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The Degree of Competition in the Italian Banking Industry

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This paper tests for the presence of market power in the Italian banking industry during the period 1971-1996 by using a simultaneous-equation model. In spite of growing consolidation, which occurred particularly in the latter years, the empirical findings rule out the possibility that the market is characterised by a joint monopoly, and appear to support the view that the conduct of the Italian banks is becoming more competitive as a consequence of the European integration process. These results, therefore, also constitute a counter argument to the idea that high concentration prevents substantial competition amongst firms.

(J.E.L.: G21, L10, L13).

Introduction

During recent years there has been a remarkable increase in the number and size of the concentration processes in Italian commercial banking: when compared with the beginning of this decade, the main Italian credit institutions now enjoy both a larger average size and a higher proportion of deposits and loans. This can be regarded as a consequence of the elimination of restrictions amongst the countries belonging to the European Union in order to create a common market. For this reason the assessment of the degree of competition in this industry, which has been always a crucial argument in the analysis performed by economists, has earned a greater degree of consideration especially on the grounds of the potential for monopoly power that the actual and projected consolidation measures could produce.

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The present study analyses the Italian banking industry, using this viewpoint, for the period of 1971 to 1996. We aim to verify whether the current modifications in the banking sector foreshadow a substantial change in the degree of competition, and hence whether a large number of banks is necessary for highly competitive behaviour.

The next section consists of a brief review of the history of the Italian banking market in the period under study, and discusses the theoretical approach underlying the performed test. Section 3 presents the model, while section 4 is devoted to the description of the data employed for the estimation, and section 5 analyses the results. Finally, section 6 offers some concluding remarks.

1. The Recent Evolution of the Italian Banking Market

In 1973 there were 1102 banks in Italy, the total number of branches was equal to 11279 and the total number of employees was equal to 179332, while in 1991 the above values were 1043, 19080 and 329324 respectively. The previous figures clearly show that in the last two decades the commercial banks have been able to maintain their outstanding role in the Italian economy and particularly in the national financial system. However, it must also be noted that the credit institutions have been subjected to structural changes, both economic and organisational (for example, the disintermediation of deposits, liberalisation of branches, consolidation, etc.), caused by modifications that occurred in the external environment.

One of the most significant changes is associated with "disintermediation": it is the process of decline and the new definition in the role of financial intermediary that is usually played by a bank[1]. The first period of strong disintermediation took place during the years of 1978 to 1982, when the government bonds began to appear as an enticing alternative to bank deposits, since they were issued to finance the growing public debt and therefore were short-term securities with a higher remuneration than bank deposits. The main consequence for the banks was that the rate of increase in their deposits suffered a notable contraction; it changed from about 24% in 1978 to values between 8% and 9% in the years 1981-1982. There was also a reduction in the rate of increase of loans (equal to 6% in 1982); however in this case a decisive role was played by the ceiling imposed on the commercial banks in those years[2]. The economic expansion that followed gave new vitality to

[1] Among the various references about the Italian context, see Bruni (1982) and Vicarelli (1982).

[2] See Padoa-Schioppa (1995), pp. 50*-51*.

investments and hence to loans (whose growth slowed down again in 1990 with the beginning of a new recession), but the financial disintermediation had continued to lessen banks' deposits, so that at the end of 1993 they had decreased to 35% of total financial resources (in 1978 this figure was equal to 67%). Facing this evolution towards a greater portfolio diversification, the Italian banks have been able to adapt by offering themselves to customers as managers of this diversification. As a consequence of this, the Italian banking system now has still control, either directly or indirectly, of over the 90% of total savings[3].

In combination with the trend in the capital market, another important phenomenon that has affected the Italian banking industry in the recent years is the increasing monetary and financial integration. The gradual liberalisation of capital flows and the prospect of the European common market has undoubtedly influenced the policy of the domestic banks, that are also concerned about the competitive pressure from foreign rivals. This has necessitated the search for more efficient organisational solutions, an enlargement of the variety of the offered services and a stronger exploitation of scale economies. The last of these phenomena has taken place thanks to an increasing consolidation within the banking industry, which has led to a decreasing number of banks throughout the period under examination; it generally consisted in the acquisition (either partial or total) of ownership of national or foreign credit institutions as well as making agreements with other banks.

