BANK-FIRM RELATION CHANGES AND EARNINGS QUALITY. AN ANALYSIS ON ITALIAN SMALL-MEDIUM SIZED COMPANIES.

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Abstract

In the last years banks and firms relationship in Italy has experienced deep changes due to a new revised national and international regulation and to an increasing globalization of economic environment.

These evolutions imply a new bank-firm relationship with a deeper disclosure, in a perspective of partnership between them.

In this scenario, “Basel 1 and 2 accords” have been contributing to revise bank-firm relationship, moreover in the specific perspective of small-medium sized firms.

In Italy, the evolution of bank-firm relation has been also influenced by an intensive banking system restructuring process, characterized by big mergers and small local banks aggregations.

This paper focuses on bank-firm relation impact on small-medium sized firms financial reporting quality.

The analysis empirically examines some proxies for earnings quality for a sample of Italian small-medium sized firms over 10 years period. Earnings quality metrics are based on the relation between working capital accruals and cash flows, following Dechow and Dichev (2002) approach.

Across these metrics we will perform a cross-sectional analysis on the relation between earnings quality and some variables regarding banks and firms governance, controlling for regulation changes and other variables such as size, sector etc.

The paper will also investigate the relation between earnings quality and cost of debt.

1. Introduction

The on going processes of deregulation and liberalization of financial markets, have caused a series of competitive dynamics that have oriented financial intermediaries towards economic efficiency and dimensional growth finalized to guarantee an adequate competitiveness either in the domestic contest, or in the international one.

These factors and the difficulties of smaller banks to benefit of scale economies and competitive mass explain the intense process of consolidation we can observe in Europe and in Italy.

The index of Italian banks system concentration remains, however, lower than in the other countries of the Euro Area (except for Germany) (Assoneb: Semestral Report on Bank).

In a framework of increasing competition, both large and small banks have been forced to undertake a deep restructuring process. The main results of the reorganization of the credit system have been a significant concentration process, similarly to that occurred in other European banking systems: the enhanced competition led by deregulation has forced Italian banks to look for a bigger size in order to achieve economies of scale and scope, as well as a better managerial capability, thus improving their overall efficiency. As a consequence, a reduction of the number of banks occurred during the last decade.

Competition and concentration require an increasing capability to acquire, manage and use information about the borrowers.

2. The Italian scenario

Traditionally, Italian firms have raised capital through the typical continental banking systems or through retained earnings rather than recurring to the securities markets.

The Italian bank-oriented system is characterized by a diffuse presence of SMEs, with no or limited access to financial market and lack in financial competences, and small-medium banks, firmly rooted in the local markets.

The high number of big-sized family firms is also one of the most known typical features of Italian capitalism, in which publicly held companies are quite absent, most companies are closely held, the financial markets are not really effective and entrepreneurial families play a decisive role in the economic system performance.

So that, Italian corporate governance system is characterized by controlling shareholders with a strong leadership, consisting of few people (very often the founding families), with a high concentration of ownership. In this contest, financial information can more easily loose its role of primary and neutral information channel to the bank.

Bank-firm relation is quite informal and depends on personal relationship between the controlling shareholders and the banks.

These conditions and their implications are of great significance, particularly in order to develop of an efficient financial market.

In this sense, "Basel 1 and 2 accords" have been contributing to revise bank-firm relationship in order to favor a better disclosure and a balanced relationship between bank and firms, moreover in the specific perspective of small-medium sized ones.

Furthermore, according to Northcott (2004) relationship lending contributes greatly to economic growth by promoting the efficient allocation of capital as long as better informed banks provide credit to the most productive projects first.

3. Bank-firm relation. Literature overview

The extensive literature on bank – firm relation can be analyzed from different points of view: corporate governance theory, transaction and agency costs, risk management, value creation, information asymmetry (Diamond 1984) and competitive advantage (Porter, 1985).

From a corporate governance perspective, banks provide an indirect source of interest alignment by mitigating the risk-taking tendency of managers and thus improving the quality of the projects undertaken by the firm (Diamond, 1984, James, 1987, Lummer and McConnel, 1989, Bolton and Scharfstein, 1996, Boot and Thakor, 2000).

In addition to that, it's possible to study bank-firm dealings from a relational point of view. In this sense, the so called "relationship lending" (Petersen and Rajan, 1994; Berger and Undell, 1995) is traditionally opposed to “transactional lending theory” (Thunman, 1992, Boot and Thakor, 2000; Cesarini, 2003). In the first one, there is a strong, stable and long-term credit relationship between bank and firm; instead, in the second case, relations are discontinuous and characterized by a short-term perspective.

Lending relationships are favored by the possibility to have better and privileged information exchanges that cause benefits both to the borrower and to the lender: i.e. lower monitoring costs and the possibility to achieve a competitive advantage in comparison to other competitors banks.

Theoretical studies and empirical findings agree that relationship lending increases capital availability to firms (Keltner, 1995; Petersen, 1999; D’Auria et al. 1999; Ferri and Messori, 2000). On the contrary, there is not a common agreement in the literature about the effects of relationship lending on the cost of credit.

