Structure of the board of directors and company performance

Purpose – This paper aims to test the relationship between selected characteristics of boards of directors and the companies' performance.

Design/Methodology/Approach - Using a significant sample of Italian listed companies during the period 2011-2013, this paper examines whether and how board size, ownership structure, gender, board independence and board diligence affect a firm's performance.

Findings - That ownership structure, board independence and diligence considered jointly are significant factors which positively affect a firm's performance, while size and gender have no impact on it.

Research limitations/implications – The analysis was restricted to Italian listed companies

Practical implications – This study suggests that regulators should continue to focus attention on the issue of board independence, and boards should focus more attention on their responsibility for achieving effective board independence.

Originality/value – This paper expands the existing literature on corporate governance and, in particular, confirms that board independence is an important factor for the survival and growth of firms.

Keywords Corporate Governance, Board Composition, Independent Directors, Board Size, Gender

Paper type Research paper

1. INTRODUCTION

The role of corporate governance is gaining importance year by year, as demonstrated by the evolution of new rules and codes of governance around the world. Many studies (e.g. De Andres and Vallaledo, 2008; Yang, 2011) argue that the outcome of good governance is good performance; therefore the role of the board of directors within the company becomes very important. Generally, boards of directors have at least four important functions: monitoring and controlling managers, providing information and counsel to managers, monitoring compliance with applicable laws and regulations, and linking the corporation to the external environment (Mallin, 2004; Monks and Minow, 2003). In recent years, there has been a sharp increase in research on corporate governance and, in particular, on the relationship between the structure of the board of directors and a firm's performance (Bhagat and Black, 1999; Jackling and Johl, 2009; Judge et al., 2003; Lefort and Urzúa, 2008; O'Connell and Cramer, 2010; Platt and Platt, 2012; Yoshimori, 2005), starting from the assumption that the composition of a board affects board functions and diligence which in turn may influence the firm's performance (Kiel and Nicholson, 2003).

Decisions taken by a board of directors should ensure the smooth running of the business, not only in terms of pursuing short-term economic interests, but also bearing in mind the future of the company and its long-term development, without compromising its performance. The global nature of the economy and the possibility of investing in any capital market in the world make it necessary for investors to have access to information regarding the impact of the board of directors on firms' performance, in order to facilitate their decision-making processes when investing in company shares. An evaluation of the structure and the functioning of the board of directors is of such importance that it may help investors in their asset allocation decision-making. For this reason, in recent years institutional investors have increasingly engaged in corporate governance activities and attached great importance to the role and quality of boards of directors.

The objective of this study is to determine whether some selected board characteristics are associated with company performance as measured by return on asset (ROA). The board

characteristics considered in this paper are: (1) size, (2) ownership structure, (3) gender, (4) independence, and (5) diligence. This paper contributes to the exiting literature on corporate governance and a firm's performance in two ways: 1) we study the Italian case, which has been little investigated in recent years despite the relevance of Italy in Europe and 2) we consider a period (from 2011 to 2013) of deep recession in order to explore whether governance characteristics can influence a firm's performance in a context of significant economic crisis. Moreover, we use a sample of more than 150 Italian listed companies representing more than 80% of listed companies in all industry sectors.

The paper is organized as follows. Section 2 briefly presents the literature review on the topic and presents the model hypotheses. Section 3 describes the sample and the data used in the analysis. Section 4 presents the empirical results obtained and Section 5 provides some concluding remarks.

2. LITERATURE REVIEW, THEORETICAL BACKGROUND AND HYPOTHESES

It is generally recognised that strong corporate governance is needed to mitigate the 'agency problems' within a company due to separation of ownership and control. The agency relationship is defined as a contract under which one party (the principal) engages another party (the agent) to perform some service on their behalf (Jensen and Meckling, 1976). Managers (agents) acting in their own self-interest are unlikely to maximise returns to shareholders (principals) unless appropriate governance structures are implemented to safeguard the interests of the shareholders (Jensen and Meckling, 1976). On this basis, companies with better governance, such as more independent, diverse and diligent boards, should provide greater returns to their shareholders than those with weaker governance structures.

