

Ownership Change and Efficiency in the Italian Banking System. A Case Study¹

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The article provides an analysis of some features of the Italian Credit System in the Nineties. In particular, it focuses on a comparison of Banks' efficiency – in terms of parametric cost and profit functions – in Northern and Southern Italy, taking into account the dualistic structure, which characterizes the Italian economy, and the ownership changes occurred in the last years.

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1. Introduction

The Italian Banking System has experienced important changes during the Nineties: the abolition of protective administrative controls, an increasing *laissez-faire* approach due to a radical change of Italian banking law, which removed operative and functional constraints, and Italy's membership in the EMU.

This has produced a higher level of competition, an increasing product diversification and, consequently, an increase in net income from services and non-financial activities. In fact, the abolition of the administrative controls as well as market and financial liberalization, through the participation in the European Monetary Union, has oriented the Banking System towards a more efficient organization.

It is worth noting that the transformation of the Italian Banking System in the Nineties is particularly interesting because of its implications for the funding of productive activities in a dualistic productive system. The major change in the credit market of Southern Italy (the so called "Mezzogiorno") was the entrance of external banking groups, which acquired control over a large proportion of Southern banks.

This reallocation of property rights within Southern Italian Banking System represents the final step of a financial system that had to face greater environmental and institutional risks compared to the ones faced by the rest of Italy. A useful indicator can be the very high level of non-performing loans that, together with a poor management, seriously compromised the relationship between banks and firms in Southern Italy.

These phenomena are also linked to the abolition, in 1992, of the special policy implemented to support, through public transfers, the economy of Southern Italy (the so called "intervento straordinario"). This abolition weakened even further an already fragile productive structure with evident negative consequences for Southern banks. In fact, since the second half of the Eighties, when the process of industrialization carried out by non-local industrial firms had concluded, the development of the Southern regions was mainly depended upon the capacities and activities of small local firms.

This caused a rapid deterioration of banks' credit portfolio since 1992. The main consequence of this situation was in turn a significant increase in interest rates paid by well performing firms. In fact, this was the only way banks, exploiting a persisting market power, were able to meet the cost of an increasing number of bad loans to poor performing firms.

The objective of this paper is to analyse efficiency patterns of the Italian Banking System in the Nineties taking into account the dualistic development of the Italian economy. At the same time, cross-region efficiency comparisons have to bear in mind the potential differences arising from region-specific aspects that may affect banking activity.

This paper will analyse cost and profit efficiency frontiers estimated with parametric methodologies; firstly, in the next section, the main features of the Italian Banking System of the last years and their implication for a dualistic economic structure are discussed. Then, in section three, some aspects of the literature about the measures of efficiency, its components, estimation models and the criteria for the construction of variables are presented. In the fourth section the estimation results are provided according to the dimensional and territorial structure of the sample. Some concluding remarks are provided in the final section.

2. Reorganization of the credit market and the productive structure in Southern Italy

In order to analyse the reorganization processes of the Southern Italian credit market in the last decade, it is necessary to put on the floor the dualistic character of the Italian economic structure. In fact, the abolition of the special policies of intervention based on public transfers exposed local firms to a standard (domestic and international) competition's pressure².

While in 1980 the real income per capita in the South was 56.8% of the average of the rest of the country, the ratio increased to 59.8% between 1983 and 1992; since then, the Southern economy has performed rather badly, due both to the adverse economic cycle and the reduction of government transfers.

The structural break, due to the end of this policy, induced effects in terms of growth: the average rate of growth of GDP in the Mezzogiorno was only 1.5% between 1992-2000, less than two thirds of the growth rate in the rest of Italy³.

These facts strongly influenced the productive structure; firms had to face increasing competition and, especially in recent years, difficult conditions of the credit market; which was characterised by a rapid deterioration in the credit portfolio since 1992. This caused higher interest rates also for firms with better performances, which in fact had to sustain the increasing costs of bad loans. The Southern banks were, hence, strongly conditioned by the increased risk due to the higher percentage of bad loans with respect to total loans. It is easy to observe the increase in the ratio of bad loans on total loans: during the period 1996-2000 it reached 19.1% compared to a national average of 6.3% in the same years.