Some empirical studies (Keltner 1995; Elsans and Krahnen, 1998 and Petersen and Rajan, 1994; Berger and Undell, 1995; Keltner, 1995) provide evidence that a close lending relationship with a bank will allow the borrower to pay a lower interest rate, thus enhancing the value of the relationship; others suggest that relationship lending exposes the borrower to a monopolistic rent, with higher loan interest rates (D’Auria et al., 1999; Degryse and Van Cayseely, 2000; Forestieri and Tirri, 2002).

Other studies highlight further costs and risks of lending relationship .

First of all, a single and stable relationship with only one bank can involve the so called “hold-up costs” linked to the information monopoly the bank generates in the course of lending (Sharpe, 1990; Rajan, 1992). Secondly, this type of relationship can generate switching costs, related to the expensive process (in term of time and money) necessary for the substitution of the main bank.

Another cost connected to lending relationship is the so called “soft budget constraint”, which has to do with the potential lack of toughness on the bank’s part in enforcing credit contracts that may come with relationship-banking proximity (Boot, 2000).

4. Bank concentration and information

Concentration in the banking industry may have important implications related to the efficiency of financial sector, bank stability, credit policy, industrial competitiveness.

In our analysis, bank-firm relationship is critical for its impact on the information flows between the bank and the firm..

In many countries, as in Italy, banks are the most important providers of financial resources for small and medium firms. A wave of bank mergers during the past decade has decreased the total number of banks and has increased banking sector concentration. According to BCE data[1], between 1995 and 2004 the number of financial intermediates is fallen down from 9.500 to 6.400.

Someone argues that concentration will intensify market power and thereby stimulate competition and efficiency. Others argue that economies of scale drive bank mergers and acquisitions, so that increase efficiency and stability contributing in creating incentives for banks to avoid imprudent risk-taking.

Thus, bank mergers can lead to efficiency gains that are potentially passed on to borrowers. Lower loan rates imply that borrowers are more likely to continue borrowing and to increase their loan volumes from the consolidated bank. On the other hand, mergers also often increase market power, which may result in borrowers decreasing their loan volumes or in termination of relationships, overall for SMEs (Stein, 2000 and Strahan and Weston, 1998).

While excessive competition may create an unstable banking environment, insufficient competition in the banking sector may breed inefficiencies.

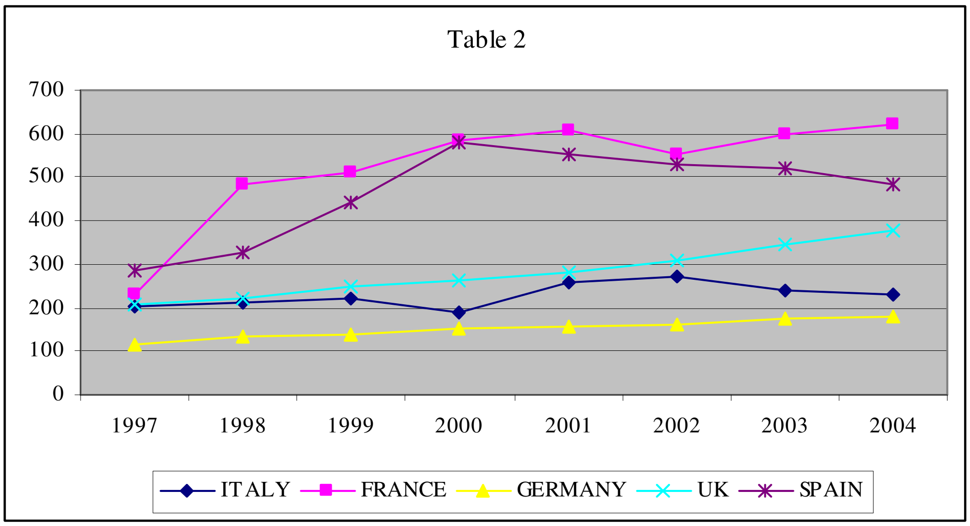
Table 1 and table 2 show the Herfindahl-Hirschmann index (IHH) - obtained by squaring the market-share of the various players, and then summing those squares - for financial intermediaries market in five main European countries (Italy, France, Germany, United Kingdom and Spain), calculated on the total intermediated funds.

[1] BCE, "Consolidation and Diversification in the Euro Area Banking Sector", Monthly Bullettin, may 2006

Table 1

	1997	1998	1999	2000	2001	2002	2003	2004
ITALY	201	210	220	190	260	270	240	230
FRANCE	229	485	509	587	606	551	597	623
GERMANY	114	133	140	151	158	163	173	178
UK	208	221	250	264	282	307	347	376
SPAIN	285	329	441	581	551	529	521	482

Unicredit Research on BCE data



It immediately appears a clear trend in all European countries toward an high financial intermediaries market concentration.

This phenomenon is, obviously, influenced by different contingent, social and political aspects.

The enhanced competition led by deregulation, as in the Italian case, has forced banks to look for a bigger size in order to achieve economies of scale and scope, as well as a better managerial capability, thus improving their overall efficiency through a complex reorganization process.