Stewardship theory provides a different perspective, suggesting that directors maximise their utility to achieve organisational rather than self-serving objectives, and better decision-making (Donaldson and Davis, 1991). What really matters is the presence of inside directors: these have access to specific information about the company and are expected to have greater knowledge than

independent directors with respect to their company's characteristics (Fama and Jensen, 1983). This superior knowledge leads to better decision-making (Donaldson and Davis, 1991; Kent et al., 2010) and therefore, according to stewardship theory, less independent boards are expected to be associated with superior financial performance.

Much research has examined the relationship between corporate governance structure characteristics and company performance. However, results have been conflicting, with some studies finding no association between the factors (Bhagat and Black, 1999, 2002; Klein, 1998; Linden and Matolcsy, 2004), and other studies finding either a positive or a negative relationship between better governance structures and higher company performance (Beiner et al., 2006; Bonn, 2004; Pi and Timme, 1993). Fooladi's study (2012), considering a randomly-selected sample of companies listed on Bursa Malaysia, shows that there is a negative relationship between CEO duality and the firm's performance (ROE and ROA), but there is no significant relationship between board independence, board size, and ownership structure as independent variables and firm performance as the dependent variable. Below we survey the articles which consider the board characteristics we test in our study.

Board Size

Fama and Jensen (1983) and Williamson (1983) suggest that the board of directors is an important part of the governance structure of corporations, and in particular that board size is related to the directors' ability to monitor and control managers. Chiang (2005) and Haniffa and Hudaib (2006) find a positive relationship between the number of directors and company performance. Chiang (2005) considers high-tech companies listed in Taiwan in 2001 while Haniffa and Hudaib (2006) investigate the relationship between the corporate governance structure and performance of 347 companies listed on the Kuala Lumpur Stock Exchange. Williams et al. (2005), considering 221 firms continuously listed on Fortune 500 for the years 1998-2002, find that larger boards possess more specialised skills and are better equipped to monitor management. According to Lipton and Lorsh (1992), limiting board size is believed to improve company performance, as the increased

monitoring benefits of larger boards are outweighed by their poorer communication and decision-making abilities. The authors suggest that board size should be limited to a maximum of ten directors.

Agyemang et al. (2014) examine how board characteristics and activities affect the performance of banking institutions listed on the Ghana Stock Exchange during the period 2007-2012. The study does not find any significant relationship between board size, audit committee membership and chief executive status, and the firm's performance.

This study aims to test the following hypothesis:

Hypothesis 1: Board size influences a firm's performance

Ownership structure

It is generally accepted that ownership structure is an important component of corporate governance (Shleifer and Vishny, 1986). The debate on ownership structure and firm perfomance was initiated by Berle and Means (1932), who found an inverse correlation between the diffuseness of shareholdings and firm performance. According to the agency theory (Jensen and Meckling, 1976), the separation of ownership and control provides managerial incentives to diversification because of the personal benefits that managers would acquire from risk reduction. Indeed, a large number of shareholders cannot exercise enough power to oversee managerial performance. Li and Simerly (1998), using a dataset of 90 U.S. companies from different sectors for the time period 1990-1993, demonstrate that ownership dispersion creates possibilities for free riding because of a lack of monitoring of management; thus a positive relationship between ownership concentration and firm value is expected. Consistent with this monitoring theory, Shleifer and Vishny (1986) show the important role of large shareholders and how market value is positively related to increasing values of shares held by larger shareholders. In the same way, Denis and McConnell (2003) argue that greater control by owners leads to a greater reduction in conflict of interest, which should lead to improved firm performance.