The increasing gap between interest rates on loans in the two macro-regions reflects the deterioration of credit quality due to bad performance of the southern productive system; as a consequence, this strongly influenced the Southern banks' balance sheets⁴.

Moreover, the Southern banks were not able to gain efficiency by enlarging and improving the quality of the services supplied; in addition to this, the loans/deposits ratio dynamics can be an indicator of the environmental difficulties to develop a satisfying intermediation activity. In fact, looking at 1990-2000 period, Southern Italy has experienced an annual growth rate for deposits similar to the national one; however, the amount of loans granted decreased by 18.6% during the same period⁵.

Another indicator of this picture refers to the loans and deposits ratio of resident customers to the GDP in the two macro-regions: regarding the loans, at the end of 2000 the ratios were 86% in the North and 38.6% in the South; with regards to deposits, the same ratios were 53.3% in the North and 41.6% in the South. This situation indicates a further difficulty for local banks in following productive diversification strategies in the South with comparison to those adopted in the rest of the country. Hence, savings flee from the South to the Central and Northern areas⁶. The result of these elements (mainly the higher risk in the loans and the limited market dynamics) produced, during the

² Special incentives were revoked in 1992 and the fiscal retrenchment, imposed by the public finance constraints (due to well known domestic fiscal imbalances), made subsidy policies more difficult. So, both restrictive fiscal policies and the strong reduction of public transfers immediately influenced the Southern economy. The policy of tax relief to firms (i.e. to pay social security contributions) was also abandoned, following the European Union *reprimenda*.

³ Gross investment decreased at a yearly rate of 2.4%, compared to an average annual increase of 1.6% elsewhere. Population growth, on the other hand, was considerably higher in the South, so that the per capita GDP fell further to 58.2% in 2002, just as it was in the Sixties.

⁴ In 2000 the gap between Southern and Northern short-term interest rates was 1.6%.

⁵ The analysis of the incidence of the average ratio of net revenues from services to the intermediation margin reveals that during the period 1994-2000 this was only 11.2% for Southern banks compared to 14.7% for Northern banks.

⁶ This point is stressed in Ferri and Inzerillo (2002); in addition, see Panetta (2003) for an opposite position.

second half of Nineties, a deterioration in Southern banks profitability. In this context, the expansion of loans and other financial services both to households and firms was clearly problematic⁷. All these phenomena have eased property reallocation processes, with the acquisition of Southern banks by non-local ones. This process took place in the second half at the end of the Nineties and by the beginning of the new decade only 27% of the total branches located in Southern Italy were controlled by local banks; in our opinion, the increasing acquisition of local banks by outside banks makes the problem of financing local firms even more severe⁸.

These changes in the national credit market are crucial in order to evaluate more deeply the efficiency performance of the Italian Banking System.

3. Efficiency analysis by means of parametric frontiers

3.1 Cost and profit efficiency

Technical efficiency analysis is based on the comparison – given an observed efficient frontier – of each firm with respect to the best practice in the sector. Consequently, an efficiency score ranging from 0 to 1 is assigned; in other words, this score is a measure of the distance of each firm from the efficient frontier (Farrel, 1957).

According to the economic theory, the technical efficiency of a single firm can be measured by comparing the observed output with the maximum amount that could be obtained by using the same input bundle. Alternatively, it is possible to compare the observed cost for the production of a given level of output with the minimum cost which could be paid for the same output (Forsund et al. 1980).

The methodologies most frequently used to construct the production frontier are based on the specification of a production function, estimated by using econometric techniques; an alternative approach is based on non-parametric techniques of linear programming⁹. In this paper the parametric approach is used; econometric techniques, although negatively affected by specification problems of production function, allow a more rigorous distinction between inefficiency residuals and error terms by using statistical inference tests; in addition, it is possible to test the model goodness of fitting data and to perform several specification tests; such an analysis is not feasible through a non-parametric approach.