In table 3 (Source: Banca d'Italia, annual report) we can observe the trend of mergers and acquisition in Italian banking sector for the period 1993-2002.

Table 3

Year	Merger & Incorporations [1]		Acquisition [1]	
	No. of Operations	Intermediated Funds	No. of Operations	Intermediated Funds
1993	38	0.63	6	1.5
1994	42	1.59	10	1.9
1995	47	1.57	19	4.5
1996	37	0.47	19	1.08
1997	24	0.80	18	3.42
1998	27	2.65	23	11.02
1999	36	0.39	28	14.35
2000	33	1,50	24	4.86
2001	31	0.08	9	1.55
2002	18	0.06	11	4.94
Total	**333**	**9.67**	**167**	**36.79**

[1] Inter-group operations are excluded

As a consequence of this trend, a strong reduction in the number of banks has occurred during the last decade. The above two mentioned tendencies (competition and concentration) stress the need for banks to become more market oriented and client-driven for competing in the new environment.

In this perspective the development of close, long-lasting relationships with selected target of customers, especially with regard to corporate segment, assumes the form of a strategic choice in order to gain comparative advantages.

In order to achieve this result, it is fundamental to create, sustain and develop a continuous exchanges of data and information: the intensity and the quality of bank-firms relationship, in other words, have to be inspirited by an co-operational approach.

Cooperation presupposes a relationship of trust between the bank, its external auditor and firms. If there is no trust, co-operation cannot exist.

But trust is founded on information sharing. Higher levels of information disclosure and data integrity are necessary, due to regulations such as Basel 1 and 2 accords, that represent an instruments to build transparency in bank-firms relations and to assure the market about the fairness of players.

On the one hand, in a even more competitive market, banks will have to assure better services and solutions, always increasing quality and creating a straightness relationship, involving also the development of combined strategies.

On the other hand, the enterprises that will be able to distinguish themselves in term of stability, transparency and information compliance will also be able to obtain smaller financial rates and a more complete service.

Moreover, a continuous analytical and operating control, like in the rating procedures will offer to the enterprises a constant monitoring of their risks assuring directly the banks and indirectly the whole market.

5. Bank concentration and the effect on credit availability

After a M&A operation, the relationship between firms and bank (target or bidder) obviously tends to change. It is discussed if this concentration process affects or not the availability of credit, in terms of rate, volume or conditions.

First of all, it's possible to distinguish merger operations from acquisition operations. Usually, in fact, in the case of a merger, the consequences on the firm/bank relationship are more complicated, due to a new reorganizational process that lead to a loss of soft information. In the other case, instead, normally, acquisition is a synonymous of preservation of existing relationship (Bonaccorsi di Patti and Gobbi G., 2003).

Regarding to the effect on credit availability in a post M&A situation, the literature's position is not unique.

Sapienza (2002) demonstrates that consolidation has a negative effect on credit relationship, particularly in relation to small business. She finds that interest rates on credit lines decrease in the case of bank mergers.

Berger and Undell (1998) maintain that after an M&A deal, banks tend to reduce their portfolio share of small business, due to the impact of information losses.

Degryse H., Van Cayseele P. (2000), also demonstrate that borrowers of target banks continuing the relationship after the M&A are harmed, and have a 1.1% lower change in loan volume (as a percentage of assets) than otherwise similar firms borrowing from non merging banks.

On an other position, Bonaccorsi and Gobbi (2003) demonstrates, in one empirical study about Italian firms, that the bank consolidation has no negative effect on outstanding credit.

6. Earnings Quality. Literature review

In recent years earnings quality (EQ) and the quality of financial reporting have becoming more and more important. This big attention is the consequence of the financial scandals of the early 2000s even if the concerns regarding earnings quality exist since long before. This subject is complex and literature doesn't present a unique definition of earnings quality.

According to Balsam e.a. (2003), there exist various measures of earnings quality in literature but those different measures capture various manifestations of earning quality.

Investors are very interested in companies earnings. Bernstein (1993) says that earnings quality "arose out of a need to provide a basis of comparison among the earnings of different entities as well as from the need to recognize such differences in "quality" for valuation purpose".

Earnings are a summary measure of the performance of a firm (Dechow, 1994). Investors use EQ "as a conditioning variable to extract valuation-relevant information from earnings patterns" (Francis 2003).

But the term EQ can have different meaning because it is a broad concept.

The accounting literature embraces several definitions. Some of them focus on the persistence of earnings in the sense that current earnings can be considered a good indicator of future earnings. Some others consider the relation between accruals and cash flows.

Hodge (2003) defines earning quality as the degree to which reported net income differs from future earnings. Chan e.a. (2004) consider EQ as the degree to which reported earnings reflect operating fundamentals. Mikhail e.a. (2003) define EQ as the degree to which a firm's past earnings are associated with future cash flows. For Richardson e.a. (2001) it is the degree to which earnings performance persists into the next period.

But what are “high quality” earnings? According to Kirschenheiter and Melumad (2004) high quality earnings are earnings that are more informative and closer to the long run value of the firm. Revsine e.a. (1999) consider that earnings are of higher quality when they are sustainable.