Demsetz and Lehn (1985) find that there is no significant relationship between ownership structure and accounting profit rates. The results obtained by Demsetz and Lehn (1985) are confirmed by Himmelberg et al. (1999), McConnell and Servaes (1990), and Morck et al. (1988). In particular Morck et al. (1988), using the Fortune 500 U.S. corporations, estimate a piecewise-linear relation between board ownership and Tobin's Q as a proxy of firm performance. They find that Tobin's Q increases and then decreases with managerial ownership (for ownership stakes between 5% and 25%). McConnell and Servaes (1990) examine a larger dataset than the Fortune 500 examined by Morck et al. (1988) and find an inverted U-shaped relation between Tobin's Q and managerial ownership. Himmelberg et al. (1999) provide evidence in support of Demsetz and Lehn's (1985) arguments.

Hypothesis 2: Ownership concentration influences a firm's performance

Gender diversity

It is well established that men's and women's brains are different both in terms of size (e.g. Dekaban and Sadowsky, 1978), and neurons activity (e.g. Witelson et al., 1995). Partly for this reason, women and men behave differently, including in the field of finance. Generally, women are more risk-averse (e.g. Jianakoplos and Bernasek, 1998), both when they act individually and in making a team decision, while men are more overconfident than women (Lundeberg et al., 1994). Bearing these differences in mind, the literature also includes studies of the impact of gender – i.e. the presence of female directors on boards – on company performance, but the results are contradictory. Adams and Ferreira (2009), Erhardt et al. (2003), and Luckerath-Rovers (2011) demonstrate a positive relationship between board diversity and accounting performance as measured by balance sheet ratios such as ROA, ROE or ROI. Darmadi (2011) and Francoeur et al. (2008) find a negative relationship between the same variables. Adams and Ferreira (2009) in particular find a positive relationship between the presence of women on boards and firm value. Luckerath-Rovers (2011) investigates the financial performance (ROE) of 99 Dutch listed companies with and without women on their boards; the results obtained demonstrate that firms

with women perform better than those without women. According to Dobbin and Jung (2011), an increase in the number of women on boards has no effect on subsequent profitability, but is followed by a significant decrease in stock value. Rose (2007), considering a sample of listed Danish firms during the period 1998-2001, finds no significant link between firm performance as measured by Tobin's Q and having females on the board. Carter et al. (2010) examine the relationship between the number of women directors and the number of ethnic minority directors on the board and on important board committees, and financial performance as measured by ROA and Tobin's Q. They do not find a significant relationship between the gender or ethnic diversity of the board or important board committees and financial performance for a sample of major US corporations.

This paper aims to test the following hypothesis:

Hypothesis 3: Gender diversity influences company performance

Board Independence

Agency theory and stewardship theory arguments lead to different predictions regarding the composition of the board. From the agency perspective, the ability of the board to act as an effective monitoring mechanism is dependent upon its independence from management (Beasley, 1996; Fama and Jensen, 1983). In contrast, stewardship theory argues that inside directors are trustworthy stewards of company resources and their in-depth knowledge of the business enhances company performance (Donaldson, 1990; Nicholson and Kiel, 2004, 2007).

Bonn et al. (2004), comparing the effects of board size, proportion of female directors, proportion of outside directors and average age of directors on firm performance in Japanese and Australian firms, find that the ratio of outside directors is positively associated with ROA. In contrast, Hermalin and Weisbach (1991), and Vafeas and Theodorou (1998), find no significant relationship between board structure and company performance. Bhagat and Black (2002) find that firms with more independent boards do not perform better than other firms in terms of the market-based measure Tobin's Q and accounting-based measures.