More recent literature constructed other efficiency measures not only related to technology, but also to inputs allocation. In this case, a cost frontier specification can be considered; under this specification, the observed cost expanded in producing a particular bundle of output is compared to the minimum cost necessary for the production of the same bundle. Hence, the cost frontier is formulated by estimating a cost function, which relates observed cost to output quantities and input prices, allowing random error and inefficiency.

$$(1) \quad C = C(y, w, u_c, v_c)$$

where C is a measure of costs, y is a vector of output quantities, w is a vector of input prices, u_c is a measure of cost inefficiency, and v_c denotes a random error which may be caused by measurement

⁷ This pattern – as already stressed above – is not due to a lack of funds but rather to the higher risk associated with increasing loans to local firms.
⁸ The non-local banks' market share in Southern Italy rose from 38% in 1990 to 48.6% in 2000. At the same time, the Southern banks' market share in this area fell from 62% to 51.4%. Finally, the market share of Southern banks in the rest of Italy – which was only 3% in 1990 – decreased to 1.6% in 2000. See Imbriani (1996), Imbriani and Lopes (2002), Lopes and Netti (2002).
⁹ For a review of these topics see Coelli et al. (1999).

errors, and/or by exogenous shocks experienced by the firm which may, for these reasons, expand costs to a level higher than the minimum.

Analysing only costs efficiency may be misleading because a firm may be “efficient” in terms of cost reducing strategy, but, at the same time, not able to expand business activities and profits.

For this reason further efficiency measures are related to the profits. The standard profit frontier relates profits to the prices of inputs and outputs. The observed profit generated by a particular combination of inputs and outputs is compared with the maximum possible profit generated by the same input-output mix.

By computing profit efficiency we are able to detect how cheaply a single firm is able to produce output and how effectively it sells it on the market given input and output prices:

$$(2) \quad \Pi = \Pi(w, p, u_{\Pi}, v_{\Pi}),$$

where Π is firm profit, u_{Π} is a measure of profit inefficiency, and v_{Π} denotes a random error which may be caused by measurement errors, and/or by exogenous shocks experienced by the firm which may make profit different from the maximum.

An alternative approach to estimate the profit frontier was proposed in more recent studies¹⁰ in which output prices are not included, but output level is considered as an explanatory variable.

In other words, the alternative specifications for revenue and cost functions are the following:

$$(3) \quad \Pi = \Pi(w, y, u_{\Pi}, v_{\Pi})$$

There are three main reasons for preferring these alternative specifications:

- a) Firms may not be able to control completely the scale of output to reach any desired size; as a consequence, efficiency comparisons based on standard profit function may be misleading since they do not take into account these size differences over firms. In particular, larger firms may seem more efficient simply because of this size effect. Alternative functions explicitly allow output levels to be taken into account.
- b) It is likely that output markets are not perfectly competitive, and so firms have some market power in pricing their outputs. In this case standard profit function does not allow differences in output pricing and variations in quality output across firms to be taken into account.
- c) If output prices are not accurately measured, the standard profit frontier could provide a poor measure of efficiency; in addition, it may be difficult to compute prices for bank non-traditional output. For traditional output, prices are computed as ratio of income (py) to quantity (y) where p is the price of output y . For non-traditional output only income information is available; hence, without a measure of the quantity of non-traditional output, it is impossible to define a price for this type of output.

3.2 *Econometric specification*

In order to evaluate efficiency, we have considered an econometric estimate methodology based on panel data proposed by Battese and Coelli (1992). Assuming that in equations (1) and (3) inefficiency factors and error terms are independent, the specification in logarithmic terms is the following:

$$(4) \quad \ln Z_{it} = f(y_{it}, w_{it}) + u_{it}^Z + v_{it}^Z$$

¹⁰ See, among others, for financial sector analyses, Berger and Mester (1997); Humprey and Pulley (1997); Pulley and Humprey (1993).

$$(i = 1, \dots, N)$$

$$(t = 1, \dots, T)$$

where Z corresponds, respectively, to cost, or profit, (depending on which frontier is estimated) referred to bank i at time t . v_{it}^Z is assumed to be independent and identically distributed $N(0, \sigma_v^2)$ random error, u_{it}^Z , which account for cost or profit efficiency, is assumed to be independent and identically distributed as a truncated distribution $N(\mu, \sigma_u^2)$.