A possible explanation for the multiplicity of those different interpretations could be that different readers use the information to make different decisions (Kirschenheiter and Melumad, 2004).

6.1 Different measures of Earnings Quality

The main difficulty to treat earnings quality is the large number of measures that have been used in literature.

There is not a generally accepted approach to measure EQ. Recently, accounting accruals have gained attention as an important indicator related to earnings quality.

Schipper and Vincent (2003) discussed the several classes of earnings quality constructs that have been used in literature. They classified them according to four categories.

The first category refers to the concept of persistence, variability and predictability.

The second one is derived from the relation among cash, accruals and income.

The third one relates to qualitative concepts in the FASB’s “conceptual framework”. In the framework, quality is assessed in terms of relevance, reliability and comparability/consistency.

Those three concepts cannot be separately measured.

Finally, the fourth category is derived from implementation decisions.

According to Bernstein (1993) there are three broad classes of factors that include EQ. The first class relates to management accounting and attesting accountants in their choice of the different accounting principles.

The second one is connected with the degree to which “adequate provision has been made for the maintenance and enhancement of present and future earning power”.

The last one refers to economic forces impacting on earnings on their stability and variability.

Williams considers at least three components of earnings quality, in particular, the persistency, the sustainability of earnings and earnings management. The concept of sustainability refers to the fact that earnings obtained through recurring activities have a better quality of those obtained through nonrecurring activities.

To summarize, earnings quality is a broad concept encompassing many determinants.

The purpose of our paper is to analyse the trend of earnings quality during the observed period characterized by an intense bank concentration process, and the variables influencing it.

In order to get a parameter of EQ we have used the model of Dechow and Dichev (2006).

7. Earnings Quality in SME's financial reporting and the evolution of bank-firm relationship. The methodology of analysis.

The purpose of our analysis is to study the trend of financial reporting quality in Italian SME during the years 1997-2005 and its relation with bank-firm relation evolution.

The sample consists of 300 firms for 10 different sectors, with sales ranging from 5 to 50 millions of Euros[2]. The source of data is AIDA database.

The analysis has been performed through the following steps.

First, we confirmed the validity of Dechow-Dichev (2006) regression model of Earnings Quality for our sample.

Then, we calculated their EQ parameters, and particularly of the standard deviation of the residuals of the regression model. This gives a representation of the evolution of the EQ in the period of the analysis.

Then, the EQ data set has been put in relation, either on a quantitative or on a qualitative basis, with the independent variables influencing EQ.

These variables have been individuated in the following:

- debt/equity ratio;

[2] The sectors are: wood, shoes, chemical, buildings, metal, textil, automotive, food, turism, professional services.

- earnings/sales ratio;
- income tax ratio;
- bank concentration index.

A linear regression analysis has been used to find out the relation between debt/equity ratio, earning/turnover ratio, income tax ratio (as independent variables representing causal variables of EQ) and EQ (as dependent variable).

At last, the EQ parameter (standard deviation of the residuals of Dechow-Dichev model) and the residuals of the regression on EQ causal variables have been put in relation, on a qualitative basis, with a bank concentration index in Italy to argue the effect of bank concentration on EQ.

As showed before, for a long time Italian Bank sector has been characterized by a lower concentration in comparison to other capitalistic developed economic systems (with the only exception of Germany), but in the period of analysis (1997-2005) Italian banking system has experienced an intense process of concentration.

In fact, the Italian system is characterized by a great number of small local banks and a relatively few number of bigger banks, which are no more than medium sized in comparison to biggest global players.

In last years Italian banking system has observed a process of some big mergers, which have increased the competitive power of the biggest Italian banks, and of many mergers and acquisition of small and medium sized banks either between them or by big banks.

The lending procedures of small local banks is strongly based on soft and direct information about the borrower. Opaque financial reporting is then often tolerated and it hasn’t a negative effect on credit availability.

Instead, the increasing Bank concentration has involved a more extensive utilization of rigorous and rationale lending procedures by big banks. Apart from the above mentioned discussion on the effects on credit availability, this should bring to a greater attention to firms’ fundamentals and to its financial reporting.

The effect on earnings quality could be of a double nature, depending on the capacity of the banks in detecting earnings management policy aimed at improving credit merit. If the banks are assumed to be able to detect bad earnings quality there will be an incentive for the firm to improve the quality of financial reporting. On the opposite side, there could be an incentive for the firm to manipulate earnings and to implement window-dressing policy to improve credit merit. Of course, this second incentive will prevail if the bank is assumed to be unable to detect bad earnings quality.

The qualitative analysis of correlation between bank concentration and earnings quality (for the part not explained by the other analyzed variables) will give a first answer to this problem, highlighting which of the above incentives is prevailing.

8. Empirical results.

8.1 The relevance of Dechow-Dichev (2006) model and EQ measurement.

According to Dechow-Dichev model, we performed the following linear regression model for each year of the analyzed period (1997-2005):

$\Delta\ WC_t = \alpha_1 + \alpha_2\ CFO_{t-1} + \alpha_3\ CFO_t + \alpha_4\ CFO_{t+1} + \varepsilon_t$

The relevance of the model is confirmed by the data of our sample.

