1984), Gilligan and Smirlock (1984), Berger, Hanweck and Humphrey (1987), Humphrey (1985) and Mester (1987).

[36] Previous work by Cuesta Torres (1983) dealt with saving banks.

stay unchanged. Furthermore, the number of accounts per branch and the size of deposit per account are included as additional explanatory variables unrelated to output.

Estimation is undertaken by OLS and the authors reach an overall conclusion that diminishing returns are absent. Significant economies of scale are found with respect to both AB and DA, with independent increases of both variables by 10% leading to cost increases between 6 and 8%. No such result is found for the number of branches but the evidence seems to indicate constant returns in this instance. The authors note that DA does not result in economies of scale when the dependent variable includes financial costs. On the contrary, results do not change significantly when depreciation is deducted from the dependent variable TOC.

Equations with a physical measure of output also show significant scale economies.

Finally, statistical work with savings bank data confirms the results obtained for private banks except for the case of a physical measure of output, where constant returns to scale are found. Returns to scale are even more relevant for the case of DA.

Most results reported by FM establish strong economies of scale with cost elasticities with respect to output between .60 and .77. Only for the variable number of branches do we find values around .96, close to constant returns to scale.

These figures show even stronger economies of scale than those obtained by similar previous studies for the United States (see Gilbert, 1984). In those studies, elasticities of operating cost with respect to output range between .803 and 1.036, depending on the category of output (number of accounts) specified. The results obtained by FM with their physical measure of output are typically in that range, with .761 to .914 for private banks and .949 to .986 for savings institutions.

The study of FM is subject to the same criticisms of those studies using a Cobb-Douglas approach: it cannot capture either U-shaped average cost curves or the existence of joint costs. Their conclusion that overall the Spanish banking industry does not face diminishing returns to scale might be questioned by an approach that allows average cost curves with both downward and upward sloping parts (as shown in the United States by Benston, Hanweck and Humphrey, 1982). Alternatively, allowing for joint production of several outputs might provide evidence in favor of size (see Gilligan, Smirlock and Marshall (1984)). Nevertheless, this need not be the case as shown for the United States by Berger, Hanweck and Humphrey (1987). Preliminary evidence of the estimation of a multiproduct translog cost function for Spanish banks and savings banks by Delgado (1989) shows that increases in output per branch, keeping the number of branches fixed, would decrease average costs, while at the firm level there are no signs of economies of scale. In terms of economies of scope there is some evidence that they exist for certain classes of banks (foreign banks) but not in general.

3.2. Size and Profitability

The empirical literature about the impact of market structure on the performance of the banking industry has focused on the standard analysis of the relationship between profitability and concentration measures, using in general cross-section samples of local market areas (fundamentally for the United States) where such a statistical design is possible. The idea is that concentrated markets are more conducive to high price-cost margins and collusive behavior. Gilbert (1984) presents a comprehensive survey of work up to the early 80's for the banking

industry, noting the measurement problems involved, and the general conclusion is that the positive relationship between profitability and concentration is weak.

As with the general empirical literature testing the Industrial Organization S-C-P paradigm, work on the banking industry has ignored for some time the alternative efficiency hypothesis (Demsetz, 1973), and only recently has some research attempted to test the competing collusion and efficiency theories. The efficiency hypothesis explains the potential relationship between concentration and profitability in terms of cost advantages of larger firms. Concentrated markets have large firms that are more efficient and therefore have higher profits.

One such study by Smirlock (1985) concludes that market share is a significant explanatory variable of bank profitability (which is interpreted in favor of the efficiency hypothesis), and that, when this is accounted for, concentration plays no role in explaining profitability differences between markets. Nevertheless the discrimination between the two hypotheses is not easy. Tests of this sort have been critically assessed by Schmalensee (1985, 1988) in a more general framework. Special care is needed to interpret the results of this sort of regression in a structural fashion. For this reason, we will next review the evidence for the Spanish banking industry only with respect to the correlation between market share and profitability.

