

**THE CORPORATE GOVERNANCE DRIVERS,  
PERFORMANCE AND RISK:  
EMPIRICAL EVIDENCE FROM ITALIAN CONTEXT**

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The paper is a part of a broader research project led by Giovanna Mariani and Francesca Bernini. As it is a work in progress comments are welcome. Conventionally Delio Panaro is responsible of the statistical analysis and of the par. 4. All the other parts may be attributed to Giovanna Mariani and Francesca Bernini.

## **ABSTRACT**

**Research Question/Issue:** In this work we carried out an empirical research on a sample of 98 Italian companies continuously listed during 2005-2011, with the objective of deepening the analysis :

- 1) We tried to verify the role played by the Corporate on performance and default risk, with the definition of an index of good Governance (scG)
- 2) We tried to verify the variables of Corporate Governance that produce effects on performance and risk of default (Z-score and leverage).
- 3) We tried to verify the difference of effects of Corporate governance Index on performance and risk for family business and for companies active in M&A.

### **Research Findings/Insights:**

We conducted an analysis on a sample of Italian companies to measure Corporate Governance quality and to evaluate the relationship with the accounting and market performance and the effect on risk level.

We find that The Corporate Governance quality presents some correlation with performance and risk parameters. The non family companies are better structured. They show a positive correlation between some Corporate Governance drivers and performance and Z-score. We can observe that le “well-advised” firms in external strategies are able to obtain a better correlation with performance and also a good relation with Z-score

### **Theoretical/**

**Academic Implications:** This study can suggest the definition of Corporate Governance Index according to the need to evaluate the opening to shareholders and stakeholders. We examine the relation between the different CG variables and some measure of performance and risk.

**Keywords:** *Corporate Governance; Bankruptcy prediction and determinants, Corporate finance, M&A, Accounting, Auditing and Performance Evaluation, Governance Index, Family business*

## 1. Introduction

The issue of corporate governance has always been interesting for business economics. Several reasons have led scholars to address the above issue. In particular, in the context of management studies, corporate governance may prove to be an important determinant of various aspects of business dynamics. Such aspects can reconnect, for example, to the performance, the default risk and, nevertheless, the probability of the future survival of the company. Riskier financial conditions can be determined, in fact, both from internal operational dynamics which are inefficient and from general hostile economic conditions (Whitaker, 1999). In this context, the current economic and financial crisis has made companies more vulnerable and more exposed to situations of insolvency. The attention towards the relationship between corporate governance issues, performance and possible conditions of financial distress are accentuated also by the recent corporate governance failure, such as the Parmalat case. Considering the link between business performance and conditions of financial distress, it is interesting to study the possible impact of governance on performance indicators and default risk. For this purpose, we proposed a synthetic indicator capable of providing a measure of the quality of corporate governance for companies listed on the Italian Stock Exchange (MTA segment) in 2005-2011. A more accurate analysis of the impact of governance systems, on one side, and performance and risk, on the other has been conducted looking at the relationships between some of the parameters used to build the synthetic indicator and some performance and risk measures. The analyzes regarding the sampled companies reveal generally key factors in the governance profile, such as the presence of shareholders' agreements, a Code of Ethics and the presence of non-executive directors who can bind positively with certain performance measures and with business value. In particular, the performances were observed with reference to their accounting profile (ROI), to market trends (CAR) and to the evaluation of the company's ability to create value (Tobin-q). The financial risk, however was measured both with reference to the level of indebtedness (Leverage), and considered an indicator (Z-Score) developed to realize in firms' classifications the financially distressed and non-distressed (Altman, 1968).

In order to deepen the investigation and to better understand better if the particular nature of the companies or their capacity to pursue external growth strategies, could affect the above mentioned relationships, we analyzed companies distinguishing them on the basis of their family nature and of their propensity towards the realization of active acquisitions. In this regard, we tried to verify the difference of effects of Corporate Governance variables on performance and risk for family businesses and for companies involved in active M&A deals.

In these years, in fact, the discussion is lively on what may be the best strategies to create value and “react” to the crisis (Wan, Yiu: 2009, Cartwright, Schoenberg: 2006). Entrepreneurs and policy makers are debating on the real contribution that merger and acquisitions can play on the value creation process (Bigelli, Mengoli: 1999), rather than for distraction and what are the different factors of attractiveness that a market in recession can present, including the opportunity to deal underestimated targets (Granata, Chirico: 2010). Many studies also emphasized the critical effects that this typology of investment can have on performance and on the risk, but also on the stakeholders system (Cartwright, Schoenberg,

2006), further compounded in the case of environmental jolt, as the current one (Wan, Yiu: 2009; Park, Mezas: 2005).

Analyses that involve the observation of the economic system in general, but particularly in Italy, also cannot leave aside the study of family business that represents an essential component of the Italian economic structure, as they play an important role also in the world economy. The family business is an “evergreen” research field for what concern the definition, its connotations, and for its contribution to economic growth, as well as regarding its criticality. One of the things that animate the debate among scholars about this business model is relative to its specific dynamics of growth. In Italian family companies we can find groups that became large, listed on the Borsa Italiana, as on other stock markets, very active on corporate acquisition, even cross-border, projected to a long-term orientation.

The analysis is based on the evidence stemming from a sample of the Milan Stock Exchange listed companies which made acquisitions in the considered period. The sample includes all the companies which resulted listed in each year from 2005 to 2011, excluding pure financial companies and real estate services companies (Giovannini: 2010; Sraer, Tesmar: 2006; Favero et al: 2006). The sample dimension is of 98 units.