The R² of the model, representing the model significance, is quite high for every year of the analyzed period, ranging from 0,66 to 0,89.

It is then verified that working capital changes in year t are negatively correlated with cash flows from operations in year t, and positively correlated with cash flows from operations in years t-1 and t+1.

In the following table are illustrated the results of the regression model:

	1998			1999			2000			2001			2002			2003			2004		
Anni	1997	1998	1999	1998	1999	2000	1999	2000	2001	2000	2001	2002	2001	2002	2003	2002	2003	2004	2003	2004	2005
R square	0.83			0.66			0.87			0.82			0.88			0.86			0.89		
t	15.49	-33.05	9.53	4.09	-23.22	8.07	13.03	-43.44	11.57	7.26	-37.87	9.21	8.34	-48.09	0.61	14.18	-34.39	7.99	4.12	-44.88	8.59
Coeff. Corr.	0.3	-0.69	0.19	0.12	-0.66	0.17	0.34	-0.84	0.19	0.17	-0.81	0.14	0.2	-0.84	0.02	0.21	-0.74	0.14	0.11	-0.91	0.23

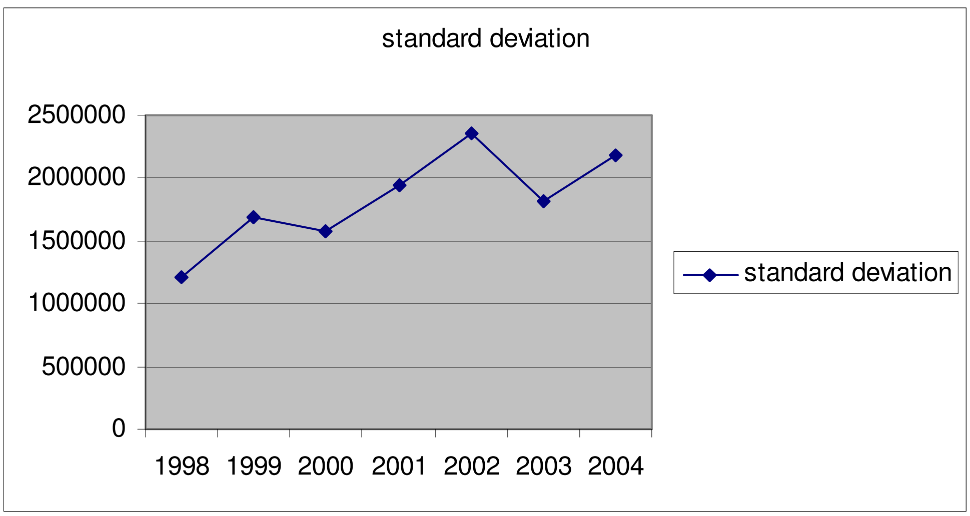
Dechow-Dichev indicate as EQ measurement parameter the residuals of the regression analysis or the standard deviation of the residuals.

Here are the results of EQ measurement in terms of total, mean and standard deviation of the residuals:

	1998	1999	2000	2001	2002	2003	2004
Total Errors	-6,669,515.34	-9,242,110.37	-7,921,032.25	-12,371,517.47	60,878,236.56	-10,578,071.72	-12,928,724.36
Average Errors	-22,231.72	-30,807.03	-26,403.44	-41,238.39	202,927.46	-35,260.24	-43,095.75
standard deviation	1,212,725.74	1,681,787.76	1,573,075.22	1,940,582.37	2,357,845.59	1,815,677.58	2,175,879.84

Obviously, according to Dechow-Dichev model, the higher the standard deviation the lower is the EQ.

As showed by the following chart, representing the trend of standard deviation, EQ has a declining trend in the analyzed period, with a light adjustment in last two years.



This means that window dressing policies have tendentially increased in the same period.

Regarding as the analysis of the relevance of Dechow-Dichev model, we can make two further observations.

The opaqueness of SME's financial reporting is not only due to overestimate and underestimate of working capital, but also to overestimate/underestimate of fixed assets, especially for the capitalization of intangible investments, such as R&D and marketing costs[3].