With respect to estimates of the relationship between size and profitability early empirical results for the Spanish banking industry are provided by Lafuente and Salas (1983). They estimate, using a sample of 15 publicly quoted banks, a simple semi log-linear relationship between accounting profitability (returns on assets) and size as measured by the volume of sales for several cross-section samples in the seventies. Their results do not show any correlation between profitability and size.

The same exercise but with returns on sales as the dependent variable yields a significant negative relationship at least for samples corresponding to 1972 and 1976.

Lafuente and Salas also report on the relationship between size and profit variability as a performance measure. Randomness in profit is approximated by the estimated standard deviation of returns on assets and the idea is to test whether larger banking firms perform better in the sense that they show less erratic profitability. The results reported by the authors do not indicate any relationship between size and this additional performance measure.

More recent work on the industry (Ballarín et al., 1988) finds no statistical relationship between profitability and firm size. This work regresses, for a sample of 135 private banks (and alternatively for 78 savings banks) in 1985, returns on assets on market share as measured by the share of assets on total assets of the banking system. The results replicate those obtained by Schuster (1984) for several other countries and hold both for private banks (national or local) and savings banks. No relationship is found between the selected market share variable and accounting profitability.

3.3. Market Power

The data presented in section 2, in particular the international comparisons, are not inconsistent with a relatively high degree of market power in the Spanish banking sector. This hypothesis is reinforced by the mentioned fact that Spanish banks have been getting returns much higher than other firms in the industrial sector. Is there any evidence that Spanish banks collude in terms of their quality offer or to keep prices above the competitive level or that, at least, there are significant departures from competitive behavior?

The few studies that have been made concentrate on pricing behavior. Casual observation of the big expansion process of branches after deregulation in 1974 seems to indicate that banks in a mostly regulated price context competed along the quality dimension providing convenience through proximity and free services to customers. An important issue in this respect is to analyze how the extension of the branch network, and their location patterns, compares with what would be optimal from a social point of view. Some theoretical location models suggest that, with fixed prices, competition in location tend to yield too much agglomeration. In other words, the spatial distribution of branches would not be optimal from the welfare point of view.[37]

A first problem encountered by the analyst is the very definition of "competitive pricing" in banking. Banking is a multiproduct business in which products and services are jointly offered. We are thus in a differentiated product context in which pricing a marginal cost could entail not recovering the fixed costs of operation. A more appropriate benchmark then may be Bertrand pricing, in which prices are above marginal costs. In any case, as far as we know there is no full-fledged model of banking competition which incorporates all the main relevant features of the banking business: multiproduct competition on the different products (both on the asset and on the liability side) and services, taking into account regulatory restrictions, like reserve requirements, and restrictions arising from the term and risk structure of assets and liabilities. With these limitations in mind let us proceed with the available evidence.

There is the temptation to read performance results in *concentration indexes* following the Industrial Organization tradition of the Structure-Conduct-Performance paradigm. As is well known by now, this is not without its problems. Higher concentration tends to be associated with a higher probability of collusion to maintain prices above competitive levels or simply with a higher degree of market power. The Cournot model, for example, associates concentrated markets with high mark-ups over marginal costs. Nevertheless, Bertrand-type models seem to suggest that "two is enough for competition," a point stressed by recent contestability literature. Potential competition may discipline even a monopolist if there is free and costless entry and exit from a market. One of the reasons we have chosen the Herfindhal index to measure concentration is that from this index one can read performance results at least in one plausible scenario (and this is still arguable in the context of banking competition): Cournot competition. Then the H index is proportional, with a factor depending on the elasticity of demand, to the sum of the relative mark-ups over marginal cost of the different firms, weighted by market shares. A higher H implies then larger departures from marginal cost pricing.