Our major finding is that the companies of our sample could improve their Corporate Governance quality, especially in the subsample of family business that detect a lower value (8,5), although in the index there are drivers specific on the family firms (Executive Independent, CEO). Moreover, we must point out that the not family companies are better structured (9,8), demonstrating greater protection of minorities and opening to the outside.

We can highlight a positive correlation of gGI values with Tobin q in static analysis. For this reason we can observe that the Tobin q is the only parameter that manages to capture a relationship. We can observe that the “well-advised” firms in external strategies are able to obtain a better correlation with performance and a less probability of default (Z-score).

We can find that the more active in corporate acquisition companies that feel the need to draw up a Code of Ethics and it is correlated with a less probability of failure (Z-score) and with positive sign for Car. We can observe, also the research must be extended, that the non family firms, that present a better gGI show a less probability of default

The paper is structured as follows. After a definition of a theoretical framework, we illustrate our research questions. Then, we describe the data collection process, the variables used in the empirical analysis and the statistical methodology. In the last parts, we discuss our findings and the limitations of our study. Again, we highlight that this work is a first step in the overall research, a work in progress: the study, in fact, is proceeding with an expansion of the sample, introducing a benchmark with the companies of other countries.

## **2. THEORETICAL FRAMEWORK AND QUESTIONS RESEARCH**

The quality of Corporate Governance models, imposed by a legal system or Auto Disciplinary Code, may be important for the proper functioning of the economic system (Roe: 2004). In literature we can find the hypothesis that improvements in practice and corporate governance rules, as the awareness and active involvement of all components of the business community (Brown, Caylor: 2006), can increase economic efficiency (World Bank:

2001). In the context of the different Corporate Governance we mention the Baghat, Bolton, Romano (2010-page 1806) definitions that put the rules of good governance first as an investment and therefore the importance of the measurement of its effects: *“Corporate governance is the set of processes that provides an assurance to outside investors of a fair return of their investment”*.

Performance, accountability and supervision, are interdependent dimensions: managers and boards of Directors, being "measured" continuously for the results obtained by the company under their guidance, should improve their performance, helping the business performance to grow. The many corporate crises that have occurred worldwide in recent years were caused, in many cases, by deficiencies or even the absence of controls: the importance given to Corporate Governance issues by the owners and managers of enterprises, as well as by the market and the legislator have grown considerably (Baghat, et al.: 2008; Barontini, Caprio: 2006). There has been renewed interest in the Corporate Governance practices of modern corporations, particularly in relation to accountability, since the high-profile collapses of a number of large corporations during 2001-2002, most of which involved accounting fraud.

In recent years the Corporate Governance issues are focusing on interest of scholars and practitioners, stimulating a cross-culture discussion, investing finance scholars, economists and jurists. A search for "Corporate Governance", found a lot of titles, that analyzed the different matters, but one of the most important is the need to "measure" the quality of firm's Corporate Governance and the effects that a good governance may produce on performance and on the level of risk, especially about the default risk. In literature there have been innumerable studies examining the Corporate Governance best practices (Black: 1999; Lipman, Lipman: 2006; Tarantino: 2008; Zaffron, Logan: 2009) and the impact of Corporate Governance on performance, using several parameters. The issue of measurement of Corporate Governance is still very delicate and discussed (Romano: 1999; Bhagat, Black: 1999). In fact, although on the one hand is a matter of great importance and to which has been given a lot of attention from academics and investors, on the other hand there is not still today a unique methodology universally adopted, as there is not even a unique meaning to ascribe to the notion of Corporate Governance (Bhagat, Bolton, Romano: 2008; Colarossi et al.: 2008). The studies of Gompers, Ishii, Metrick (2003) has opened a new thread pointing to the creation of firm level Corporate governance indexes (G-Index), that can concentrate the contribution of different drivers of the Corporate Governance quality. Using an index, as an aggregated measure of Corporate Governance quality, allows scholars and professionals to enjoy a significant advantage, because they can relate the Corporate Governance with companies' performance indicators. After this studies there have been other contributions that have banked some simplification (Cremers, Viany: 2005; Bebchuk, Cohenm Ferrel:2009; Brown, Caylor: 2006) or to consider the country policy regulation (Bubbico, Giorgino, Monda: 2012) (tab. 1)

Tab. 1- Most important Corporate Governance Indexes in literature

<b>CORPORATE GOVERNANCE INDEXES</b>	<b>AUTHORS</b>	<b>NUMBERS OF DRIVERS</b>
Governance Index (G)	Gompers, Ishii e Metrick, 2003	24
Alternative Takeover Protection Index (ATI)	Cremers, Vinay, 2005	3
Gov-Score Index and Gov 7	Brown, Caylor, 2006	51 and 7
Entrenchment index (E) and Other Provision Index	Bebchuk, Cohen&Ferrel, 2009	6 and 18
Corporate Governance Index (GGI)	Bubbico, Giorgino&Monda, 2012	76

*Font: ns elaboration*

These indexes are similar but different at the same time, both in terms of number and of kind of drivers. It is obvious, that considering a wide range of factors a more indicative index and a more accurate firm's Governance measurement can be produced. On the other hand, it is also true, however, that adopting a more limited number of provisions makes the index far more practical, easier and faster to find all the information necessary for its construction. It will focus more attention on those few, but more reliable and relevant.