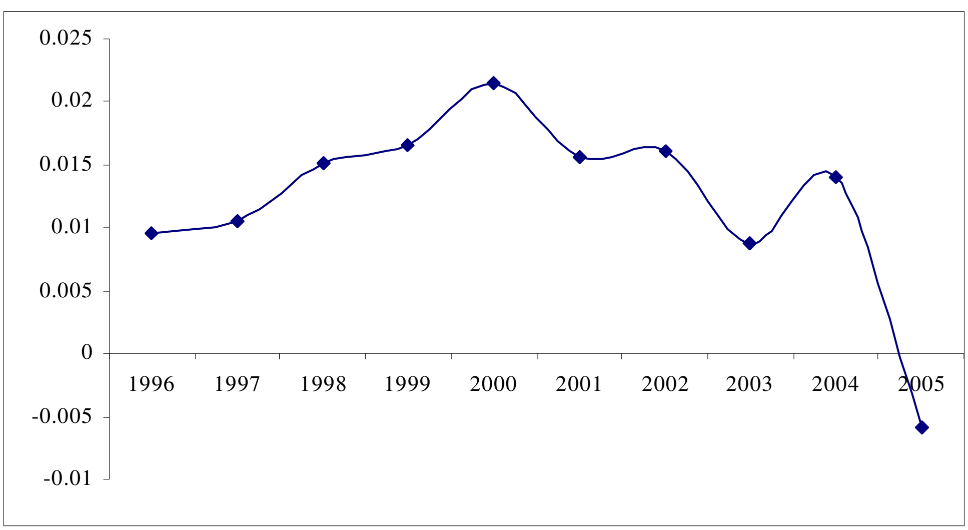
[3] Under Italian GAAP, differently from IFRS, it is possible to capitalize marketing costs related to the launch of a new product or a new business.

For this reason, we have calculated the changes in intangibles assets to analyze their correlation with Dechow-Dichev EQ measure. Indeed, the firms of the analyzed sample doesn't extensively recur to intangibles assets capitalization as earnings manipulation practice. Capitalization is not correlated to Dechow-Dichev EQ measure and it is also not correlated with the earnings before fixed assets capitalizations.

Moreover, the model of analysis doesn't capture the so-called "submerged economy", which in Italy is not negligible. In other words, a part of the sales turnover could not be represented in the financial reports and this could be a way to manipulate earnings. For this reason there could be a bias in the analyzed data. Anyway, as in the case of "submerged economy" accrual sales and cash flows are misrepresented for the same amount, it could be deducted that it doesn't alter the correlation between changes in working capital and cash flows from operations.

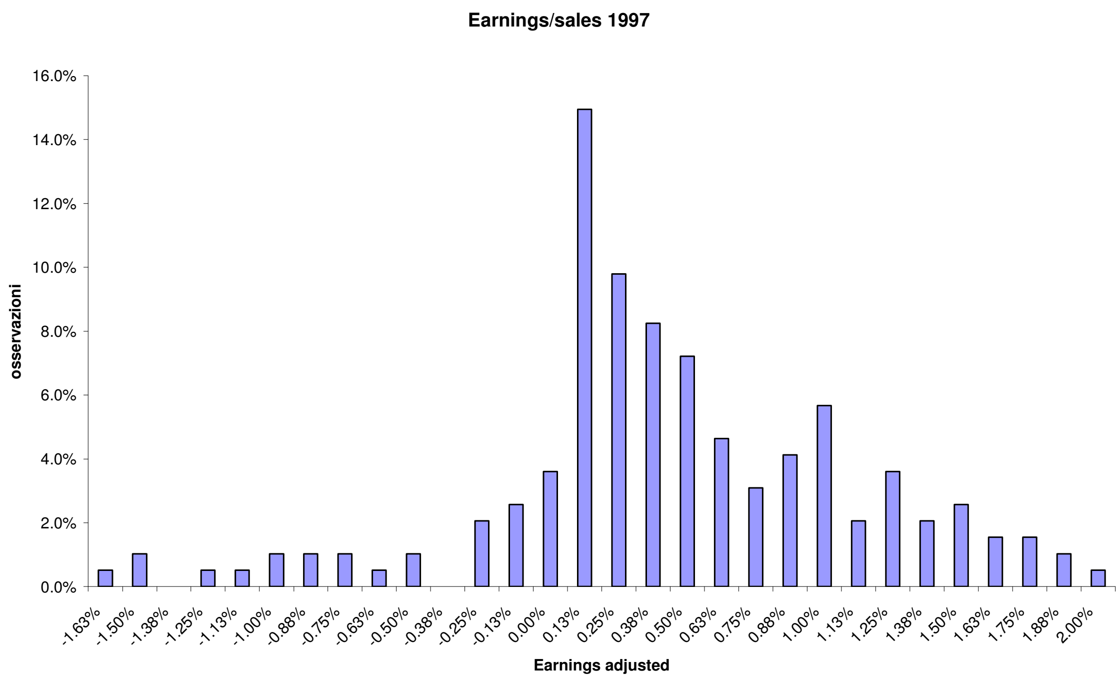
Finally, we have also qualitatively measured EQ through the analysis of the frequency distribution of net earnings, to find out the trend of the mean value of earnings and the presence of significant frequency changes corresponding to specific thresholds (such as the zero net earnings).