The process of structural consolidation, which was especially remarkable from 1990 onwards and was related to the aspiration of an improvement in efficiency to face the enhanced competition, has cast doubts on the possibility that a competitive conduct is still possible in the banking industry today. This fear derives from the structure-conduct-performance paradigm, where the degree of competition in the market is a direct function of the number of firms and an inverse function of the average market share[4]. The above theoretical framework is surely coherent, but the occurrence of certain conditions can lead to alternative results. One example of these conditions is given by contestability, which emerges when there are no sunk costs and the hit-and-run behaviour by potential firms is possible[5]. In this case, contestability makes competitive

[3] See Padoa-Schioppa (1995), p. 55*.

[4] These linkages were first formalised by Mason (1939) and deepened by Bain (1951). See also Stigler (1964) and Scherer (1970).

[5] On the argument, the main reference is the book by Baumol, Panzar and Willig (1982).

conduct easier with no regard to the number of operating firms[6]. In addition, in some markets high concentration and profits might derive from the higher efficiency of firms rather than from substantial market power.

The previous point emphasises the significant role that an empirical investigation could play in assessing the degree of competition in an industry. The economic literature offers various techniques for investigating this question. With reference to the banking industry, efforts have been devoted to the examination of the relationship between structure and return (in terms of either profitability or price), since a positive link could imply imperfect competition[7]. A difficulty with this approach is that it is not possible to find a clear benchmark for competitive returns.

Another method consists in a comparative statics analysis for the identification of market power[8]. Such a technique has been applied to a sample of banks in New York by Shaffer (1982), to Canadian banks by Nathan and Neave (1989), to a selection of commercial banks belonging to various European countries by Molyneux *et al.* (1994), and to a sample of Italian banks by Coccorese (1998).

To check the presence of competitive conditions in the Italian banking industry, in this paper we utilise the procedure suggested by Bresnahan (1982) and Lau (1982) that requires the estimation of a simultaneous-equation model, where a parameter representing the degree of market power of firms is included. This parameter can be interpreted as the extent to which the average perceived marginal revenue schedule of a firm in the industry deviates from the demand schedule. An important feature of this test is that it employs aggregate industry data, thus avoiding the collection of firm-specific data. Empirical implementations of this technique have been performed by Alexander (1988) and Shaffer (1989, 1993); particularly, the latter has applied this method within a banking context.

2. The Model

The analysis starts from the theoretical assumption that a profit-maximising firm will choose a level of production that equalises marginal revenue to marginal cost. The former corresponds to the demand price in the case of a perfectly competitive market, but is equal to the marginal

[6] For some consideration about the possibility that Italian banking market exhibits characteristics of contestability, the reader may refer to Coccorese (1995).

[7] An exhaustive survey on these and related topics is given by Gilbert (1984).

[8] See Rosse and Panzar (1977), and Panzar and Rosse (1987).

revenue of the whole industry in case of perfect collusion amongst firms. The industry's *true* marginal revenue function can be written as follows:

$$MR_t = P_t + D'(Q_t, Y_t, \delta)\, Q_t \tag{1}$$

where $D'(\cdot)$ represents the first derivative of the inverse demand function with respect to quantity Q_t (the aggregate production of the industry), P_t is the market price, Y_t is a vector of exogenous variables shifting the demand curve, and δ represents a vector of unknown parameters of the demand function[9]. It should be noted that the value $D'(\cdot)\, Q_t$ can be also considered as the semi-elasticity of market demand, since

$$D'(Q_t, Y_t, \delta)\, Q_t = Q_t / (\partial Q_t / \partial P_t) \tag{2}$$

For the single firm i, the firm's *perceived* marginal revenue function may be written as:

$$MR_{it} = P_t + \lambda_{it}\, D'(Q_t, Y_t, \delta)\, q_{it} \tag{3}$$

where the positive unknown parameter λ_{it} (to be estimated) measures the competitiveness of oligopoly conduct. It assumes a value between 0 and 1: when equal to 0, firms act as though marginal revenue coincides with market demand, an occurrence that indicates a perfectly competitive behaviour (and therefore the application of the marginal cost pricing principle); when it is equal to 1, firms choose the level of price and output according to the industry marginal revenue curve, so that the market is now characterised by joint monopoly or perfect collusion. Intermediate values of λ_{it} indicate various degrees of imperfect competition or collusion.