For this reason, in this work, was built and tested a Corporate Governance index (good Governance Index-gGI), adjusted to Italian enterprises, taking into account the peculiarities of the national context. The main cognitive goal is to evaluate the minority protection, as well as the level of openness towards investors, particularly private equity funds, that has become an important partner for financial support to enterprises' strategies (see § 3). Private equity funds can produce significant advantages for businesses, including credibility, improvement of rating, higher visibility and increasing corporate communications, better access to community and international contributions: in essence, they stimulate a well-structured governance.

Another factor of interest is the study of the relation between the level of good governance with the performance and the financial risk. In academic empirical studies of the relationship between Corporate Governance and performance we can identify two research fields. In the first case, the analysis is centered in the study of the effects of Governance, such as unitary complex of choices of Government, for the creation of business value. The second group of studies, on the other hand, focused on the drivers of Corporate Governance (specifically the ownership structure, the size, composition and turnover of the Board of Directors and the control system) and the performance (Romano et al.: 1996; Baghat, Black: 199). Despite widespread belief in the importance of governance mechanisms for resolving agency problems (Jensen:1988), the empirical literature, investigating the effect on corporate performance, has not been able to identify a univoque effects. Although Gompers et al (2010), Brown, Caylor (2006) and Bebchuk et al. (2009) found a positive associations between their indexes' rankings of governance quality and firm performance, correlations are obviously not causation. Subsequent work has even questioned whether a positive association truly exists (Cremers, Nair: 2006; Lehn, Patro, Zhao: 2006; Core, Guay, Rusticus: 2006).

In addition to these studies there includes further research that has occupied the theme of the relationship between good Governance practices and corporate performance.

A first example was a survey (McKinsey, 2000 and 2002) highlights that about 80% of investors surveyed would be willing to pay a premium for well governed companies, with a majority of external, independent advisors. The amount of the premium, according to the survey, should be a minimum of 11% for Canadian companies, to a maximum of 40% for

those companies operating in countries with a less strong State regulation.

Other studies have also found a link between the quality perception of the company and the stock return. For example, in a study on consolidated profit in five years, led by the American magazine Fortune, it was shown that in “much admired” companies presented a consolidated profit of shares in five years equal to 125%, compared to the 80% of those “less experience”.

In an economic situation in which there is a “struggle for existence” (Lee, Yeh: 2004; Hui, Jing-Jing: 2008) a strong debate kicked off above all the relationship between Corporate Governance and risk of default. Among the many reasons that lead a company to a crisis, a large literature highlighted the ineffective and inefficient management and control systems: the problems related to Corporate Governance as a bad “gubernum” (Mumford, Wright 2000 2003). The seriousness of the causes of decline is expressed by poor economic performance and often resulting in loss of value for the companies. The outlook of the company is not favorable and the degree of risk is ever increasing (Mariani, Panaro: 2012). An increasing attention has been given to the study of systems and instruments that can be adopted in the prevention, diagnosis of corporate crisis (Kane: 2002, Lappalainen, Niskanen: 2009). In literature on corporate finance there are numerous studies on problem analysis and forecasting crisis (Altman: 1977, 2000, 2002; Altman, Hotchkiss: 2006; Beaver: 1966, 1968; D’Annunzio, Falavigna: 2004; Friedman: 1977; Hui, Jing-Jing: 2008; Lee, Yeh: 2004; Mumford: 2003). So for performance valuation we would also to define the “state of health” of the companies and to detect warning signs. We decided to use a simplified approach but very useful and widespread in theory and practice, as the Z-score (Altman: 2000, Altman, Haldeman, Narayanan: 1977; Platt, Platt: 2002) and the analysis of Leverage.

According to the debate we formulate the first research question:

- 1) *There is a relation between the quality of Corporate Governance and performance and default risk, with the definition of an index of good Governance (gGI)*

An other research field is about the contribution of the different Corporate Governance drivers on performance. We can highlight the studies that analyzes how a widespread share ownership can determine a reduction of involvement or even the difficult for the owner to exercise effective control over the management (Jensen, 1976). Studies in this area have shown, albeit with obvious simplifications and limits, a positive trend in support of the theory of the agency costs, highlighting how the presence of an active shareholder reduces the tendency of managers to pursue private interests and promoting value creation. Yet Baghat and Bolton (2008) found a significant positive relation between performance and ownership.

The decisive balance of studies found no relation between Directors independence and performance, measured by accounting parameters or stock return measures (Romano: 1996; Bhagat, Black: 1999). In this sense, therefore, it would seem useful in terms of Good Governance take an ownership structure that requires a principal owner and not an overly fragmented (La Porta et al.:2000).

The relation between voting rights and performance has not been as extensively studied as that of board composition. Not surprisingly, studies showed that voting rights are economically quite valuable (Gompers et al: 2010). There are also research (Forbes, Milliken:

1999) that investigated the relationship between the size of the Board and the corporate performance, and not all had the same empirical results. In fact, there are studies that claim that the increasing of the numbers of members determine new strategic opportunities, with advantages in terms of performance. Other studies showed that the benefits emerging from an increasing size of the Board are disadvantages resulting from lower costs due to major decision-making and organizational complexity of Corporate Governance (Lipton, Lorsh: 1992).

Further studies concerning the relationship between the components of the Board of Directors turnover and business performance went to analyze the optimum composition of it in relation to the number and the impact of the independent directors in terms of value creation (Li, Harrison:2008; Bhagat, Black: 2002; Mork: 1988).

Ample space is also occupied by studies and research relating to the issue of internal controls. The presence of an effective control system facilitates the convergence of different interests within the company. According to these studies, there is a positive correlation between higher level of independence and technical expertise of internal control bodies and value creation (Chan, Li: 2008). The studies of Bennedsen et al (2009) provide direct evidence that CEO actions can have a meaningful impact on performance. In the discussion we can define the second research question.

