OWNERSHIP CONCENTRATION AND EFFECTS OVER FIRM PERFORMANCE: EVIDENCES FROM ITALY

Genc Alimehmeti, PhD

Department of Management, University of Tirana

Angelo Paletta, Professor

Department of Management, University of Bologna

Abstract:

This paper investigates the ownership concentration as a governance mechanism, and its implications over firm value. We conduct an empirical analysis over all Italian listed firm in a four-years period (2006-2009). The results show a positive relationship between ownership concentration and firm value except in 2008, when the results show a non-linear relationship, suggesting that the financial crisis has enhanced the expropriation effects.

Keywords: Corporate governance; ownership concentration; expropriation effect

Introduction:

Prior existing literature has highlighted the agency problem of shareholders concentration over minority shareholders (Berle & Means, 1933). The subject of ownership concentration has been a subject of interest for both transition and developed economies because of its doubtful effects over firm value. Morck et al. (1988) results on insider ownership provide evidences of a non-monotonic relation with firm value. The estimated piecewise regression is positive for management holdings of shares between 0% and 5% of outstanding shares; negative for management holdings between 5% and 25%; and positive once more for management holdings greater than 25%. However these results are contrasted by other evidences. For instance, Demsetz & Villalonga (2001) find that the ownership structure ought to be influenced by the profit-maximizing interests of shareholders, so that, as

a result, there should be no systematic relation between variations in ownership structure and variations in firm value.

We conduct an analysis of 203 listed firms in Italy. The sample data are collected from Amadeus for two periods: pre and post crisis (2006-2007 and 2008-2009). The analysis aims to investigate the effects of ownership concentration over firm value after controlling for other firm characteristics. We find a changing relationship ownership concentration and firm performance in 2008, suggesting that the financial crisis has enhanced the expropriation effects.

1. Ownership Concentration

It is generally accepted that ownership structure is an important component of corporate governance (Shleifer & Vishny, 1986). The relationship between ownership structure and economic performance has been a topic of great interest in strategic management literature (Oswald & John S. Jahera, 1991; Li & Simerly, 1998; Bethel & Liebeskind, 1993; Demsetz & Villalonga, Ownership structure and corporate performance, 2001).

Since Berle and Means (1932) it has been largely argued that ownership structure is related positively related to firm profitability. Continuing this debate, other scholars have examined and generally given supporting evidences to the agency theory expectations (Jensen & Meckling, 1976) that separation between ownership and control provides managerial incentives to diversification because of the personal benefits that managers would acquire from risk reduction. Indeed, large number of shareholders cannot exercise enough power to oversee managerial performance. Consequently, managers exercise more freedom in the use of firm resources as they would in case of a single shareholder or if the ownership would have been more concentrated (Shleifer & Vishny, 1997).

In studies of diversification strategy, it is found that managers assume more personal benefits (financial and reputational) in product or market diversification because of risk aversion, expense preference, and empire building (Thomsen & Pedersen, 2000). Ownership concentration, can counteract corporate diversification and gain more shareholder value. Agency theory argues that managers tend to increase their wealth and reputation by diversification and fast growth without maximizing firm market value (Jensen & Meckling, 1976). Consequently, managers are not willing to downsize or reverse diversification if they are not pressured or obliged by ownership or external investors, to follow owners' interests in

increasing firm market value. Therefore, according to the agency theory, managers' propensity to increase firm value depends, ceteris paribus, on the ownership structure.
Supporting this theory, in a landmark work, Amihud and Lev (1981) examine empirically this theory, confirming that managers working in firms with large shareholders were less likely to invest in non-related mergers or acquisitions.

These findings were supported by Hill and Snell (1989) who conclude that that diversification, investment in R&D, capital intensity, and ownership structure all determine firm productivity. They argue that large shareholders control is negatively related to product diversification.

Another stream of research in corporate governance studies, takes into consideration the controlling mechanisms that induce managers to be aligned with shareholders' interests. An example of these controlling mechanisms is ownership concentration as it involves a trade-off between risk and incentive efficiency (Jensen & Meckling, 1976; Demsetz, 1983; Shleifer & Vishny, 1986). Larger shareholders might have stronger incentives to monitor and therefore, they should oblige managers to be aligned with their objective of increasing the value of their shares.