It is important to observe that a model which allows the parameter λ_{it} to vary by both firm and time would result in being over-parameterised. In time series this problem is solved by aggregation, so that the only parameter, λ_t, can be interpreted as the average value of all the conduct parameters of the firms within the industry[10]. The same argument can be applied to marginal cost as well as to other variables related to single firms.

If we remember that in perfect competition the firm's equilibrium

[9] See also Bresnahan (1989), pp. 1014-1015.

[10] See Bresnahan (1989), pp. 1016-1017. Of course, this average value λ_t originates from different levels of the conduct parameter λ_{it}, which vary across banks in accordance with the characteristics of intermediaries and local markets.

production is set at the level where the market price P_t (coinciding with the marginal revenue MR_{it}) equals the marginal cost MC_{it}, we are able to aggregate for the n firms in the market, so that equation (3) becomes:

$$P_t - MC_t = -\lambda_t D'(Q_t, Y_t, \delta)\, Q_t \tag{4}$$

This expression represents the deviation of price from the level of marginal cost and therefore from the competitive price level. However, we also have to keep in mind that the difference between the actual quantity and the competitive output level is equal to:

$$Q_t - Q_t^* = (\partial Q_t / \partial P_t) \cdot (P_t - MC_t) \tag{5}$$

so that by substitution we obtain that:

$$(Q_t - Q_t^*) / Q_t = -\lambda_t \tag{6}$$

Therefore, the value $-\lambda_t$ is, at the same time, both an index of market power and an estimate of the percentage deviation of total industry output from the optimal level of production that characterises the competitive equilibrium.

In our application to the Italian banking industry, the parameter λ_t has been estimated as if it were constant over time. Nonetheless, we have also tried to capture possible changes in the conduct of the industry (linked to the European integration process) by adding a dummy variable for the most recent years[11].

For our purposes, it is necessary to build a simultaneous model using a demand function and a supply relation. The demand function takes the following form:

$$\ln Q_t = a_0 + a_1 P_t + a_2 Y_t + a_3 Z_t + \varepsilon_t\,, \tag{7}$$

where Q_t is the quantity of banking output (as described later), P_t is the market price of these banking services, while Y_t and Z_t are two exogenous variables affecting demand and here identified as the aggregate income and the price of a substitute for banking services (a non-banking product) respectively; ε_t is an econometric error term.

The supply function originates from a translog cost function, widely used in the analyses of banking markets because of its ability to deal with

[11] A similar hypothesis is found in Shaffer (1993).

both scale and scope economies in multiproduct firms[12]. In particular, for a generic period t and two generic inputs, it is given by:

$$(8) \qquad \begin{aligned} \ln C_t = {} & \beta_0 + \beta_1 \ln Q_t + \beta_2 (\ln Q_t)^2 + \beta_3 \ln W_{1t} + \beta_4 \ln W_{2t} + \\ & + \beta_5 (\ln W_{1t})^2 / 2 + \beta_6 (\ln W_{2t})^2 / 2 + \beta_7 \ln W_{1t} \ln W_{2t} + \\ & + \beta_8 \ln Q_t \ln W_{1t} + \beta_9 \ln Q_t \ln W_{2t} \end{aligned}$$

where C_t is the total cost, Q_t is the output level, and W_1 and W_2 are the exogenous prices of the inputs. Such a cost function implies the following marginal cost function:

$$(9) \qquad MC_t = AC_t \cdot (b_0 + b_1 \ln Q_t + b_2 \ln W_{1t} + b_3 \ln W_{2t})$$

where AC_t is the observed average cost. It should be noted that there are no particular restrictions that have to be imposed on the coefficients of the above function. Moreover it is not possible to make predictions on their signs[13].

We can now write the supply equation and hence complete the model. Assuming that banks are input price-takers and profit-maximisers, equation (4) can be rewritten as:

$$(10) \qquad P_t = AC_t \cdot (b_0 + b_1 \ln Q_t + b_2 \ln W_{1t} + b_3 \ln W_{2t}) - \lambda/a_1 - \lambda' D_t/a_1 + \phi_t$$

where D_t is a dummy variable (further explained in the next section) that attempts to consider changes in industry conduct over time, and ϕ_t is an econometric error term.

Hence, the competitive index λ is identified in the system formed by equations (7) and (10). We have already seen that this index reflects the behaviour of the average firm in the sample, and therefore the possible presence of a dominant firm (or cartel) combined with a group of smaller competitive firms should give rise to values of λ that represents a weighted average of the actual competitive and collusive values. It therefore follows that the estimated value of λ should exceed the competitive one[14].