## *2 There is a relation between the Corporate Governance quality drivers and performance and default risk (Z-score and leverage).*

Around the world the most common large shareholder are families (Anderson, Reeb: 2003; Villalonga, Amit: 2006). It should be noted that in Italy the presence of family businesses has spread in a more marked way than in other countries (Corbetta, Salvato: 2004; Gnan, Songini: 2003; Gnan, Montemerlo: 2008). In recent years, the studies on this topic have multiplied, more often supported by empirical analysis, to deepen the “definition dilemma” (Rutherford et al.:2008; European Commission (2009); Toma, Montanari: 2010) and the impact that the family role could express on performance and on corporate governance quality (Litz: 1997; Miller et al: 2007; Chrisman et al: 2010; Sharma: 2011; Pearson, Lumpkin: 2011). The first crucial question is what a family business is. The “definition dilemma” is somewhat debated and still able to produce controversy. As it is well known, it is not possible to find an unambiguous and generally shared definition of family business. Being a family firm depends on different aspects. Some studies define a firm as a family business considering the sole extent of interest owned by family (Donnelley: 1964; Bernard: 1975; Barnes, Hershon: 1976, Donckels, Frohlich: 1991). In a progressive evolution scholars have additionally taken into account the presence of family members in the management (Astrachan, Shanker: 2003; Babicky, 1987; Chrisma et al: 2004; Churchill, Hatten: 1987; Davis:2007; Dreux:1990; Donnelley:1964; Handler,1990; Holland, Boulton: 1984; Holland, Oliver: 1992; Lyman:1991; Litz, 1995; Pratt, Davis:1986) and finally, the develop a synthetic indicator of capable of represent the degree the family involvement in the firm (Astrachan et al: 2002, Klein et al: 2005). The importance of family business has sparked a growing body of studies that focuses on the governance of these companies. Aside



from defining problems, we must emphasize that family firms are unique because the governance is largely determined by the family control. In fact, in terms of governance, ownership concentration may alleviate the agency problems from dispersed shareholdings. The challenge is that families may steer firms towards decisions that favor them at the expense of minority shareholders (Shleifer, Vishny, 1986; Becht, Bolton, Roell: 2003). The family organization can play a crucial role in decision making. At the most general level, family governance determines the type of interactions between the family and the firms (such as Ownership, Board of Directors, and Management). Bennedsen et al. (2007) provide stark evidence that the characteristics of the family behind the firm can affect succession decisions and performance. The existing literature provides few clues into the specific ways in which family firms use their characteristics or structure to affect value (Caprio et al, 2011). Direct tests on the effect of governance in family firms are rare in literature and it can be an attractive area of research for the future. In this discussion we can analyze the third research question.

### *3 - Corporate Governance quality drivers have different relation with on performance and default risk in the family firms and non family firms*

As previously noted, the corporate governance quality can influence the company strategies and M&A activity is a fundamental strategy for growth, for value creation, sometimes for the enterprise survival (Teece et al: 1997; DePamphilis: 2012). The literature on M&A is extensive: many multinational companies today are the result of M&A between two or more companies (Arnold: 2013). Most research argues also that M&A is one of the mechanisms by which companies gain access to new resources through redeployment, increase revenues, efficiency and cost reduction. Above all M&A can be considered the main way for firms to grow, to create value (Bigelli, Mengoli: 1999; Healy et al.:1992; Heron, Lie: 2002). The high incidence and volume of mergers and acquisitions highlights their importance to the corporate world. Companies are been to participate in M&As because by combining their assets with the assets of another firms they can achieve operating and financial synergies. Another type of synergies discussed in the academic literature results from the improvement of the target firms' corporate governance. A hostile acquisition can be considered an important corporate mechanism to correct opportunistic managerial behavior; however, a "good governum" can influence the success of operations. In fact, M&A activity is sometimes mentioned as the outgrowth of corporate governance failure. This is because numerous empirical studies showed that a substantial proportion of M&As destroy corporate value. The failure of an acquisition (Kalpic: 2008; Marafioti: 2005) is, in most cases, attributable to the managerial inability and lack of a strategic management. Shleifer and Vishny (1991) cited agency problems between management and shareholders as the main driver of such value destroying acquisitions. Self-interested managers may engage in M&A activity to achieve their personal objectives, such as building an empire, at the expense of shareholders value (Jensen, 1988 and 2005). So with the fourth research question.

### *4 In the M&A activity the Corporate Governance quality drivers can produce different effects on performance and risk default*

Some transaction may results in value destruction if they occur as a result of the conflict of interest between management and shareholders of the bidding firm. The Corporate Governance quality is also most important for institutional shareholders that are determinant in financing M&As and restructuring operations. Institutional shareholders generally agree on the core principles of corporate governance and what might be deemed to be good corporate governance. The level of balance between the rights of shareholders and managers and the opening degree of management and control structures outwards are important towards institutional investors, who would be willing to recognize a premium for well governed companies (Mc Kinsey 2002): in essence “*to need to Access*” (Gubitta and Gianecchini 2011).

### 3. METHODOLOGY

The analysis is based on the evidence stemming from a sample of the Milan Stock Exchange listed companies. The sample includes all the companies which resulted listed in each year from 2005 to 2011 and which realized at least one acquisition in the period, excluding pure financial companies and real estate services companies (Giovannini: 2010; Sraer, Tesmar: 2006; Favero et al: 2006). The sample dimension is of 98 units.