But on the other side, Fama and Jensen (1983) argue that ownership concentration above a certain level will allow managers to become entrenched and expropriate the wealth of minority shareholders. This argument has leaded scholars in a hot debate over the possible non-linear relation of ownership concentration and firm performance.

As ownership dispersion creates possibilities for free riding (Li & Simerly, 1998) because of a lack of monitoring on management, a positive relation of ownership concentration with firm value is expected. Consistent with this monitoring theory, Shleifer and Vishny (1986) show the important role of large shareholders and how the market value is positively related to increasing values of shares held by larger shareholders. Nevertheless, recent studies have emphasized another source of agency problem created by rising ownership concentration that gives more power to a circumscribed number of shareholders, that in turn might expropriate value from minority shareholders (La Porta, Lopez-de-Silanes, & Shleifer, 1999). This is true for certain countries (i.e. in Europe) where the agency problem comes from the conflict between controlling owners and minority shareholders, instead of between ownership and management. In this case, large owners might be costly as they can redistribute wealth in both efficient and inefficient way from minority shareholders (Shleifer & Vishny, Large shareholders and corporate control, 1986).

Another stream of research has examined the relationship between ownership structure and firm value suggesting that contrary to conventional wisdom, firm performance might influence ownership structure, but not vice versa (Demsetz, 1983; Demsetz & Lehn, 1985; Chang, 2003).

Despite this long debate, there is little empirical evidence on the effects of ownership structure in Europe as prior empirical literature has majorly provided documentation for U.S. and U.K. firms (De Miguel, Pindado, & De La Torre, 2004). Furthermore, at the best of our knowledge, there are no studies on the effects of the recent financial crises over the relation between ownership concentration and firm performance.

Our analysis fits in this research stream which aims in controlling the relation between ownership concentration and firm performance by giving empirical evidences on the influence of ownership structure over firm performance for all the listed Italian firms over 2006-2009. In addition we study the changes of this relation due to the financial crisis in 2008 – 2009. We conclude by giving evidences of the changing relationship between ownership concentration and firm performance as effect of the financial crisis.

2. Research Design

The objective, the sample selection criteria and the model used to test our hypothesis are elaborated in a detailed way on this section.

2.1. Methodological Approach

As stated before, prior empirical studies have proved that the relationship between ownership and firm performance can assume linear or non-linear relation. Our objective is to analyze this relation and to verify if the financial crisis has influenced its state.

Despite empirical evidences that assume linear relationship between performance and ownership concentration (Hill & Snell, External control, corporate strategy, and firm performance in research-intensive industries, 1988; Leech & Leahy, 1991; Lehmann & Weigand, 2000; Morck, Nakamura, & Shivdasani, 2000), there are other controversy theories that suggest the possibility of a non-linear relationship. On one hand, increasing ownership influences positively firm value as large shareholders would play an important role to increase the price of firm's shares (Shleifer & Vishny, Large shareholders and corporate control, 1986). On the other hand, concentrated ownership may also lead to worse performance because of the expropriation effects and the risk of minority shareholders (1997).

By these means, we aim to study the relationship between ownership concentration and firm performance and its evolution over time, in order to assess the effects of the global crisis. We expect to find that firm performance has a positive linear relation with ownership concentration or that firm value increases with ownership concentration at low levels (as a result of the monitoring effect), and decreases with ownership concentration at high levels (as a consequence of the expropriation effect).

To test these hypotheses, we use the following models:

Model 1: $ROA = \alpha + \beta_1 \times OC + \beta_2 \times Size + \beta_3 \times TD/E + \varepsilon$

and

Model 1: $ROA = \alpha + \beta_1 \times OC + \beta_2 \times OC^2 + \beta_3 \times Size + \beta_4 \times TD/E + \varepsilon$

Where

Dependent	
ROA	is the Return on Assets, calculated as 100 × Net income before preferred dividends + ((interest expense on debt – interest capitalized) × (1 – tax rate) / total assets
Independent	
OC	is Ownership Concentration; percentage of ownership shares (votes) of the largest shareholder
OC^2	is the square of ownership concentration
Size	is the natural log transformation of total assets
TD/E	is the leverage ratio, calculated as the total debt (TD) / equity (E)

Model 1 permits us to test whether firm performance is sensible to monitoring effects of ownership concentration. It tests a linear relationship of ownership concentration and firm performance, as measured by ROA.