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[12] The translog function was first proposed by Christensen *et al.* (1971); for the extension to the multiproduct context, see Brown *et al.* (1979). Applications to banking industry have been made by Gilligan *et al.* (1982) and Mester (1987), while specific studies on Italian depository institutions can be found in Cossutta *et al.* (1988), Baldini and Landi (1990) and Conigliani *et al.* (1991).

[13] See Berger *et al.* (1987) for some details on the various restrictions that apply to the translog function.

[14] The econometric theory has shown that the use of macroeconomic data (which do not consider the heterogeneity of the firms since they assume a representative firm) may

Finally, the semi-logarithmic form, used here for the demand equation[15], allows the correct identification of the λ index. In fact, Lau (1982) has demonstrated that a necessary and sufficient condition for λ to be identified is that the demand (or the inverse demand) function must *not* be separable in at least one of the exogenous variables that are included in the demand function but excluded from the marginal cost function. This condition is met in equation (7) since, for example:

$$(11) \qquad \partial^2 Q_t / (\partial P_t \, \partial Y_t) = a_1 \, a_2 \, Q_t$$

which is clearly different from zero.

3. The Estimation

Annual data from 1971 to 1996 have been used for the identification of the system. The size of the sample (26 observations) can be judged as acceptable for our purposes. In similar empirical studies of the degree of competition within the industry, samples of analogous size have been utilised: for example Alexander (1988) and Shaffer (1993) use 22 and 25 observations, respectively. A notable feature of our sample is that it considers a certain number of observations after 1989, the year when the European Community Council of Ministers approved the Second Banking Directive (no. 89/646, dated 15/12/1989) that introduced the full freedom of banking services across EC boundaries, later completed with the total liberalisation of capital flows in 1992. In this manner, it is possible to verify potential shifts in the Italian banking industry conduct that are connected to this Directive. Even though the latter was acquired by the Italian laws with D.L. 14/12/1992 no. 481, it is plausible that it began to have an impact on banks' behaviour once its approval was gained at the European level.

The sample of data is composed of various time series of national aggregate data (see Appendix). For those pertaining to credit institutions only the banks with short-term deposits have been considered. Here we adopt the intermediation model of a bank[16], where deposits are to be considered as an intermediate input generated by labour, in conjunction with which they originate loans. This means that the quantity of output,

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give rise to an aggregation bias. On these and related arguments, see Theil (1971), ch. 11, Judge *et al.* (1985), ch. 13, and Hendry (1995), pp. 46-48.

[15] See Varian (1992), p. 211.

[16] About this model, which has been used in several banking cost studies, the reader can refer to Klein (1971) and Sealey and Lindley (1977).

Q, is measured by the lira value of loans and the price of output, P, is given by the interest rate earned on loans.

The inputs that have been considered are deposits, labour and physical capital. For the first and the second inputs the respective prices are the deposit interest rate and the annual wage rate. We do not assume the price constancy of the capital inputs across the sample, as we are dealing with time series. In any case, this input is embedded in our analysis only in an alternative specification. The reason for this is associated with the difficulty of its characterisation and therefore its measurement and the increased degrees of freedom caused by its presence in a small sample. Furthermore, its role in banks' total costs is not high.

We must also underline that the assumption that banks are input price-takers, necessary for the specification of λ, is probably true for labour and physical capital as for these inputs the banks compete with other firms for their acquisition. This conjecture would also be true for deposits if the deposit interest rates were not under banks' control: we can assume that this happened during the period under examination, mainly because the fierce competition from government bonds notably reduced the market power of banks with regard to deposits.

In our estimation, P was measured as the average interest rate on loans, and its coefficient a_1 is expected to be negative, that conforms to a downward-sloping industry demand curve. Y was measured as the gross domestic product (in billions of lire), and we expect that it has a positive effect on the level of aggregate demand in banking services, so that the coefficient a_2 should be positive. Z was measured as the rate of interest on a government short-term treasury bill, and its coefficient a_3 should also be positive, since the aforementioned rate constitutes a good proxy for the price of a substitute of bank loans: in fact, an increase in the rate of interest that the customers have to pay for loans which do not come from a bank should make bank loans relatively cheaper, and therefore cause a growth in their total amount. In this series the data generally refers to the three-month government bills, except in the first four years when their minimum duration was annual.