It was necessary to merge several data sources in order to build an exhaustive database to analysed different aspects:

- 1) to provide measures on the number of mergers and acquisitions operations;
- 2) to calculate performance indicators;
- 3) to identify family businesses;
- 4) to measure the market value of the company;
- 5) to assess the financial risk of the company.

Data were collected for the years 2005-2011, with the only exception of data.

Accounting data were drawn from the AIDA database, the companies’ web-sites and DataStream. Information about corporate acquisition activity was taken from the Zephyr files. The Borsa Italiana and YahooFinance website provided data on the companies’ share prices and Corporate Governance Relations. Gathering data on familiness was particularly demanding. Most of information was drawn from the companies’ corporate governance reports and from the Consob files. In some cases, it was necessary to consult the company’s web-site and/or journalistic data sources.

#### 3.1 VARIABLE DESCRIPTION

We describe, below, the other variables used for the empirical analysis.

##### **Familiness**

In this paper, we distinguished the family firms from other companies, using variables well-suited to expose the characteristics of the Italian economic context and unambiguous in

their definition (Astrachan et al.: 2002). First, we introduce a criterion regarding ownership and management at the same time, i.e. a dichotomous variable "familiness" (equal to 1 in the case of family businesses, 0 otherwise). According to this interpretation, the following are considered family businesses (Tab. 2):

- Companies where family<sup>1</sup> owns a majority interest equal to at least 50% + 1 of the equity capital (**presence in the property**).
- Companies where at least one member of the family (ultimate owner) holds a package not smaller than 20% (Klasa, 2007: p. 346) and at least one member of the family is part of the board of directors (**decisions control**).

The **family presence only in the property** criterion includes in the group of family businesses all companies in which control is held permanently by the family (regardless of the fact that there are families in the board of directors), for which there is no possibility of involuntary loss of control right as a result of passive take over. The choice of a high threshold (absolute control) of the share capital is based on the characteristics of Italian companies. The Italian context, is characterized by companies with more concentrated ownership with respect to the Anglo-Saxon benchmark, especially in the case of family businesses (Favero et al, 2006; Granata, Chirico: 2010).

The second condition (**capital control and administrative control**) is designed to include, in the sample of family companies, firms that are not completely controlled by the family capital. So we have considered the presence of family members both as shareholders and as directors. In other words, if the family does not have absolute control, the family presence is required in the board of directors too. The aforementioned condition is also in line with Corbetta, Tommaselli (1996) and in Klein (2000). These authors stress that family participation in business can be inferred from the family control of the capital or, if the controlling stake is not held by the family, from the degree of influence of family members on the management.

Tab. 2 – Family business identification criteria

		Ownership		
		family member = 0	family member = 1	family member > 1
Management	family member = 0	Non family	Non family	Family**
	family member = 1	Non family	Family*	Family*
	family member > 1	Non family	Family*	Family*

\* if family stake is > 20%, \*\* if family stake is > 50%

## Corporate governance index

Tab. 3 – The Good Governance Index (gGI)

<sup>1</sup> In this first case, is necessary that family members be present in at least two shareholders. The term "family members" refers to persons related by kinship and marriage.

Corporate Governance Variables	SCORE
Typical administration	
Traditional	1
one-tier system	0
two-tier system	0
Auto Disciplinary Code	0 if not present 1 if partially present 2 if present
Code of ethics	1 if present; 0 if not present
Non-executive directors	1 independent; 0 dependent
Executive directors	1 no family member; 0 family member
Board of directors	1 if present; 0 if not present
Board audit committees	1 if present; 0 if not present
Compensation committees	1 if present; 0 if not present
Nomination Committee	1 if present; 0 if not present
Stockholders' agreement	0 if not present 1 if for minority protection -1 if for majority favor
Minority expressed Directors	1 if present; 0 if not present
Corporate Agreement or veto of Private Equity	1 if present; 0 if not present
Private Equity Directors	1 if present; 0 if not present
Nonvoting Stock	0 if present; 1 if not present
Chief Executive Officer (CEO)	1 external; 0 family member

Each of these Corporate Governance variables, except those relating to the existence of shareholders' agreements and Auto Disciplinary Code serves as a dummy variable — we can assign to it a value of 0 or 1. Since the purpose of indicator of "good governance", as anticipated, to measure the degree of protection of minority shareholders and the company's opening level at the entrance of new members, assigning values to these variables follows this simple and logical policy: we will assign the value 1 to the variable object of analysis if it reflects a greater degree of openness to new members or input of greater protection of minorities. While we assign the value 0 in the opposite case. With regard to shareholders, it was decided to assign the values 0 and 1, -1, while for the adherence to the code of conduct has opted for assigning values 0, 1 and 2.

## Performances

- ROI (Return On Investment) as accounting performance variables;
- CAR (Cumulative Abnormal Returns) used as market performance indicator (Masulis et al., 2007), obtained, on an annual basis, as the sum of monthly returns of stock prices compared with the FTSE-All Share Italy:

$$CAR = \sum_{t=1}^{12} \left[ \frac{p_t - p_{(t-1)}}{p_{(t-1)}} - \frac{Ftse_t - Ftse_{(t-1)}}{Ftse_{(t-1)}} \right]$$

- Tobin-q is the ratio of the market value to book value and is calculated as follows: (total asset – equity book value + equity market value)/total asset. Where equity market value is represented by market cap.