As the presence of independent directors and their role influence board size, board diligence and, of course, board independence, this study aims to test the following hypothesis:

Hypothesis 4: Greater board independence is associated with higher performance of the firm

Board Diligence

Boards of directors need to be active to achieve their commitment to corporate governance; boards that meet frequently are more likely to perform their duties diligently and effectively, thereby enhancing their level of control (Kent and Stewart, 2008; Vafeas, 1999; Yatim et al., 2006). In particular, Vafeas (1999) considers 307 firms over the years 1990-1994, Yatim et al. (2006) consider 736 firms listed on Bursa Malaysia for the financial year ending 2003, and Kent and Stewart (2008) consider a sample of Australian firms in the year 2004. According to Kent and Stewart (2008), a positive relation between board meeting frequency and company performance is expected. Agyemang et al. (2014), considering a sample of 8 banking firms listed on the Ghana Stock Exchange from 2007 to 2012, demonstrate that the number of banking institution board meetings per year positively affects the institution's performance. Thus, according to the authors, this implies that as the number of board meetings increases, the monitoring and advisory role of boards improves, hence translating into firm performance.

Theoretical and empirical studies (Clark, 2005; Fama and Jensen, 1983; Finkelstein and Hambrick, 1995; Zahra and Pearce, 1989), support the crucial role of independent directors on the board. Fama and Jensen (1983) argue that independent directors are in a better position to perform a critical monitoring function and are thus able to mitigate agency conflicts between management and shareholders. Clark (2005), Finkelstein and Hambrick (1995), and Zahra and Pearce (1989) demonstrate the relationship between greater board independence and shareholder protection. Stein and Plaza (2011) examine the role played by the independent director in the supervision and turnover of the chief corporate executive (CEO). They argue that companies with a larger number of independent directors are more likely to replace the CEO when performance is not as expected. Based on these conclusions, it is logical to suppose that the duration of board meetings can be

affected by the presence of independent directors. For this reason, when considering this relation, we include in the model an interaction variable created by multiplying the duration of the board meetings and the percentage of independent directors on the board.

This paper aims to test the following hypotheses:

Hypothesis 5a: Greater board diligence is associated with a higher firm performance

Hypothesis 5b: The impact of independent directors on board diligence is associated with a higher firm performance

3. DATA AND METHODOLOGY

The Sample

Of the companies listed on the Italian Stock Exchange, those which have not published an annual report on corporate governance in one of the years examined (2011-2013) were eliminated; furthermore the companies suspended from the listing and those in liquidation were not considered in the sample. We also eliminated some companies' performances (considered as outliers) from the analysis. After this selection, the sample analyzed in this study consists of more than 150 Italian listed companies belonging to different segments of the Italian market; it represents more than 80% of the Italian Stock Exchange capitalization and well represents each of the four economic sectors into which we have subdivided the companies: consumer goods and services, finance, industrial, and public services. We analysed the corporate governance annual reports published from 2011 to 2013 on the Borsa Italiana web site for each company in order to gather information on the characteristics of each board we considered. Information about ownership structure is derived from Commissione Nazionale per le Società e la Borsa (Consob).

Measurement of Dependent Variable

Empirical research on corporate governance uses either market-based measures or accounting-based measures to assess firm performance. Klein (1998) uses return on asset (ROA) and Lo (2003) uses return on equity (ROE) as operating performance indicators. Hitt et al. (1997) consider three accounting-based measures as possibile indicators of firm performance: ROA, ROE and return on

sales (ROS). ROE is ruled out because it is more sensitive to capital structure differences. Both ROS and ROA generate similar findings and they are highly correleated (r=0.91). Core et al. (2006) suggest that operating performance measured by ROA is a preferred measure for examining the relationship between performance and corporate governance because it is not affected by leverage, extraordinary items or other discretionary items. For this reason, in this paper, ROA is considered as the company performance measure and as a dependent variable.

Independent variables

We collected data on:

a) size: the total number of directors;

b) ownership structure, that is to say the number of main shareholders (those who held more than 2% of the company's capital shares) for each company at every year-end; the percentage of company shares owned by the main shareholder for each company at every year-end; the percentage of company shares owned by all the main shareholders for each company at every year-end, and the percentage of free float shares on the market for each company at every year-end.