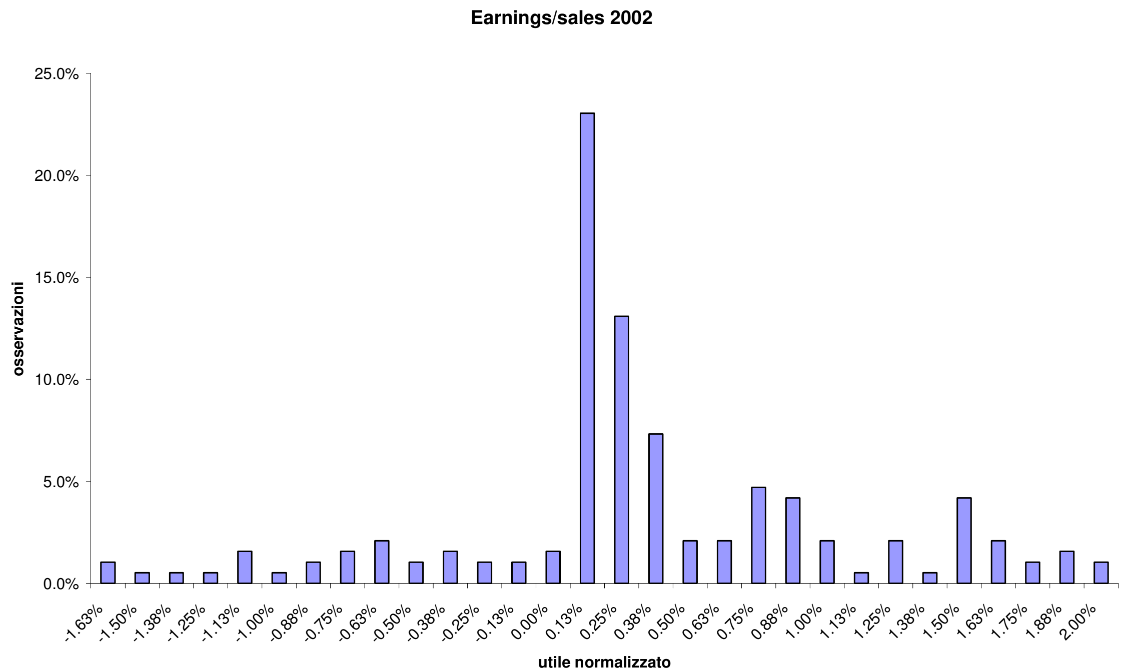
The mean value of earnings/sales changes as follow, in the considered period:



The chart shows an increasing trend of the ratio until 2000; after this year the earning/sales ratio decreases and it gets even negative in 2005.

The following graphs show the frequency distribution of earnings/sales in 1997 and in 2002.





In both chart it is possible to verify that a high percentage of earnings is concentrated around zero.

In conclusion, the EQ measurement process shows a decreasing level of earnings quality in Italian SMEs in the period 1997-2005. The following paragraph will go through the causes of this phenomenon.

8.2 EQ, indebtness, net profitability and firm taxation: a regression analysis.

To understand the role of the variables on which the decrease of earnings quality could be dependent, we have performed a regression analysis with the following model:

$$EQ_t = \beta_1 + \beta_2\,(D/E)_t + \beta_3\,(NE/S)_t + \beta_4\,(T/EBT)_t + \varepsilon_t$$

where:

EQ is the standard deviation of the residuals in the Dechow-Dichev model;

D/E is debt/equity ratio;

NE/S is the Net Earnings/Sales ratio;

T/EBT is the Taxes/Earnings before taxes ratio.

The regression analysis has been performed on the whole data set, with observations for each company and for each year.

The R² of the regression model is not very high, having a value of 0,12

The results of the analysis are the following:

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Taxation/E, D/E, NE/sales(a)	.	Enter

a All requested variables entered.
b Dependent Variable: ERRORS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,298(a)	,012	,010	1773871,046

a Predictors: (Constant), Taxation/Earnings, D/E, Earnings/sales

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	137634,8	41196,161		3,341	,001
	D/E	-6560,400	4538,207	-,030	-1,446	,148
	Earn/sales	-7785889	548152,6	-,297	-14,204	,000
	Tax/Earning	719,085	1226,705	,012	,586	,558

a. Dependent Variable: ERRORS

EQ appears then to be:

- positively correlated with indebtness (D/E ratio);
- positively correlated with profitability (NE/S ratio);
- negatively correlated with firms taxation level.

The results of the regression seem to be intuitive considering the effect of all the controlling variables. In fact, more indebtness and more profitability increase EQ, instead more taxes decrease EQ.

The D/E ratio and the NE/S ratio effects can be explained with the lower incentives to misrepresent earnings suffered by the firm when its results are satisfactory and also with the higher incentives caused by the pressure of the lenders.

The correlation of EQ with debt/equity ratio and with net earnings/sales ratio is statistically significant. In fact the negative correlation with the indebtness is represented by the estimated coefficient on D/E having a t-statistic of –1,45 and the correlation with the profitability is represented by the estimated coefficient on earnings/sales having a t-statistic of –14,20.