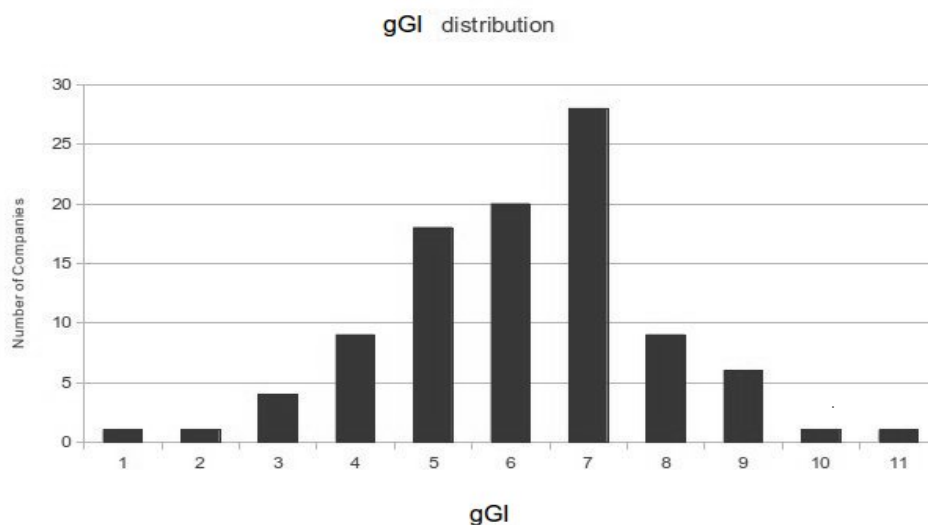
## Financial risk

- Leverage (Debt/Equity) as financial risk indicator;
- Z-Score as default risk indicator. The Z-Score model consists in a linear analysis in that five measures are objectively weighted and summed up to define an overall score that represents the basis for measuring the risk of bankruptcy (Altman, 1968). We decided to use a revised version of Z-Score to better represent the characteristics of Italian companies (Bottani et al., 2004):  $Z\text{-Score} = (1,981 * \text{Working Capital}/\text{Assets}) + (9,841 * \text{Retained Earnings}/\text{Assets}) + (1,951 * \text{ROI}) + (3,206 * \text{Equity}/\text{Assets}) + (4,037 * \text{Return On Sales})$ . The operating nature of the components described above, make the Z-Score more capable than other indicators of explaining the risk linked to the operational aspect of the business.
- M&A: number of operations

## 4. STATISTICAL ANALYSES

The aim of our analysis is to understand if and how corporate governance features can influence the performance and risk of companies. To do so, we collected a sample of 98 companies listed of the Italian stock exchange market from 2005 to 2011, that had an active role in corporate acquisitions. For each of them we have information about corporate governance features, performance, risk and some more data that we used to cluster the sample. Being aware of limitations due to this choice, we used a simple least square approach, in order to preserve easy and immediate understanding of results. First of all, we tried to build a synthetic index able to reflect corporate governance quality for each company. We listed 15 corporate governance features and built a matrix  $A_{m \times n}$  ( $m = 98$  is the number of companies and  $n = 15$  is the number of corporate governance features considered). Each element of  $A$ , that is  $A_{ij}$ , is equal to 1, if company  $i$  has corporate governance feature  $j$ , otherwise if not present 0. The synthetic index of corporate governance is simply given by the row-wise sum of the matrix  $A$ . In the following Fig. 1 we displayed the distribution of gGI, that, as we can easily check, seems to be Gaussian.

Fig. 1- Distribution of Good Governance Index (gGI)



In order to discover if different corporate governance frameworks are responsible for different company performance and risk, we regressed companies performance indexes (ROI and Tobin Q) and companies risk indexes (CAR and leverage) versus our synthetic index gGI. We carried two types of analysis: static and dynamical. In the first one, we regressed the value of performance and risk indexes concerning the 2011 versus the gGI. In the second one we regressed the trend of performance and risk indexes of the last 6 years versus gGI.

The static analysis highlighted a lower correlation (tab. 4).

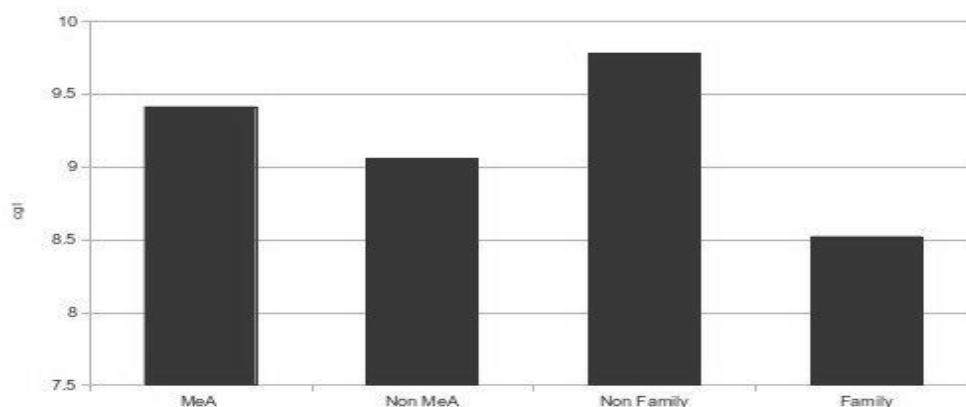
Table 4- Relation between Corporate Governance Index and Performance. Static regression results

<b>ROI vs. gGI</b>	<b>Beta</b>	<b>Standard Error</b>	<b>P-value</b>
Const.	0,0254417	0,0460528	0,5823
gGI	-0,00423439	0,00494937	0,3950
<b>Tobin Q vs. gGI</b>	<b>Beta</b>	<b>Standard Error</b>	<b>P-value</b>
Const.	0,258493	0,143490	0,0758 *
gGI	0,0313410	0,0154371	0,0460 **
<b>Leverage vs. gGI</b>	<b>Beta</b>	<b>Standard Error</b>	<b>P-value</b>
Const.	1,21931	0,877316	0,1688
gGI	0,00937297	0,0943842	0,9212

As we can see, only Tobin Q beta is significantly different from 0 and shows a positive correlation between tobin Q and gGI. Dynamical analysis shows insignificant correlations between performance/Risk indexes and gGI. We omit the results for brevity.