Shareholder concentration is taken into consideration because it is likely to reduce agency problems. Greater control by owners leads to a greater reduction in conflict of interest, which should lead to a better firm performance (Denis and McConnell, 2003). In this study, it is measured in two ways: i) the percentage of company shares owned by the main shareholder with more than a 2% shareholding as indicated by the Commissione Nazionale per le Società e la Borsa (Consob); ii) the total percentage of company shares held by all main shareholders (those who have at least 2% of the company's capital);

c) gender diversity: according to the Italian Law 120/2011 the statute of each listed company must provide a policy for the allocation of directors that ensures balance between genders. The criteria adopted must establish that at least 1/5 of the directors elected in the first term and at least 1/3 in the following renewal of the board must be of the less-represented gender (female). For this reason in this study we consider the number and proportion of female directors on each board;

d) independence: according to the Legislative Decree 58/98 the number of independent directors changes according to i) the corporate governance system adopted by each listed company and ii) the number of directors on the board/management board. If the listed company adopts the traditional corporate governance system, and there is a maximum of 7 directors, at least one of them must be independent; if there are more than 7 directors, at least 2 must be independent. In the case of a one-tier system, at least 1/3 of the directors must be independent. When the listed company adopts a two-tier system and there are more than 4 directors on the board, at least one of them must be independent. Table 1 summarizes the minimum number of independent directors required by Italian law.

Insert Table 1 about here

As matter of fact there are very few Italian listed companies that adopt the one-tier or two-tier system (respectively 2 and 5 in our sample) and the minimum number of independent directors for all the other companies, which adopted the traditional system, is very low, but most of them exceed the legal minimum. Besides, the Italian governance code does not suggest a minimum number or a minimum percentage of independent directors on a board, except for the 40 largest companies belonging to the MIB segment. With reference to the latter, a minimum of one third of independent directors on the board is suggested. For this reason, our model considers the number of independent directors and their weight out of the total number of directors;

e) diligence: the number of board of directors meetings during each year and their average duration;

Table 2 summarizes the descriptive statistics of the variables used in the analysis of the sample. The correlations between the independent variables used in the survey are shown in table 3.

Insert Table 2 about here

Insert Table 3 about here

Control Variables

Our model includes variables that are potentially associated with company performance or corporate governance factors in order to control for alternative explanations of performance.

Theoretical and empirical support exists for including size as a control variable for performance (Vafeas and Theodorou, 1998). As can be expected, larger firms have greater agency problems due to an increase in monitoring requirements. Hence, they are expected to compensate with more rigorous formal governance mechanisms. Smaller companies have more limited financial and human resources to devote to costly corporate governance provisions and are likely to have lower agency costs. For this reason, in this study, we consider the company's assets as a size control variable (TOTAL ASSETS). In addition, since performance is likely to be related to industry group (Vafeas and Theodorou, 1998), we classify the companies in our sample, like the Borsa Italiana, in four macro sectors. Sector 1 identifies 98 firms belonging to the consumer goods and services sector, Sector 2 considers 96 firms belonging to the financial sector, Sector 3 consists of 201 firms belonging to the industrial sector and Sector 4 includes 109 firms belonging to the public services sector.

To test which independent variable influences the ROA of the Italian listed companies, we used the following panel regression analysis:

$$ROA = \alpha_{1+} \beta_1 NUMBER\ OF\ DIRECTORS + \beta_2 NUMBER\ OF\ MAIN\ SHAREHOLDERS + \beta_3 \%\ OF\ THE\ MAIN\ SHAREHOLDER + \beta_4 TOTAL\ \%\ OF\ MAIN\ SHAREHOLDERS + \beta_5 \%\ OF\ SHARES\ ON\ THE\ MARKET + \beta_6 NUMBER\ OF\ WOMEN\ DIRECTORS + \beta_7 \%\ OF\ WOMEN\ DIRECTORS + \beta_8 NUMBER\ OF\ INDEPENDENT\ DIRECTORS + \beta_9 \%\ OF\ INDEPENDENT\ DIRECTORS + \beta_{10} NUMBER\ OF\ BOARD\ MEETINGS\ PER\ YEAR + \beta_{11} BOARD\ MEETINGS\ DURATION\ PER\ YEAR + \beta_{12} BOARD\ MEETINGS\ DURATION\ PER\ YEAR\ x\ \%\ OF\ INDEPENDENT\ DIRECTORS + \beta_{13} TOTAL\ ASSETS + \sum_{i=1}^{4} \gamma_i SECTOR_i + \sum_{j=1}^{3} \lambda_j T_j + \varepsilon \quad (1)$$

where ROA is the return on assets for each company per year, α_1 is a constant, NUMBER OF DIRECTORS is the number of directors for each company at year-end, NUMBER OF MAIN SHAREHOLDERS is the number of main shareholders (those holding at least 2% of total capital shares of the firm) in each company per year, % OF THE MAIN SHAREHOLDER is the percentage of the main shareholder for each company at the year-end, TOTAL % OF MAIN SHAREHOLDERS is the percentage of capital shares owned by all the main shareholders, % OF SHARES ON THE MARKET is the percentage of shares on the market, NUMBER OF WOMEN DIRECTORS is the number of females present on the board, % OF WOMEN DIRECTORS is the percentage of females on the board, NUMBER OF INDEPENDENT DIRECTORS is the number of independent directors on the board per company, % OF INDEPENDENT DIRECTORS is the percentage of independent directors on the board, NUMBER OF BOARD MEETINGS PER YEAR is the number of board meetings during the examined years, BOARD MEETINGS DURATION PER YEAR is the duration (on average, expressed in hours) of the board meetings per year, BOARD MEETINGS DURATION PER YEAR x % OF INDEPENDENT DIRECTORS is an interaction variable created by multiplying the duration of the board meetings and the percentage of independent directors on the board, SECTOR indicates the four macro-sectors the companies examined belong to (consumer goods and services, finance, industrial and public services respectively), T represents time dummies 2011-2013.

4. EMPIRICAL RESULTS

The results obtained by equation (1) are shown in Table 4. They reveal that the number of directors (NUMBER OF DIRECTORS) is not statistically significant, so there is no relation between board size and ROA. This result confirms Agyemang's (2014) conclusions. Thus Hypothesis 1 is rejected.

Insert Table 4 about here

In accordance with Denis and McConnell (2003), Table 4 shows that the number of majority shareholders (NUMBER OF MAIN SHAREHOLDERS, those holding at least 2% of the company's capital shares) and the percentage of shares held by the largest majority shareholder (%

OF THE MAIN SHAREHOLDER) have a positive and significant impact on ROA. This can be explained by the fact that majority shareholders are geared to the maximization of corporate performance, which obviously translates into a direct financial return for them; for this reason they act to push decision-making that can improve or maximize business performance. Moreover, our study highlights that the free float shares on the market (% OF SHARES ON THE MARKET) also have a positive and significant impact on ROA. This result is particularly remarkable because it shows that, in the sample of companies surveyed, there is a convergence of interests linked to performance between majority shareholders (TOTAL % OF MAIN SHAREHOLDERS) and market investors. Thus Hypothesis 2 is confirmed.

As is concluded in the studies by Carter et al. (2010) and Rose (2007), our results also confirm that female board representation (NUMBER OF WOMEN DIRECTORS and % OF WOMEN DIRECTORS) has no impact on firm performance. Thus Hypothesis 3 is rejected.

The number (NUMBER OF INDEPENDENT DIRECTORS) and the percentage (% OF INDEPENDENT DIRECTORS) of independent directors have no influence on ROA. This conclusion confirms the studies by Bhagat and Black (2002), Hermalin and Weisbach (1991), and Vafeas and Theodorou (1998). Thus Hypothesis 4 is rejected.