Following the approach of Morck et al. (1988), we control for Size and Debt Ratio as well. We use a natural log transformation of total assets as a measure of firm size in order to eliminate scale effects (Baker, 2004; Brealey, Myers, & Marcus, 2007). The nature of the agency problem, and as in this case, the marginal effects of ownership structure, may be

influenced as well by the debt structure (Jensen M. J., 1989). Therefore, we include the total debt / equity ratio as an alternative control variable.

The inclusion of the ownership concentration and its square in Model 2 permits us to explicitly test the monitoring and expropriation effects. The quadratic relation proposed in this model presents only one breakpoint, which can be optimally derived by differentiating value with respect to ownership concentration. Letting this partial derivative equal zero, this breakpoint is OC = -(β1/β2). OC is positive and, consequently, β1 and β2 present opposite signs. In addition, the fact that we expect a positive relation because of the larger shareholders effect on firm value and negative relation because of the expropriation effect, it implies that OC is a maximum, which leads to the condition that $\beta 2 < 0$ and, therefore, $\beta 1 > 0$.

2.2. Data and Results

We collect data from Amadeus (Bureau Van Dijk) for all active listed firms in Italy from 2006 to 2009 which include the total population: 186 in 2006; 201 in 2007; 188 in 2008 and 224 in 2009. The period is particularly interesting as it includes two years of before the crisis of 2008 and two years (2008-2009) of the post-crisis period.

An OLS regression is performed for both models in each year (Table 3 and Table 4). We check for possible correlations between variables and except OC and OC2 high correlations, we don't find other relations between the other variables.

Considering the results of Model 1 (Table 4) it is interesting to notice that ownership concentration is significantly related with firm performance, but with a very low coefficient. In 2006, it seems that ownership concentration is positively related (meeting the expectations) with ROA; for each percentage point increasing in ownership concentration, firms have a better performance of 0.05813 (measured by ROA). This relation of course is very weak as firms with a single shareholder have a better performance by only 5.81% in confront to firms with a maximum diffused ownership. This value increases during the years, but not meaningfully. It is interesting to notice that in 2008 (the year of the crisis) this relation is not statistically significant. This result may be due to model definition issues, one of which is the assumed linear relation between ROA and OC.

Model 2 instead presents complementary information to the above. Regarding OC and OC2 we have statistically insignificant coefficients for 2006, 2007 and 2009 and only for 2008 we have statistically significant values. It seems that from 2006 and 2007 to 2008, the relationship between OC and ROA has diverted from a linear function to a non-linear one; as

in 2009 Model 1 coefficients for OC are significant and Model's 2 coefficients for OC and OC2 are not, it suggests a linear function for this year.

This differences suggest that in 2006, 2007 and 2009 only the monitoring effects have influenced the relationship between ownership concentration. The expropriation effect seems to gain importance in 2008 during the first symptoms of the financial crisis. This can be reasoned because one of the reactions of managers during the risk of crisis might have been expropriation of wealth to minority shareholders first.

OC coefficient in 2008 – Model 2, shows an increasing value of 23.424, which suggests a stronger relation between OC and ROA.

As per the other variables, we have non-significant coefficients for the Debt ratio in both models in quite every year, so we cannot draw meaningful conclusions. Size seems to respond better for each model with a positive relation. It means that bigger firms have better performance than smaller ones.

Conclusions

It is generally accepted that ownership structure is an important component of corporate governance (Shleifer & Vishny, 1986). As earlier research has given contrasting theories and evidences on the relationship between ownership concentration and firm performance (Fama & Jensen, 1983; Demsetz, 1983; Chang, 2003) there is always room for further evidences. Differences in the results of prior empirical research that shows absent, linear and non-linear relation, might depend on many factors: models variables, relationship assumed (linear or non-linear), country, years of study and sample selection. By this mean, our study adds further evidences on such debate as we assume a full population from Italy in 2006-2009 investigating the effects of the crisis over such relation.

The results confirm the positive relationship between ownership concentration and firm value, confirming the agency perspective that higher concentration increases shareholder power and control aligning managers and shareholders interests, and consequently increasing firm value.