The poor explaining power of our model can be due to the strong heterogeneity of the sample. To avoid this problem we clustered the sample using some a priori knowledge. More precisely, we separate companies whose number of merging and acquisition activities is under the mean from companies very active in M&As and family business from non family business (Fig. 2).

Figure 2- Value of gGI for different subsamples



In the following we show only significant results for the four subsamples.

Table 5- Relation between Corporate Governance Index and Performance in companies more active in M&A

<b>CAR vs. gGI</b>	<b>Beta</b>	<b>Standard Error</b>	<b>P-value</b>
Const.	0,373989	0,222303	0,1040
gGI	-0,0435213	0,0232948	0,0726 *

Table 6- Relation between Corporate Governance Index and Performance in companies less active in M&A

<b>Tobin Q vs. gGI</b>	<b>Beta</b>	<b>Standard Error</b>	<b>P-value</b>
Const.	0,201879	0,182826	0,2747
gGI	0,0371954	0,0197842	0,0658 *

As we can see, correlation between gGI and Tobin Q seems confirmed for companies who made a fewer M&As, whereas, for the companies more active this correlation disappears, it is replaced by a small negative correlation between CAR and gGI. To understand better which Corporate Governance component influences performances and risk, we regressed each single component of gGI versus both static and dynamical performance and risk indexes. We carried out the analysis for the whole sample and for four subsamples: high M&A/low M&A as before and Family/Non family business.

We summarized significant results in table 7.

Table 7- Relation between different drivers of Corporate Governance Index and Performance in the whole sample (Delta before index name indicates the trend of the index in last six years)

<b>Parameters</b>	<b>Corporate Governance drivers</b>	<b>Beta</b>	<b>Standard Error</b>	<b>P-Value</b>
Tobin Q	Shareholders' agreements	0,120926	0,0558514	0,0336 **
Z Score	Executive directors	18,0959	9,69341	0,0659 *
CAR	Board audit committees	8,14818	3,53234	0,0232 **
Delta Tobin Q	Non-executive directors	-6,86202	3,55479	0,0565 *
Delta Z Score	Shareholders' agreements	3,85124	1,87267	0,0425 **
Delta CAR	Code of ethics	-0,281618	0,0969400	0,0046 ***

Table 8- Relation between different drivers of Corporate Governance Index and Performance in family business (Delta before index name indicates the trend of the index in last six years)

Parameters	Corporate Governance driver	Beta	Standard Error	P-Value
ROI	Executive directors	-0,0559147	0,0250111	0,0310 **
Tobin Q	Auto Disciplinary Code	0,115830	0,0598827	0,0602 *
Tobin Q	Non-executive directors	0,133420	0,0713513	0,0688 *
Z Score	Board audit committees	-9,22987	2,38871	0,0004 ***
Z Score	Non-executive directors	5,26496	2,35149	0,0308 **
Delta CAR	Code of ethics	-0,196581	0,116047	0,0970 *
Delta CAR	Traditional System	-0,957447	0,294817	0,0022 ***

Table 9- Relation between different drivers of Corporate Governance Index and Performance in non family business (Delta before index name indicates the trend of the index in last six years)

Parameters	Corporate Governance driver	Beta	Standard Error	P-Value
Tobin Q	Board audit committees	0,546132	0,295181	0,0738 *
Tobin Q	Non-executive directors	-0,197454	0,103201	0,0650 *
Leverage	Nonvoting Stock	1,22048	0,680538	0,0827 *
CAR	Board audit committees	10,9823	5,94454	0,0708 *
Delta CAR	Code of ethics	0,0251763	0,0104901	0,0203 **
Delta Z Score	Shareholders' agreements	2,92516	1,05114	0,0077 ***



Table 10- Relation between different drivers of Corporate Governance Index and Performance in more active in M&A companies (Delta before index name indicates the trend of the index in last six years)

<b>Parameters</b>	<b>Corporate Governance driver</b>	<b>Beta</b>	<b>Standard Error</b>	<b>P-Value</b>
ROI	Auto Disciplinary Code	0,0754722	0,0354757	0,0460 **
Tobin Q	Nonvoting Stock	0,135082	0,0703351	0,0692 *
Tobin Q	Non-executive directors	-0,173214	0,0709145	0,0240 **
Z Score	Auto Disciplinary Code	9,31618	3,85258	0,0253 **
Z Score	Code of ethics	7,82869	4,01466	0,0653 *
Leverage	Minority espresed Directors	1,08297	0,563582	0,0690 *
Leverage	Nonvoting Stock	1,09867	0,526613	0,0500 **
CAR	Board audit committees	-0,179935	0,0794669	0,0318 **
Delta ROI	Shareholders' agreements	3,43056	1,48887	0,0291 **
Delta ROI	Nonvoting Stock	-3,34444	1,66399	0,0545 *
Delta ROI	Board audit committees	4,44928	1,84898	0,0232 **
Delta Tobin Q	Code of ethics	3,75000	2,07814	0,0823 *
Delta Tobin Q	Board audit committees	4,07246	1,89579	0,0408 **
Delta Tobin Q	Non-executive directors	-3,25325	1,83822	0,0881 *
Delta Tobin Q	Nonvoting Stock	-3,39444	1,67320	0,0525 *
Delta Z Score	Code of ethics	3,25000	1,88386	0,0959 *
Delta Leverage	Executive directors	-1,76842	0,885866	0,0561 *
Delta CAR	Shareholders' agreements	0,0233113	0,0132149	0,0890 *
Delta CAR	Code of ethics	0,0402820	0,0170433	0,0256 **