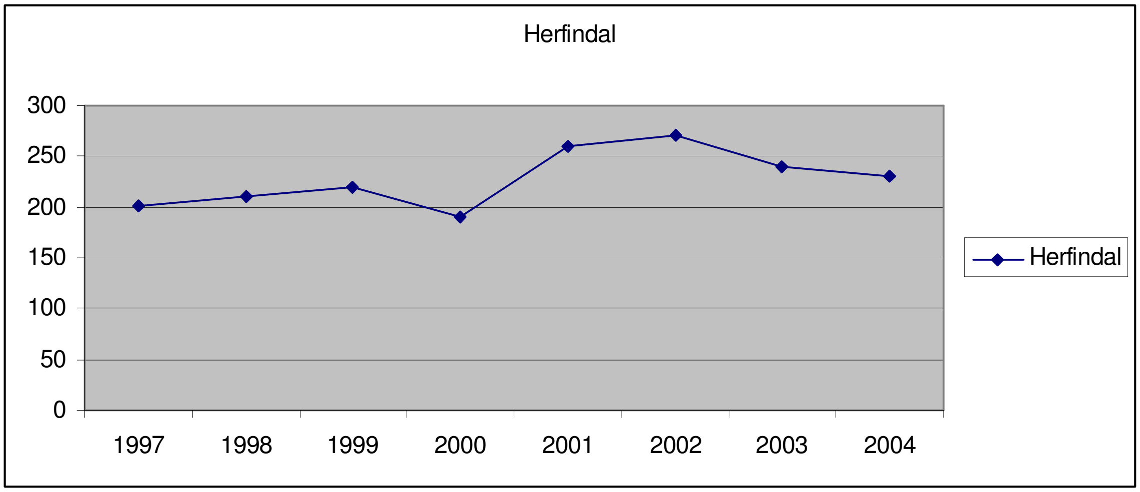
Instead, the correlation of EQ with Taxation/earning ratio is not statistically significant.

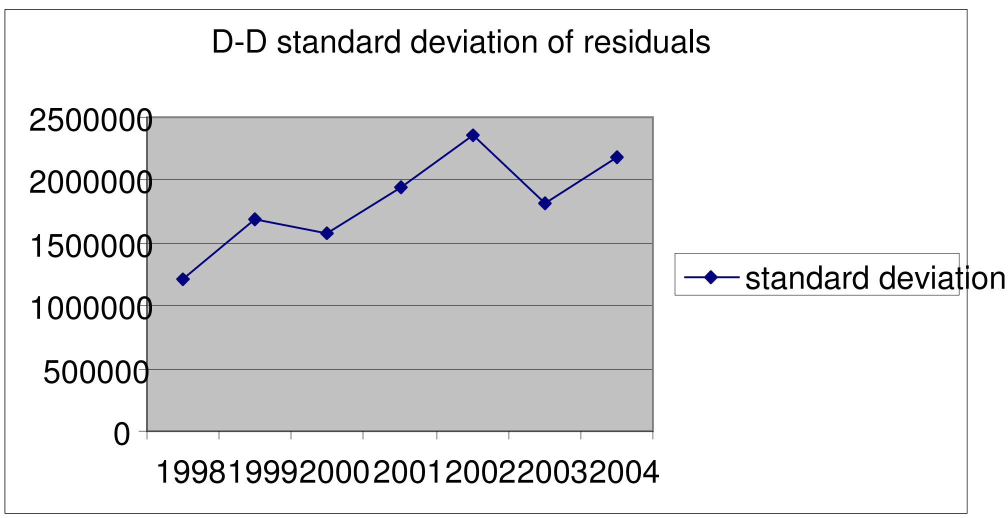
8.3 Bank concentration and EQ.

In order to analyze the determinant of earnings quality we have put in relation, on a qualitative basis, EQ with bank concentration index.

The expected relation is not certain because a higher concentration could have a positive influence on EQ, due to the higher attention big banks direct on financial information, or a negative influence, due to the incentive to manipulate earnings as a response to the request of good financial performance. This relation must also consider all the other variables influencing EQ (whose relation with EQ is discussed above).

In the following charts it is possible to identify the trend of Italian bank system concentration over the period 1997-2004 (according Herfindhal index) and the SME’s EQ trend over the period 1998-2004.





Bank concentration shows an increasing trend even if there is a small reduction in 2003 and 2004.

Also EQ trend shows a progressively increase during the years of banks concentration (with an exception in 2003).

The changes in the D-D EQ parameter appear to be highly correlated with the changes in bank concentration. Furthermore, the changes in EQ are not fully explained by the changes in net earnings/sales and debt/equity ratios, which have an irregular trend in the observed period (and which are significantly correlated independent variables of EQ).

This means that the changes in EQ could be explained by the bank concentration process. This would mean that bank concentration had lead to worse EQ for SME.

The above phenomenon could be explained by the opportunistic behavior of SME that, in presence of higher attention on financial results by banks and in absence of effective control systems on their financial reporting, increase the use of earnings manipulation practices.

9. Conclusions and further implementations

In this sense, it is possible to say on a qualitative basis that, other variables (D/E, NE/S and taxation) unchanged, worse EQ is related to banks concentration.

Furthermore, the main limitations and further implementations of the analysis are:

- the implementation of other variables influencing earnings quality in order to implement the regression model;
- a deeper analysis of the conceptual model and the use of more sophisticated and effective statistical tools;
- a more detailed definition of the parameters of bank concentration;
- the extension of the analysis to other countries.

These aspects could be the main direction of further implementations of our work.

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