Our results demonstrate a negative and significant relationship between both the number of board meetings (NUMBER OF BOARD MEETINGS PER YEAR), and their duration (BOARD MEETINGS DURATION PER YEAR), and ROA. This result is in contrast with the literature but is acceptable when bearing in mind the crisis period examined in this paper. These results can be explained in the light of two findings. First, when there are serious problems in the company, both in terms of number and/or in terms of content, the board needs to meet several times to analyse and make decisions consistent with the company's situation; this fact may create a delay in taking important strategic and operational decisions with negative consequences on performance. Secondly, the more frequently the board meets, the greater the risk of previous decisions being

changed as a result; the procedure for the implementation of the decisions taken is more complex and this has a potentially negative impact on business performance. Thus Hypothesis 5a is rejected.

The most important result in relation to the hypotheses tested in this paper is that the interaction variable (BOARD MEETINGS DURATION PER YEAR*% OF INDEPENDENT DIRECTORS) has a positive and a strong statistical impact on ROA. The meaning of this result is very relevant. The duration of board meetings is influenced by the number of problems concerning the company, the complexity of the situations examined and the action of each director, whether dependent or independent. As previously stated, the duration of board meetings has a negative influence on returns on assets but when jointly analysed with the percentage of independent directors on the board, it changes to a positive impact on firm performance. For this reason it is logical to deduce that the independent directors play an active role within the boards and the efforts made by them is qualitatively better than that of the other members of the board. Above all, it emerges that their participation in board discussions, their advice, their remarks and their behaviour in general, although possibly increasing the average duration of board meetings, is considered of high quality, such as to impact positively on firm performance. This result confirms our Hypothesis 5b and the importance of the role of independent directors on the board as indicated by Clark (2005), Fama and Jensen (1983), Finkelstein and Hambrick (1995), and Zahra and Pearce (1989).

The results obtained demonstrate that the SECTOR control variables have no impact on the performance of the firms in the sample, except for the companies belonging to consumer goods and services (SECTOR1), an anti-cyclical sector. Finally, as identified in the literature, the firm's size (TOTAL ASSETS) has a positive impact on the performance of the companies included in our analysis.

5. CONCLUSIONS

This paper expands the existing literature on corporate governance and firm performance measured by ROA, by analysing a sample of Italian listed companies in a period of deep crisis from 2011 to 2013. Contrary to previous research, the results obtained highlight the fact that there is no evidence

of any relationship between the number of directors (board size), board independence and the presence of females on the board and firm performance. Board diligence, that is to say the number of board meetings and their duration per year, has a negative impact on ROA. A positive relationship is found between the number and the percentage of the main shareholders and ROA; the same evidence is highlighted considering the percentage of floating shares on the market. This result demonstrates a convergence of interest between the shareholders in the sample in the period of time analysed.

The most important outcome of this paper is that we have demonstrated the importance of the role of independent directors in the achievement of satisfactory/improved corporate performance. The results obtained show that the functions and the tasks performed by independent directors have a positive and significant impact on business performance. Considering that this result was achieved in a period of deep economic crisis, we can theorize that the efforts made by independent directors are of the highest quality and instrumental in safeguarding the company's viability, its shareholders and minority stakeholders in general. Therefore the results obtained, as well as contributing to existing literature on corporate governance and firm performance, also underline the significance of the qualitative contribution made by independent directors on the board.

Future research in this field should examine the relationship between board members' education, age and, in general, demographic diversity on boards, with firms' financial performance, distinguishing between independent directors and non-independent ones with the aim of helping companies and regulators to identify the optimal criteria for board membership.

REFERENCES

Adams, R., and Ferreira, D. (2009), "Women in the boardroom and their impact on governance and performance", *Journal of Financial Economics*, Vol. 94 No. 2, pp. 291-309.