For example, and only for illustrative purposes, according to the previous model, and assuming that market elasticities are constant, the Herfindahl concentration indices presented in section 2 suggest that, in 1988, industry average mark-ups, both in the deposits and the loans markets, could have increased more than 13% when considering competition among groups of banks or by more than 7% when adding savings banks. The recent Bilbao-Vizcaya merger, if it were not by other de-concentration movements in 1988, could have resulted in a noticeable increase in aggregate mark-ups. This increase, according to our 1987 hypothetical H index which simulates the BBV merger but does not incorporate later developments, would have ranged from 17% to 22% depending on

[37] See Neven (1989).

whether we were to look at groups of banks only (22.5% for deposits and 22.3% for loans), or both at groups of banks and savings banks (17.65% for deposits and 20.30% for loans).[38]

A possible measure of market power of a firm is given by Tobin's q ratio, the ratio of the market value of the firm to the replacement value of its assets, in practice approximated by the book value of the firm.[39] A ratio close to one implies competitive behavior, while larger ratios are taken to be evidence of market power since, according to the valuation of the market, the firm is expected to earn supra-normal returns. The q ratio has the advantage of incorporating an adjustment for risk but it is not free from accounting measurement problems when using approximations and relies heavily on the efficiency of the stock market as a pricing mechanism.

The ratio q for the seven big banks in Spain from 1978 to 1985 has been above one (slightly) only in 1978 and 1981, probably due to the effect of the severe banking crisis during the period. Nevertheless international comparisons of averages of the period 1974-1982 show Spain, with a ratio of 1.62, above France, Germany and the United Kingdom (see Table 6). After 1985, q ratios for the big Spanish banks are well above one. Even after the October 1987 crash they ranged between two and four (see Ballarín et al., 1988). The evidence provided by the stock market prices must be taken with some reservations, given that the stock market is, as we have seen, underdeveloped and controlled by the large banks in general. In particular the price of the stock of a bank is typically manipulated by the same institution buying or selling in the market.[40] The market value of the big Spanish banks is very high indeed. For some of them it may represent between 50 and 70% of the market value of much larger banks like Citibank, Deutsche, National Westminster or Barclays.[41] This may be read in the sense that the potential for growth in a profitable way in the Spanish market, or from a Spanish base, is estimated to be very high by the market, or maybe that the break-up value of Spanish banks is very high, or, as hinted before, that prices tend to be manipulated. A mixture of the three factors, with less weight on the second, is probably not far from the truth.

Table 6

q-Ratios

Countries	Market price/book value (average 1974-1982)	Market Price/book value (1978)
France	0.89	0.94
Switzerland	1.65	1.61
Germany	1.34	1.43
United Kingdom	0.59	0.68
Japan	1.92	1.62
United States	0.90	0.87
Spain	1.62	1.10

Source: Aliber (1984) and Ballarín et al. (1988)

[38] If the projected merger between Banesto and Central, the two largest banks before the Bilbao-Vizcaya merger, had not failed, the predicted increase in margins would have been 65.06% for deposits and 51.63% for credits when looking at groups of banks and 52.94% for deposits and 47.03% for credits, when looking at groups of banks and savings banks.

[39] See Lindenberg, E. and Ross (1981).

[40] Econometric evidence of particular aspects of pricing in the Spanish equity market is provided by Rubio (1986) and Alonso and Rubio (1988).

[41] See Gutiérrez and Campoy (1988), p. 61.

The European Commission in its report "The Economics of 1992" includes some research on prices of financial services in Europe. This study shows the percentage difference of prices of selected financial services in each country with respect to the average of the four lowest national prices found. The latter is taken to be the competitive norm. Spain shows the highest prices of all the studied countries with an average "mark-up" of 34%. Prices in Spain are particularly higher for services to firms (foreign-exchange drafts and commercial loans), for mortgages and for brokerage services.