However, our results show a changing relationship function in 2008 confronting with the other years of our analysis, confirming a changing relationship compared to the other three years of observation. The non-linear function proves that in 2008, the positive relationship between ownership concentration and firm value, decline to a negative relationship. As 2008 is the first year of the financial crisis this might have influenced the relationship because of

increasing expropriation effects contrasting the monitoring effects that dominate during the other years.

Table 1 - Correlation Matrix MODEL 2

-> Year = 2006
(obs=186)

	ROA	DC	DC2	TD_E	Size
ROA	**1.0000**				
DC	**0.1954**	**1.0000**			
DC2	**0.1929**	**0.9371**	**1.0000**		
TD_E	**0.0421**	**-0.1290**	**-0.0876**	**1.0000**	
Size	**0.2359**	**0.1388**	**0.0571**	**-0.0212**	**1.0000**

-> Year = 2007
(obs=201)

	ROA	DC	DC2	TD_E	Size
ROA	**1.0000**				
DC	**0.1582**	**1.0000**			
DC2	**0.1246**	**0.9460**	**1.0000**		
TD_E	**0.0588**	**0.0564**	**0.0661**	**1.0000**	
Size	**0.2561**	**0.0576**	**-0.0409**	**-0.0113**	**1.0000**

-> Year = 2008
(obs=188)

	ROA	DC	DC2	TD_E	Size
ROA	**1.0000**				
DC	**0.0398**	**1.0000**			
DC2	**0.0682**	**0.9514**	**1.0000**		
TD_E	**-0.0562**	**0.0111**	**0.0170**	**1.0000**	
Size	**0.2335**	**0.0148**	**-0.0560**	**0.0194**	**1.0000**

-> Year = 2009
(obs=224)

	ROA	DC	DC2	TD_E	Size
ROA	**1.0000**				
DC	**0.1395**	**1.0000**			
DC2	**0.1420**	**0.9561**	**1.0000**		
TD_E	**0.1000**	**0.0559**	**0.0440**	**1.0000**	
Size	**0.2511**	**0.0795**	**0.0394**	**-0.0772**	**1.0000**

Table 2 - Correlation Matrix Model 1

-> Year = 2006
(obs=186)

	ROA	DC	TD_E	Size
ROA	**1.0000**			
DC	**0.1954**	**1.0000**		
TD_E	**0.0421**	**-0.1290**	**1.0000**	
Size	**0.2359**	**0.1388**	**-0.0212**	**1.0000**

-> Year = 2007
(obs=201)

	ROA	DC	TD_E	Size
ROA	**1.0000**			
DC	**0.1582**	**1.0000**		
TD_E	**0.0588**	**0.0564**	**1.0000**	
Size	**0.2561**	**0.0576**	**-0.0113**	**1.0000**

-> Year = 2008
(obs=188)

	ROA	DC	TD_E	Size
ROA	**1.0000**			
DC	**0.0398**	**1.0000**		
TD_E	**-0.0562**	**0.0111**	**1.0000**	
Size	**0.2335**	**0.0148**	**0.0194**	**1.0000**

-> Year = 2009
(obs=224)

	ROA	DC	TD_E	Size
ROA	**1.0000**			
DC	**0.1395**	**1.0000**		
TD_E	**0.1000**	**0.0559**	**1.0000**	
Size	**0.2511**	**0.0795**	**-0.0772**	**1.0000**

Table 3 - Model 2 Results of OLS Analysis

ROA	2006	2007	2008	2009
OC	.507	7.846	**23.424****	6.309
OC^2	-7.654	-1.116	**-34.580*****	-16.928
TD_E	**.047*****	.0345	-.1757029	**.0330***
Size	**1.071*****	**1.405*****	**1.971002*****	**1.902*****
_cons	**-13.857*****	**-19.681*****	**-25.22736*****	**-28.643*****

*,** and *** indicate significance at 0.01, 0.05 and 0.01 levels. Coefficients not in bold are statistically insignificant.

Table 4 - Model 1 Results of OLS Analysis

ROA	2006	2007	2008	2009
OC	**5.813****	**6.882*****	1.875	**7.018***
TD_E	.0522	.0344	-.1645	**.032***
Size	**1.001*****	**1.416*****	**1.702*****	**1.840*****
_cons	**-13.689*****	**-19.675*****	**-23.984*****	**-29.640*****

*,** and *** indicate significance at 0.01, 0.05 and 0.01 levels. Coefficients not in bold are statistically insignificant.

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