In addition, in this model we assume that the bank effect u_{it}^Z depends on time t in the following way:

$$(5) \quad u_{it}^Z = \{\exp[-\eta(t - T)]\} u_i^Z$$

$$(i = 1, \dots, N)$$

$$(t = 1, \dots, T)$$

This model is such that the bank effects u_{it}^Z decrease, remain constant or increase as t increases, if the parameter η is respectively greater, equal or smaller than zero. The case in which η is positive is likely to represent situations where banks tend to improve their cost or profit efficiency over time. Given equations model (4) – (5), the minimum-mean-squared-error predictors of cost and profit efficiency for the i th bank at the t th time period, are calculated as suggested by Battese and Coelli (1992).

The usual translog specification¹¹ for equations (1), and (3) was chosen. Ignoring individual index for each bank at different periods, the model takes the following form:

$$(6) \quad \ln Z = \alpha + \sum_{j=1}^4 \beta_j \ln y_j + \sum_{K=1}^3 \gamma_K \ln w_K + 1/2 \sum_{J=1}^4 \sum_{H=1}^4 \beta_{JH} \ln y_J \ln y_H + 1/2 \sum_{K=1}^3 \sum_{L=1}^3 \gamma_{KL} \ln w_K \ln w_L + \sum_{j=1}^4 \sum_{K=1}^3 \delta_{jK} \ln y_j \ln w_K + \ln u_Z + \ln v_Z,$$

where Z corresponds, respectively, to cost or profit¹², depending on which frontier is estimated.

$$(7) \quad \ln C = \sum_{K=1}^3 w_K x_K$$

$$(8) \quad \ln \Pi = \sum_{j=1}^4 p_j y_j - \sum_{K=1}^3 w_K x_K$$

with p = output prices vector

Equations (7) and (8) reported above represent respectively the cost and the profit, and include the same set of explanatory variables: input prices¹³ (w_1, w_2, w_3), input quantities ($x_1 =$

¹¹ We consider this more flexible specification instead of the typical Cobb-Douglas function, which may avoid multicollinearity problems but is more rigid because assumes a constant input substitution elasticity; see Caves and Christeensen (1980).

¹² For this dependent variable, in order to obtain the argument of positive natural logarithm in cases of banks making negative profits, we used the correction proposed by Berger and Mester (1997): $\theta = (|\Pi_{\text{MIN}}| + 1)$, where Π_{MIN} is the minimum value of observed profits. When θ will be added to the original profit series, bank showing $\Pi = \Pi_{\text{MIN}}$ will have a profit equal to one.

¹³ Labour price was calculated as ratio of banking staff costs to the average number of banking staff; capital price is given by the ratio of capital cost (depreciation, leases and other administrative expenditures) to bonds, deposits and other lending funds sources (subordinated liabilities and free capital). The collected funds price is calculated dividing the purchased funds cost (interests and fees) by deposits and bonds. Revenues are obtained considering interests and other incomes coming from non-traditional activities; total costs are calculated summing up labour cost, capital cost and purchased funds costs. Finally, total profits are just total revenues less total costs.

labour, x_2 = capital, and x_3 = collected funds); output quantities (y_1 = deposits, y_2 = loans to non financial institutions, y_3 = loans to banks and bonds, y_4 = Non-traditional banking activities¹⁴).

In order to ensure that the estimated frontier is well behaved, symmetry and linear homogeneity are imposed on model parameters:

$$\beta_{jh} = \beta_{hj} \quad j, h = 1, 2, 3, 4$$

$$\gamma_{KL} = \gamma_{LK} \quad K, L = 1, 2, 3$$

$$\sum_{K=1}^3 \gamma_K = 1,$$

$$\sum_{L=1}^3 \gamma_{KL} = 0 \quad K = 1, \dots, 3$$

$$\sum_{K=1}^3 \delta_{jK} = 0 \quad j = 1, \dots, 3.$$

4. Empirical results

4.1 Efficiency Analysis

The empirical analysis¹⁵ was carried out by using a balanced panel of 603 banks provided by ABI (Italian Bankers Association) for the 1994-2000 period. This sample covers almost 80% in terms of Total Assets for the entire Italian Banking System. We have taken into account only banks for which data were available for all sample period, in order to assess how a representative sample of the Italian Banks performed in terms of cost and profit efficiency. In addition, estimating the parameter η , as suggested by Battese and Coelli (1992), allows to take into account also time effects which may influence the efficiency scores over time.