Systematic econometric analysis of market conduct is only very recent in Spain. For that matter, the banking industry has only rarely been the subject of this sort of industry-specific econometric work that attempts to test the collusion hypothesis by directly trying to measure market conduct for specific industries.[42]

A recent paper by Gual and Ricart (1988) ("GR") tests for collusive behavior in the Spanish banking industry with quarterly data between 1974 and 1984. This work focuses on a very specific submarket: that of *term deposits* (more than six months maturity) and attempts to test whether firms behave competitively when demanding deposits from atomized consumers. Data limitations preclude firm-level analysis so the authors work with industry-wide relationships. Estimation of the supply relation and the demand function yields a setup where the market conduct parameter can be estimated due to the interest rate deregulation over the period (see section 2).

The authors cannot reject the null hypothesis of competitive behavior. Although this might seem to counter the evidence mentioned so far, GR acknowledge that results are only preliminary since they work with fairly aggregate data, and the competition model posited does not take proper account of the complexity of the banking business. On the other hand the result is not so surprising since the study is restricted to a specific submarket, i.e., that of term deposits, where there are close substitute products to those of the banking industry, namely government bonds or commercial paper.

Another submarket where the possibility of collusive behavior looms large is that of *interest bearing checking* (money market) accounts. Since 1987 interest rates on all accounts are free but the introduction of checking yielding market rates is very sluggish. Foreign banks, some small and medium banks[43] and some subsidiaries of the large banks have introduced them.[44] In fact there seems to be an inverse relationship between the interest given on checking accounts and the number of branches of an institution. Large banks offer them only to preferred customers and do not advertise. It seems as if large banks and savings banks[45] were afraid of offering a new product that will necessarily make the financial cost of deposits more expensive. They know that a unilateral move would benefit the bank but that other banks would follow

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[42] Gelfand and Spiller (1985), following up on Spiller and Favaro (1984), have done work on the industry with a somewhat different aim. They test for the presence of multiproduct oligopolistic interactions in the Uruguayan banking sector. The two products considered are loans denominated in local currency and United States dollars. It is assumed that these multimarket strategies arise because of the existence of legal entry barriers. The relaxation of this legislation in the middle of the sample period provides a setting to test the role of these barriers on the development of the multimarket strategies.

[43] The middle-sized banks offer them in differing degrees, as does the small Banco de la Pequeña y Mediana Empresa.

[44] For example, Bankinter of the Santander group (now formally independent), Banc Català de Crèdit of Banesto, Urquijo of Hispano (now bought by March) and Banca Catalana of Vizcaya (now Bilbao-Vizcaya).

[45] Some large saving banks also offer interest checking in a limited way.

suit and the outcome would be a transfer of surplus from the banks to the consumers. Therefore they do not introduce it through the main brands but only through subsidiaries to respond to the competition of foreign and small banks. In other words, the (purely speculative) hypothesis would be that large institutions try to keep interest checking on the fringe of the market via a tacit agreement of non-aggression on this front.

Circumstantial evidence of anti-competitive behavior has also been recently collected by anti-trust investigations by the EC Commission and the Spanish competition policy authorities. The EC investigation found no evidence of collusive behavior and dropped the procedure, but the Spanish authorities are still analyzing the case against the banking industry, arguing price-fixing for some *services*.

The overall picture that emerges about the extent of market power is mixed. Along certain dimensions of service and submarkets with non-bank substitute products competition seems vigorous; among others the collusion hypothesis cannot be dismissed. It is worth noting that this hypothesis is in fact consistent whit the absence of correlation between size and profitability mentioned above. Such a correlation would appear from the "efficiency hypothesis" alluded to, for example.

3.4. Other Issues

It is well recognized that, in an industry such as banking where managing information is one of the key strategic variables, maintaining a leadership position requires a strong *innovative activity* both at the product (financial) level but also at the process (operating) level. These innovative activities are themselves crucial determinants of the future market structure in view of the deregulation and disintermediation processes in financial markets. Commercial banks have to be active now in many markets to compete with the new competitors like insurance companies, mutual funds and investment banks. This accentuates the multiproduct character of banking: money market accounts, mortgages, pension funds, cash management, underwriting, etc.