Table 11- Relation between different drivers of Corporate Governance Index and Performance in less active in M&A companies (Delta before index name indicates the trend of the index in last six years)

<b>Parameters</b>	<b>Corporate Governance driver</b>	<b>Beta</b>	<b>Standard Error</b>	<b>P-Value</b>
Tobin Q	Shareholders' agreements	0,151405	0,0718986	0,0402 **
Tobin Q	Code of ethics	0,162469	0,0868637	0,0672 *
Z Score	Non-executive directors	25,0033	13,8506	0,0769 *
Leverage	Non-executive directors	0,857166	0,458856	0,0675 *
CAR	Board audit committees	16,4651	5,57805	0,0044 ***
Delta Tobin Q	Code of ethics	-6,43421	3,82473	0,0972 *
Delta Z Score	Shareholders' agreements	2,72052	1,33850	0,0461 **
Delta CAR	Traditional System	-0,470149	0,184731	0,0132 **
Delta CAR	Code of ethics	-0,149123	0,0836652	0,0792 *
Delta CAR	Board audit committees	-0,303030	0,154782	0,0544 *

## 5. DISCUSSION AND CONCLUSION

This paper is just the first step in our work in progress. In fact we aim to introduce a deeper analysis to test the gGI on other samples and in companies of other countries. In this direction, we can refine the Corporate Governance Index and test on other situation, such as Poland listed companies, that we are studying.

Our first results, however, could enlight some interesting constructs.

About the gGI we can observe that it can assume value between 4-13 and it presents an average value of 9,1 for the whole sample. Our companies could improve their Corporate Governance quality, especially in the subsample of family business that detect a lower value (8,5), although in the index there are drivers that specifically regarde family firms (Executive Independent, CEO).

Moreover, we must point out that the non family companies are better structured (9,8), demonstrating a greater minorities protection and opening to the outside. The Corporate Governance quality presents some correlation with performance and risk parameters (Lorne, Wang: 2013).

We can highlight a positive correlation of gGI values with Tobin Q (tab. 6), observed in a static analysis. For this reason we can observe that the Tobin Q is the only parameter that manages to capture a relationship, confirming its usefulness to detect market performance as shown in literature (Gompers et al. 2003).

Looking at the subsamples only the companies less active in M&A present a positive correlation between a “good governum” and Tobin Q; while the more active firms have a negative relation with the performance, expressed by CAR. We can observe that le “well-advised” firms in external strategies are able to obtain a better correlation with performance.

Concerning the different contribution of Corporate Governance drivers we can observe that are specially Shareholders’ Agreements and Board Audit Committee that have an important correlation on performance. Shareholders’ Agreements present a positive relation on market performance (Tobin Q and CAR) for the whole sample (tab. 7) and for less active companies (Tobin Q-tab 11). Also on risk parameters Shareholders’ Agreements show a correlation for the whole sample, for the companies less active in M&A and for non family firms (tab. 9). We can observe that for these companies a better Corporate Governance is correlated with a lowe probability of default (Jensen, Meckling, 1997). We can highlight that Shareholders’ Agreements may represent an important minority instrument. The results show that the aforementioned agreements are more present especially in the non family companies, according to the part of literature that outlined that in more concentrated ownership the minority protection is lower (La Porta et al: 2000).

The presence of Non Executive Directors presents negative sign for the whole sample and for the non family companies; it shows a good relation with Tobin Q for family firms in which independent non executive directors are more present, demonstrating a particular attention to this important driver of Corporate Governance quality. Also on risk parameters the family businesses present a positive relation with cGI level and Z-score, and less active in M&A companies show a positive relation with Z-score and leverage (tab. 11) .

The companies, in which the Non Executive Directors are more present, demonstrate a greater openness to external subjects, with important management activities (Overhue & Cotter, 2010).

On the whole sample is the Executive Directors presence that produces a very positive correlation with Z-score (tab. 7). Another important aspect, is the role of Code of Ethics, that explain a very attention of the companies to stakeholders interests (in the broadest sense). We can find that are the more active in corporate acquisition companies that feel the need to draw up a Code of Ethics. The presence of the aforementioned Code, is correlated with a lower probability of failure (Z-score) and with positive sign for CAR. We can consider that a Code of Ethics can produce an improving in reputation, especially if we consider the investors and the other stakeholders (i.e.: Unions, employers), more important for the success of M&A operations. In fact, the Code of Ethics has become a tool for ensuring fair an efficient management of transactions and human relations, supporting the reputation of the enterprise, in order to create confidence in the outside. Creating a Code of Ethics can prove the good faith of the company, in cases of dispute, reducing the sanctions (Jensen: 2002). We can observe that the non family firms present a better gGI, showing a less probability of default (Jensen, Meckling,1997).

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