The price of deposits, W_1, was measured as the average interest rate on deposits, and the price of labour, W_2, was calculated as the ratio between total labour costs and number of employees. In the estimation that includes the price of physical capital, W_3, it was measured as the value of all operating costs with the exception of those related to deposits and labour (an amount that represents a good proxy for the cost of capital) divided by the global number of branches. This figure was preferred to the value of premises and

equipment, in order to take into account the frequent cases when they are either rented or leased[17].

It has already been underlined that we are not able to predict the sign of the coefficients of the variables in equation (10). However, linear homogeneity in factor prices would imply that $\Sigma_j b_{j+1} = 0$, while each of these coefficients would also be equal to zero in cases of homotheticity or separability of the cost function between the levels of output and input prices[18].

Finally, the average cost *AC* is calculated as the ratio between total costs and loans. All variables expressed in lira values were deflated by the Gross Domestic Product Deflator.

The shift term, *D*, in equation (10) is a dummy variable assuming a value equal to 0 for years 1971-1989 and 1 for years 1990-1996. It is useful to check for changes in the degree of competition of the market after 1989.

4. The Results

The system formed by equations (7) and (10) was estimated simultaneously using non-linear least squares. The results are summarised in Table 1. In the two-factor model, six of nine coefficients are significant (four of them at the 0.01 level) in the estimation without the interactive time dummy variable, while in the two-factor specification with the term *D* six of ten coefficients are significant (five at the 0.01 level). In the three-factor model without the coefficient λ', five of ten coefficients are significant (three at the 0.01 level), while in the specification with the shift term six of eleven coefficient are significantly different from zero (four at the 0.01 level).

In all systems, the coefficients of the variables *P*, *Y* and *Z* have the same sign as we expected. The fit is good for each of the four cases: the value of *R*-square is always approximately equal to 0.90 for the first equation, and to 0.96 for the second equation, where the competitive index is identified. The additions of the capital price and the dummy variable do not modify the estimation of the coefficients or the level of *R*-square in the first equation. In the second equation the same additions give rise to small variations in the value of the coefficients (with their signs remaining unchanged except for the constant term in the three-factor model without the dummy variable) and to negligible changes in

[17] An analogous hypothesis can be found in the estimations by Nathan and Neave (1989) and Coccorese (1998).

[18] See Shaffer and DiSalvo (1994), p. 1070.

Table 1

System estimation for the Italian banking industry

Demand equation: $\ln Q_t = a_0 + a_1 P_t + a_2 Y_t + a_3 Z_t + \varepsilon_t$
Supply equation: $P_t = AC_t\,(b_0 + b_1 \ln Q_t + b_2 \ln W_{1t} + b_3 \ln W_{2t} + b_4 \ln W_{3t})$ - λ/a_1 - $\lambda' D_t/a_1 + \phi_t$

	Two-Factor Model		Three-Factor Model	
	Without the shift term	With the shift term	Without the shift term	With the shift term
Demand equation (dependent variable: *ln Q*)				
a_0	11.5587 (82.91)***	11.5587 (82.91)***	11.5587 (82.91)***	11.5587 (82.91)***
a_1	-3.0330 (-1.70)*	-3.0330 (-1.70)*	-3.0330 (-1.70)*	-3.0330 (-1.70)*
a_2	1.8034 (13.18)***	1.8034 (13.18)***	1.8034 (13.18)***	1.8034 (13.18)***
a_3	0.4836 (0.26)	0.4836 (0.26)	0.4836 (0.26)	0.4836 (0.26)
R^2	0.8965	0.8965	0.8965	0.8965
Supply equation (dependent variable: *P*)				
b_0	-0.3656 (-0.56)	-1.0251 (-1.49)	0.0156 (0.02)	-0.5822 (-0.61)
b_1	0.1479 (3.22)***	0.2164 (4.01)***	0.1152 (1.46)	0.1786 (2.27)**
b_2	0.2432 (2.95)***	0.3057 (3.72)***	0.2369 (2.85)***	0.2991 (3.64)***
b_3	0.2079 (2.38)**	0.2416 (2.92)***	0.2222 (2.43)**	0.2591 (3.00)***
b_4	-	-	0.0371 (0.51)	0.0442 (0.65)
λ	0.2161 (1.49)	0.2610 (1.55)	0.2458 (1.44)	0.2970 (1.52)
λ'	-	-0.0416 (-1.31)	-	-0.0423 (-1.33)
R^2	0.9550	0.9613	0.9554	0.9619

t-statistics for the parameter estimates in parentheses
*** = coefficient estimates significant at 1% level
** = coefficient estimates significant at 5% level
* = coefficient estimates significant at 10% level