The Spanish financial sector has witnessed a recent explosion of new financial instruments fostered by the continuous move towards liberalization of the market. Foreign banks have led the way introducing new financial products. However, the process is so recent that we have only scant evidence of its main features.[46]

There are many other issues worth of empirical study. Among them we would like to mention the influence of reserve coefficients on banking competition[47] and the role and extent of entry barriers in financial markets.

4. Competitive Analysis

The general picture that emerges from the data compiled in section 2 is the following. There are six *types* of players, leaving aside the public institutions Banco Exterior, Banco Hipotecario (mortgages) and Caja Postal. The big bank groups (now six), the middle-sized banks, the foreign banks (branches and subsidiaries), the rest of the banks, the two big savings banks and the rest of the savings

[46] See Polo (1988) for a study of the introduction of process innovations.

[47] See the work of Romer (1985) and Repullo (1988).

banks.[48] To this should be added, when considering the securities business, the new investment companies (there are about half a dozen) and small brokerage firms. The first tend to concentrate on doing business with foreigners and are trying to obtain foreign backing, particularly in terms of capital. The second type is formed by "agentes de cambio y bolsa" (brokers).

We will now review the competitive position of the main types of players. In doing so it must be kept in mind that decisions are made by *individual* players and that in fact there may be substantial differences in the position of players within the same group. Nevertheless players of the same type share the same basic structural parameters that condition their behavior. Obviously there are factors that condition all the players in the market; a very important general one being the relatively low level of development and sophistication of the financial system. In this sense an important factor is the lack of an adequate supply of qualified professionals in the field. There is a human capital problem in Spanish finance. Traditionally Spanish banks have not been interested in hiring people with university degrees, for example. Things have changed, but only recently. Another factor that affects the Spanish players is the extensive branch network. This may prove to be a very important barrier to entry in the retail business for foreign players.

The *big banks* have been losing market share both in terms of deposits and loans because of the disintermediation process and in favor of the other players since the end of the banking crisis in 1983-1984. Before that point they were increasing their market share with the consolidation process brought by the crisis. Nevertheless, some of the mergers and absorptions involved banks that were in trouble and had to be put back in shape to compete.

The process of erosion of the position of the big banks, including those affected by the 1978-1983 crisis, Hispano first and then Banesto, has been met by different responses. Among the big seven the smaller ones are the relatively more efficient and better managed. In 1987, Bilbao and Vizcaya, with strong management, tried to merge with some of the bigger ones, Banesto, Hispano and Central, with encouragement from the government. In fact, Bilbao tried a hostile takeover of Banesto but failed and in the end merged with Vizcaya. The strength of the merged banks is in management and financial services (wholesale banking, corporate finance and stock broking). This merger marked what seemed to be an end to the "gentleman's agreement" previously prevailing in the Spanish banking business.

Later on Banesto and Central, the two bigger ones, decided to merge. Their strength is in their industrial holdings with controlling interests in insurance, construction, electrical utilities and petroleum. Nevertheless the merger has failed recently in the midst of a struggle for control.

Will mergers work? In any case they will need a lot of time to yield the desired results; joint management problems and redundant branches and workers are among the most important issues. Other banks (Santander and Hispano), have made or are trying to make agreements with foreign banks in Belgium, Italy, France and the United Kingdom. The first attempts of Bilbao and Vizcaya were made with the idea of taking over poorly managed banks. It is important to remark the active role played by the government in the merger process. Government

[48] The division between the two big saving banks and the rest of them is somewhat artificial. The former are definitely the leaders among saving institutions but the six major saving institutions will be active and influential players.

intervention seems to be founded on the belief that a large size is needed to compete in the European market and to avoid national banks being taken over by foreigners.[49]

The merger projects admit two interpretations. On the one hand they can be seen as an attempt to realize necessary economies of scale and scope and shake up inefficient management to face the competition of an integrated market. However the mergers seem to have been made without much study of the economies that could be realized. If the results of Shaffer and David mentioned in section 3.1 generalize to Spain, which is by no means clear, they imply that the majority of the big Spanish banks already had an optimal size *before* the projected mergers. The entities resulting from the two big mergers will therefore be above this optimal size.