The estimates of cost and profit functions indicate that the parameter η is positive and significant in the profit function, but not in the cost function; in addition, the truncated normal distribution is an adequate representation for the distribution of the bank effects for both functions¹⁶.

Table 1 shows the efficiency scores¹⁷ – measured in percentage points – for the Italian Banking System¹⁸.

¹⁴ We have included this variable – defined as a composite aggregate of all net incomes coming from all non banking activities – in order to take into account the output diversification strategies implemented by all Italian Banks during the Nineties (Rogers, 1998).

¹⁵ The econometric analysis was carried out using STATA econometric package.

¹⁶ The main parameter estimates are reported below:

| Parameters | η | M | σ_u | σ_v | Log-likelihood |
|-----------------|------------|--------------|------------|------------|----------------|
| Cost function | -0.0017 | 0.1709(**) | 0.0091 | 0.0049 | 4471.10 |
| Profit function | 0.2863(**) | -71.5102(**) | 3.6739 | 0.6785 | -5264.21 |

(**) $\alpha = 1\%$

¹⁷ The efficiency score estimates, bounded between zero and one, are multiplied by 100.

¹⁸ The size classification takes into account total liabilities, then five groups are considered according to the following table:

| Groups | Size categories | Total liabilities (billion euro) |
|--------|---|----------------------------------|
| 1 | Large Banks (so-called Maggiori and Grandi) | >8.3 |
| 2 | Medium Banks (so-called Medie) | 8.3 – 2.8 |
| 3 | Small Banks (so-called Piccole and Minori) | <2.8 |

Source: Banca d'Italia (1995).

| Table 1 - Efficiency scores for Italian banks | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-----------|
| Cost efficiency | | | | | | | | |
| Size categories | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 1994-2000 |
| Large | 85.49 | 85.74 | 86.12 | 86.08 | 86.31 | 86.29 | 86.46 | 86.07 |
| Medium | 83.09 | 81.47 | 82.50 | 82.69 | 82.64 | 83.77 | 84.07 | 82.89 |
| Small | 81.90 | 82.08 | 82.07 | 82.13 | 82.23 | 82.33 | 82.64 | 82.20 |
| All System | 83.49 | 83.10 | 83.56 | 83.63 | 83.73 | 84.13 | 84.39 | 83.72 |
| Profit efficiency | | | | | | | | |
| Size categories | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 1994-2000 |
| Large | 69.20 | 75.00 | 79.65 | 83.46 | 86.93 | 89.27 | 90.27 | 81.97 |
| Medium | 78.81 | 82.65 | 86.90 | 89.90 | 92.17 | 94.40 | 95.77 | 88.66 |
| Small | 79.86 | 84.23 | 87.74 | 90.52 | 92.73 | 94.55 | 95.86 | 89.36 |
| All System | 75.96 | 80.63 | 84.76 | 87.96 | 90.61 | 92.74 | 93.97 | 86.66 |

We found that, in general, the cost efficiency decreases in the years 1994 and 1995 and increases only slightly from 1995 to 2000: this result is consistent with the fact that the parameter η is not significant. In other words, during this period Italian Banks did not improve in a significant way their capability to minimize production cost for a given output level. In addition, cost efficiency falls with decreasing bank size: large banks are more cost efficient than medium and small banks¹⁹.

A different pattern is found for profit efficiency. For all the banking system, in this case, we observe a significant improvement in the profit efficiency scores from 1994 until 2000. In fact, as the parameter η is significant, this could also mean that Italian Banks, during this period, have improved their ability to maximize profits. Over the period considered the profitability improvement has been more relevant for large banks, which, however, in 2000 were still lagging behind medium, and small banks (the profit efficiency being respectively 90.27, 95.77 and 95.86).

The empirical evidence shows that small and medium local banks improve their business and their profitability in local markets paying more attention to local customers needs; on the other hand, larger banks, although improve the allocative efficiency, are not able to expand their activity in a more profitable way²⁰.