List of variables:

Q = loans
P = interest rate on loans
Y = gross domestic product
Z = interest rate on government short-term treasury bills
W_1 = interest rate on deposits
W_2 = labour cost / number of employees
W_3 = other operating costs / number of branches
λ = index of competition
λ' = shift term for the index of competition (years 1990-1996)

R-square. We can also observe that the introduction of the price of capital input, which is never significant, does not affect the significance of the coefficient of the other inputs.

In the estimates without the dummy variable *D*, the coefficient λ assumes the values 0.2161 and 0.2458 for the two-factor and the three-factor model respectively. These values are statistically different from 1, allowing us to strongly reject the hypothesis that the Italian banking industry is consistent with the presence of monopoly power. However, they are not significantly different from the competitive value of 0, but their point estimates cannot be considered low. Hence, though we are not able to reject the perfect competition hypothesis, it is plausible that the Italian banking market is characterised by a certain degree of competition, although imperfect. This conjecture is in accordance with other results intended to define the market power of the credit institutions within the Italian context, where it has been shown that monopolistic competition is the best description of the local banking market[19]. Shaffer (1993) also underlines that the interpretation of λ is not altered by regulation or disequilibrium, but always keeps its characteristic of an index of firms' behaviour because it represents the actual deviation from marginal cost pricing[20].

The coefficient λ' of the shift term *D* has a negative sign in both the regressions where it has been computed. This would indicate an increase in the degree of industry competition since 1990, and thus confirm the conjectures about the antimonopolistic role that could be played by the free circulation of capital flows within the European Union. Unfortunately, in our estimations its value is never statistically significant. In any case, it appears to be a useful and truthful indicator of the direction that the Italian banking system is following: as a matter of fact, the resulting change of conduct towards a more competitive behaviour seems absolutely compatible with the future situation of the EU credit market.

The price elasticity of market demand, which can be derived from equation (7), is given by $a_1 P$. During the period under investigation the average value of *P* was 0.153 (all values being between 0.08 and 0.23), and hence the average price elasticity is equal to -0.46. Since the absolute figure is less than 1, we can conclude that the demand for banking services in Italy has been inelastic.

[19] See Coccorese (1998), where the monopolistic competition outcome is explained as a compromise between local monopolies or oligopolies from little banks and the competitive pressure coming from large banks operating at a national level.

[20] See Shaffer (1993), p. 57.

Concluding Remarks

This paper has utilised a non-linear simultaneous-equation model for the period 1971-1996 in order to identify the degree of competitiveness and give a contribution to the debate about the market power in the Italian banking industry. The results only reject the hypothesis of a joint monopoly, and are generally compatible with perfect competition. Considering both these findings and the estimated value of the competitive index, we can offer a plausible interpretation by suggesting that the Italian banking market equilibrium is consistent with imperfect competition. This conjecture is also supported by the results obtained for the same country by Coccorese (1998), who used a different method, although algebraically related to the index of competition estimated here, and applied it to a shorter period (1988-1996).

Furthermore, in this study there is no evidence of significant changes toward a less competitive behaviour in the conduct of banks for the years following the introduction of free capital circulation within the European Union. On this basis it therefore seems conceivable to state that a structural consolidation may be compatible with the persistence of a highly competitive conduct, and that the competition within the banking industry may not be damaged by the inevitable concentration processes, which are subsequent to the lowering of barriers across intra-EU boundaries.

APPENDIX

Data Source and Description

Data available from the Central Bank of Italy

- Bank deposits (current accounts and short-term deposits) from residents
- Average interest rates on bank deposits
- Bank loans to residents
- Average interest rates on bank loans
- Labour costs of commercial banks
- Operating costs of commercial banks
- Total costs of commercial banks
- Number of banks' employees
- Number of branches of commercial banks
- Interest rates on 3-months government bonds

Data available from Istat (Italian Statistical Institute)

- Gross Domestic Product
- GDP deflator

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