On the other hand, mergers can be seen as a defensive reaction of large banks used to a regulated environment, in which they could easily coordinate their actions, when faced with the prospect of fierce competition by would-be more efficient and sophisticated institutions (that may attempt also to absorb them). In this view the idea would be to try to maintain high barriers to entry wherever possible and preempt entry of foreign institutions. In this sense the extensive branching network and the ATM systems, together with consumer inertia and the goodwill of established institutions, may prove to be formidable barriers to entry in the retail business. An open issue is whether big banks will be able to stick to tacit agreements to keep profitability high, like introducing interest checking only marginally, and to coordinate their actions to make entry of foreign institutions difficult, such as not granting them easy access to the main ATM systems.

A key aspect of future developments is to what extent banks will be able to compete in the new areas, particularly providing services to consumers and firms. Large banks are trying now to develop capital market operations (Bilbao-Vizcaya and Santander seem to be ahead), build merchant bank units, and launch pension funds, for example. A potential problem for large banks when developing investment banking activities is that they have at the same time a big stake in industrial concerns and the question arises of how are they going to give independent investment advice. This issue may be important if we recall that one of the causes of the severe banking crisis that Spain suffered was precisely linked to irregular and ill founded practices of banks with stakes in firms.

Big banks in Spain, as in most other countries, are caught in a situation of competing on all fronts – retail, wholesale, international, new financial operations – without, seemingly, having the competitive edge in any one of them. Maybe some of the 1988 spin-offs or sales of middle-sized banks of the groups Banesto, Hispano and Santander is a reflection of this state of affairs.

Savings banks seem to have a better competitive position in retail in terms of quality of service, which translates into a higher accumulated stock of goodwill, but this entails higher operating costs (operating expenses over assets; see Table 3). The big savings banks at least seem to also have better qualified staff than the banks; the financial cost of deposits has tended to draw even with banks, and the savings banks' ATM system is the more extended one. For example, in 1987, the two private bank networks had market shares between 16 and 22% of the national market (Servired had 26% and 4B 22%), while "la Caixa" had 29% and Caja Madrid had 52% of the Catalonia and Madrid markets respectively.[50] Now savings banks can compete on an equal

[49] The government is clearly worried about this possibility. Deutsche Bank's unsuccessful attempt, due to the intervention of the Bank of Spain, to control the Banco Comercial Transatlántico provides an example.

[50] See Ballarin et al. (1988), X-13.

footing with banks and, as previously noted, savings banks will be allowed to expand outside their own region in 1989.[51] This possibility of expansion will probably induce a process of mergers and takeovers between savings banks which will increase concentration in the sector. This process has in fact already started in several regions. It will also imply a higher degree of competition in the mass retail market and a geographic occupation of the few "underbanked" spots left in Spanish cities.[52]

Although convergence between banks and savings banks is fast, particularly for the big savings banks, there are still some differences. Savings banks cannot issue equity capital but they can increase equity through reserves and provisions, subordinated bonds and, since 1988, by participative shares. The only question is how much they will be influenced by the fact that, in principle, they are not profit maximizers, having to pay dividends to stockholders, and with a structure of the board based upon private and public representatives of local governments, depositors, employees, and representatives of the founding corporations. In summary, the competitive position of savings banks in the retail market is very strong, although perhaps lacking more influence in the financial system due to the fact that they do not have a "central bank" of savings banks, which would increase their collective power.[53]

Middle-sized banks do well specializing in some market segments or on a regional basis, whether on the higher income segment of the retail market or on servicing small – and medium – sized firms including merchant bank operations. In fact, some seem to follow a dual strategy: universal bank in their own region and specialized bank in the rest of the country.