A more detailed analysis is shown in table 2 where the efficiency scores were calculated at territorial level. We have considered separately banks with headquarter located in the Northern and Central Italy and those ones with headquarter located in Southern Italy²¹.

| Table 2 - Efficiency scores for Italian banks at regional level | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-----------|
| Cost efficiency | | | | | | | | |
| Location | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 1994-2000 |
| Northern and Central Italy | 85.55 | 85.38 | 85.57 | 85.62 | 85.70 | 85.64 | 86.05 | 85.64 |
| Southern Italy | 75.22 | 75.25 | 75.20 | 75.10 | 75.08 | 74.99 | 75.16 | 75.14 |
| Profit efficiency | | | | | | | | |
| Location | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 1994-2000 |
| Northern and Central Italy | 69.90 | 74.24 | 79.55 | 83.76 | 87.23 | 89.66 | 91.71 | 82.29 |
| Southern Italy | 36.84 | 46.30 | 53.87 | 59.31 | 63.07 | 63.28 | 66.91 | 55.65 |

¹⁹ The same evidence is provided by Giannola and Scarfiglieri (1998).

²⁰ The relevance of a deep and lasting "Banking Relationships" between local banks and small firms is analyzed by Petersen and Rajian (1995).

²¹ The Banks with headquarter in Southern Italy, since have a market share in the rest of Italy decreased from 3% in 1990 to 1.6% in 2000, may be considered local banks operating only in the Mezzogiorno.

In table 2 we can observe that, in general, Centre-Northern banks are more cost efficient than Southern ones, and that this pattern does not change over time. The cost efficiency differential between Northern and Southern banks is – on the average – more than 10 percentage points, while the profit efficiency differential is above 25 percentage points. This result is consistent, on the one hand, with persisting problems for Southern banks in minimizing costs and, on the other hand, with the overall poor performance in profit efficiency, compared with non-Southern banks²²: in fact, even though the differential in the profit efficiency score reduced over the period, in 2000 it is still above 25 percentage points. It seems reasonable to argue that the expansion pattern of Northern banks into Southern Italy's credit market and the acquisition of several southern banks does not seem to modify the structural problems related to the dualistic economic system²³.

In table 3 we analyse the efficiency performance of Northern and Central Italy's credit system considering also the bank size.

| Cost efficiency | | | | | | | | |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-----------|
| Size categories | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 1994-2000 |
| Large | 86.85 | 86.89 | 87.17 | 87.21 | 87.35 | 87.36 | 87.54 | 87.20 |
| Medium | 83.55 | 81.89 | 82.94 | 83.16 | 83.11 | 84.25 | 84.53 | 83.35 |
| Small | 82.85 | 83.17 | 83.21 | 83.25 | 83.35 | 83.38 | 83.85 | 83.30 |
| Profit efficiency | | | | | | | | |
| Size categories | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 1994-2000 |
| Large | 73.39 | 78.43 | 82.63 | 86.34 | 89.49 | 91.75 | 92.96 | 85.00 |
| Medium | 79.52 | 83.31 | 87.40 | 90.32 | 92.50 | 94.65 | 95.94 | 89.09 |
| Small | 79.97 | 84.32 | 87.82 | 90.58 | 92.77 | 94.61 | 95.90 | 89.42 |

The empirical evidence presented in table 3 basically reflects the pattern that we already noticed at the national level. In other words, we observe a negative correlation between cost efficiency and profit efficiency, where, on the one hand, larger banks are more cost efficient than smaller banks and, on the other hand, the latter are more profit efficient than the former. Two explanations may be provided for this result: on one hand, small banks have higher costs for acquiring information from small customers compared with information costs sustained by bigger banks; on the other hand, smaller banks, since operate in proximity of local market, may extract more surplus from local customers, which usually are not considered by bigger banks.

Finally, in table 4 we look at the efficiency performance of Southern Banks considering also the bank size.

²² See Giannola (2002), pp. 87-103.