Foreign banks have an edge on the wholesale business, international operations in particular, and also seem to do well in the higher income segment offering such as, for example, checking accounts with high interest. Barclays and Citibank, for example, are expanding aggressively in well-to-do neighborhoods in Spanish cities. Foreign banks are innovative in the Spanish context but they try to adapt to the established business practices of national banks.

If we are to believe the Herfindhal index as an indicator of competitiveness, both in the broad markets for loans and for deposits, competition has been increasing since the end of the banking crisis in 1983-1984. Prior to this, it was declining due to consolidations brought by the crisis. In 1988 the picture is different, as we have seen (see Figures 6 and 7).

Nevertheless, the relevant indexes of concentration for an integrated market are the global (European or even worldwide in this case) and not the national ones. In those segments of the market where barriers to entry are low, national concentration levels do not mean much.

Apart from the fact that it is very risky to derive performance implications from structural measures like concentration indexes, as we have emphasized in section 3.3, it can also be argued that the relevant markets are not the big aggregates "loans" and "deposits." This idea is reinforced by the fact that Spanish banking seems to be evolving into a segmented market with very different degrees of competitiveness. While higher income retail and servicing large firms are developing into highly competitive submarkets, due to the disintermediation process and

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[51] Nevertheless the government will retain the possibility of introducing restrictions until 1992 and new out-of-region branches will not be allowed to do business in insurance.

[52] In Madrid, for example.

[53] Their representative organism, the C.E.C.A., is itself a saving bank.

the increased competition of new entrants, others, like mass retail or servicing small firms, do not seem to follow this pattern. In any case the identified segments are probably still too broad and a more refined analysis with well specified products should be undertaken.

In summary, competition will develop in wholesale banking mainly between the big banks and the foreign banks, with some specialized smaller banks and some of the large savings banks as side players. This part of the market will be the most affected by the integration of financial markets, the development of the stock market and the disintermediation process. Competition will be fierce, big banks having their industrial portfolio as an asset and foreign banks enjoying a better technological position. The high end of the customer retail market may develop similar levels of competition, particularly since new developments in communications technology may decrease the value of an extensive branching network and may facilitate entry of foreign and new players to compete with established institutions. The latter may include large commercial firms, mortgage societies and small investment companies, for example. The degree of competition in the customer mass retail market will depend on the aggressiveness of the large savings banks and their willingness to play by the tacit rules established by the big banks or, on the contrary, behave uncooperatively.

5. Concluding Remarks

How will be banking in Spain be after 1992? The first thing to note is that the answer depends on what happens in Europe. There are at least two important factors in this respect: first, the general evolution of financial markets and most particularly the consolidation of financial centers in Europe, and second, the degree of integration of the banking market in its different segments.

With regard to the first, will Spain develop a financial center of any magnitude, say for stock and securities in Madrid and for options and futures in Barcelona? Or will Spanish financial centers be of a second order with most of the financial weight being concentrated in the big European centers (London, for example, absorbs about 40% of the European stock capitalization while the Spanish market represents about the 3%). With regard to the second, will the European banking market be a system of national oligopolies with limited cross participation or will it be more integrated? And, more particularly, will barriers to entry in the retail and small firm segments persist and be enough to deter foreign institutions from getting any substantial part of the national markets? Market shares of foreign banks are today high in the United Kingdom, Luxembourg and Belgium, modest in the Netherlands, Ireland, France and Spain and very small in Germany, Italy, Portugal and Denmark.

In Spain an important issue is whether the present close interactions between banks and industry (given that the large bank groups own big chunks of industry) will persist once the capital market develops. A closely related question is to what point large banks will control the operation of the capital markets. In any case it seems that in the near future the needs of financing the public deficit will continue to give a central role to the Treasury bonds in the securities markets, particularly since the compulsory investment coefficients will be phased out in 1992.

Any exercise in prospective analysis must be taken with several grains of salt but let us describe a plausible scenario:

The market is segmented. High barriers to entry, and high margins, remain in the customer retail (with the possible exception of the high income submarket) and small firms segments. Barriers are maintained with the help of implicit coordination of the large Spanish institutions

(for example, by not selling pieces of the branching network, making the access to ATM systems difficult...). Nevertheless the big savings banks grow bigger through an expansion and merger process, profiting from their good competitive position in the mass retail market and tend to operate like private banks.

They also venture into lines of business previously denied them. In the mass retail market, competition will essentially be between banks and savings banks; foreign banks will only be marginal. In wholesale, competition will be more intense and essentially between national and foreign banks. The close relationship between banks and industry continues. Big banks hold positions, control an important share of stock exchange operations and consolidate a respectable market share in investment banking and some innovations (such as pension funds, for example). They are not the best at any particular thing and they are not the most profitable institutions, but they are profitable enough. Nevertheless, some of the big banks may have trouble coping with the new competitive conditions and may be taken over (perhaps by foreign banks). Foreign and smaller banks increase their share in particular segments of retail and wholesale. In the mass retail market, foreign banks are mostly crowded out by the extensive network of banks and by the expected expansion of savings banks from 1989 until 1992.

In summary we may expect an increase in competitiveness in banking in Spain; this is already happening now, but probably in some segments it will be moderate. It is also clear that the underdeveloped parts of the Spanish financial system, like the stock market, hold a potential for growth that will be realized in a few years. Nevertheless this does not mean that the Spanish capital market will increase its weight in Europe in any substantial way.

According to the EC report on the benefits of the integrated market, Spain is by far the country which stands to benefit most in terms of reductions in the prices of financial services: potentially 34% on average. Our analysis seems to suggest that not all the potential price reductions will be realized. On the other hand the effect on quality levels of increased price competition remains to be seen. In principle, high prices and quality could be substituted by low prices and quality, but "quality" has many dimensions and the new product and service offerings (such as ATM and home banking) may largely outweigh the decrease in service on other fronts (fewer tellers, for example). In any case, even moderate increases in the degree of competition which imply new product offerings and price decreases may have important welfare effects given the starting Spanish conditions.

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Appendix

Stock market reform in Spain

The government is currently involved in a drastic reform of the stock market, reflected in the 1988 Reform Bill. According to Guillermo de la Dehesa (*Euromoney*, 1988, Vol. 1): "The central objective [of the stock exchange reform] is more transparency in all market operations: less insider trading, more security for the investor, easier conditions for Spanish companies to tap the market and the promotion of more competition." The projected reform includes:

a) The creation of a computerized National Stock Exchange. A stock can be quoted either in one of the four stock exchanges or in the national one.

b) The establishment of two types of stock exchange member firms: "agencias" (single capacity brokers), and "sociedades" (brokers/dealers), who will be able to make markets, as well as dealing direct with the public.

c) Restrictions on ownership of the two types of firms: only individuals will be allowed to take stakes in "agencias," no stake being larger than 20%. Stakes in "sociedades" will also be limited with different bounds until 1992, and possibly freed thereafter.

d) Abolition of fixed commissions.

e) Creation of a National Stock Exchange Commission, appointed by the Ministry of Economy, with wide powers and supervisory responsibilities.

f) Centralization of all settlement procedures through a limited company jointly owned by the government, stock exchange member firms and banks ("Servicio de Compensación y Liquidación de Valores").

g) The outlawing of insider trading.

An important issue still under discussion is the level of capital requirements for "agencias" and "sociedades" when markets are liberalized. The concern is that this level could be set so high for certain operations that only subsidiaries of large banks could afford to satisfy it.