²³ Sapienza (1998) provides empirical evidence from Italian data that small and medium sized firms have problems in accessing to credit markets in which non-local banking groups acquire local banks.

| Table 4 - Efficiency scores for Southern Italy banks | | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|-------|-----------|
| Cost efficiency | | | | | | | | |
| Size categories | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 1994-2000 |
| Large | 74.15 | 74.11 | 74.07 | 74.03 | 74.00 | 73.96 | 73.92 | 74.03 |
| Medium | 76.38 | 76.35 | 76.31 | 76.28 | 76.24 | 76.21 | 76.18 | 76.28 |
| Small | 76.27 | 76.15 | 76.06 | 76.27 | 76.32 | 76.19 | 76.66 | 76.27 |
| Profit efficiency | | | | | | | | |
| Size categories | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 1994-2000 |
| Large | 31.43 | 34.91 | 37.94 | 40.55 | 42.91 | 45.40 | 48.52 | 40.24 |
| Medium | 68.44 | 74.60 | 79.86 | 84.22 | 87.76 | 90.57 | 92.78 | 82.60 |
| Small | 79.63 | 84.16 | 87.63 | 90.43 | 92.67 | 94.38 | 95.72 | 89.23 |

Small and Medium Southern banks are more cost efficient than medium and large banks: on the average the cost efficiency score differential is above two percentage points. Regarding profit efficiency, even though larger southern banks have somehow reduced the profitability gap over the sample period, small and medium banks remain, by far, more efficient when compared to large banks.

These results are consistent with the acquisition process of Southern banks by the Northern ones, which took place during the Nineties. It is reasonable to believe that this reallocation of property rights has reduced, in a certain way; the production costs for acquired and controlled banks; this pattern has involved all categories of banks. At the same time, the acquired large banks have been constrained in the expansion of their business to local customers²⁴. In other words, the competitive strategy of Southern large banks acquired by Northern banks seems to be more towards cost-reduction rather than interested to increase the profitability of the business activity. This phenomenon has opened some opportunities for more dynamic small and medium banks, which have been reorganised after the acquisitions by non-local banking groups.

5. Conclusions

The Italian Banking System at the beginning of the Nineties was largely owned by the public sector and mainly characterized by small average dimension, insufficient international projection, a low profitability and substantial capital inadequacy. In this financial environment the last decade has been characterized by significant institutional changes more market oriented which are still to be completed. So the prudential supervisory strategy of the Central Bank, focused on the financial stability, stimulated bank capitalization, merger and acquisition processes and an increasing competition related also to Italy's joining the European Monetary Union.

The reallocation of property rights has substantially reduced the role of the State as a direct owner in the Banking System, but this does not mean that its indirect role in controlling a significant share of Italian banks has been reduced. In any case, a considerable modernization process took place in the Nineties. The empirical evidence so far provided indicates that during this period the more dynamic Italian banks managed to expand and diversify their activity in Southern Italy, where the deterioration of the economic structure over the same period strongly affected the local Banking System.

²⁴ In fact, the most important Southern Bank, Banco di Napoli, heavily reduced its activity until finally, in 2000 a big Northern Bank acquired it through another national Bank.

The increasing competition has stimulated dimensional growth and productive diversification: the econometric analysis shows that larger banks are relatively more cost efficient but less profit efficient. An opposite pattern is observable for smaller banks. Two explanations may be provided for this result: on one hand, small banks have higher costs for acquiring information from small customers compared with information costs sustained by larger banks; on the other hand, smaller banks, since operate in proximity of the local market, may extract more surplus from local small customers, which usually have more difficulties to obtain credit resources from bigger banks.

At regional level, a similar result can be individuated in the centre and in the north. A quite more complex picture may be displayed for Southern banks.

We showed that Southern banks are less cost efficient than other Italian banks, especially the larger ones; this result is less relevant for smaller banks, which are generally more profit efficient.

The merger and acquisition processes of local Southern banks by non-local banks, on the one hand, certainly, increased their operative efficiency, but, on the other hand, constrained the potential for an expansion of the large Banks that basically have reduced their business activities to small and medium local firms. Regarding medium and small banks, the empirical analysis showed that the reorganization of southern credit market opened some opportunities for these categories of banks which may exploit the market of small and medium size firms.

A future research may assess whether these credit system trends are compatible with a consistent development of the Southern productive system, deeply affected by severe environmental constraints and strictly dependent upon banks' resources for the current activities. In the light of this analysis the question to be answered is whether there is a stance for an efficient bank, which does not conflict with the development target of a still backward socio-economic area.

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