Agyemang, O., Aboagye, E., Antwi, S., and Frimpong, J. (2014), "Board of directors and firm performance of banking institutions: A Ghananian experience", *Europena Journal of Economics, Finance and Administrative Sciences,* No. 67, pp. 45-59.

Beasley, M. (1996), "An Empirical Analysis of the Relation between the Board of Director Composition and Financial Statement Fraud", *The Accounting Review,* Vol. 71 No. 4, pp. 443-465.

Beiner, S., Drobetz, W., Schmid, M., and Zimmermann, H. (2006), "An Integrated Framework of Corporate Governance and Firm Valuation - Evidence from Switzerland", *European Financial Management,* Vol. 12 No. 2, pp. 249-283.

Berle A.A. and Means, G.C. (1932), *"The modern corporation and private property"*, New York: Harcourt, Brace, & World.

Bhagat, S., and Black, B. (1999), "The uncertain relationship between board composition and firm", *Business Lawyer,* Vol. 54 No. 3, pp. 921-963.

Bhagat, S., and Black, B. (2002), "The Non-Correlation between Board Independence and Long-Term Firm Performance", *Journal of Corporations Law,* No. 27, pp. 231-273.

Bonn, I. (2004), "Board Structure and Firm Performance: Evidence from Australia", *Journal of Management and Organization,* Vol. 10 No. 1, pp. 14-25.

Bonn, I., Yoshikawa, T., and Phan, P. (2004), "Effects of Board Structure on Firm Performance: A Comparison between Japan and Australia", *Asian Business and Management,* Vol. 3 No. 1, pp. 105-125.

Carter, D., D'Souza, F., Simkins, B., and Simpons, W. (2010), "The gender and ethic diversity of US boards and board committees and firm financial performance", *Corporate governance: an international review,* Vol. 18 No. 5, pp. 396-414.

Chiang, H. (2005), "An empirical Study of Corporate Governance and Corporate Performance", *Journal of American Academy of Business,* Vol. 6 No. 1, pp. 95-101.

Clark, N. (2005), "Corporate governance changes in the wake of the Sarbanes-Oxley Act: a mortality tale for policymakers too", No. 525, *Harvard Law and Economics Discussion Paper,* Narvard University.

Core, J., Guay, W., and Rusticus, T. (2006), "Does Weak Governance Cause Weak Stock Returns? An Examiniation of Firm Operating Performance and Investor's Expectations", *The Journal of Finance,* Vol. 61 No. 2, pp. 655-687.

Darmadi, S. (2011), "Board diversity and firm performance: the Indonesian evidence", *Corporate ownership and control journal,* Vol. 1 No. 9, pp. 524-539.

De Andres, P., and Vallaledo, E. (2008), "Corporate governance in banking: The role of the board of directors", *Journal of Banking and Finance,* Vol. 32, pp. 2570-2580.

Dekaban, A.S., and Sadowsky, D. (1978), "Changes in brain weights during the span of human life: Realtion of brain weights to body heights and body weights", *Annals of Neurology,* Vol. 4, pp. 345-356.

Demsetz, H., and Lehn, K. (1985), "The Structure of Corporate Ownership: Causes and consequences", *Journal of Political Economy,* Vol. 93, pp. 1155-1177.

Denis, D., and McConnell, J. (2003), "International Corporate Governance", *Journal of financial and Quantitative Analysis,* Vol. 38 No. 1, pp. 1-38.

Dobbin, F., and Jung, J. (2011), "Corporate board, gender diversity and stock performance: the competence gap or institutional investor bias?", *North Carolina Law Review,* Vol. 89, pp. 809-838.

Donaldson, L. (1990), "The Ethereal Hand: Organisational Economics and Management Theory", *Academy of Management Review,* Vol. 15 No. 3, pp. 369-381.

Donaldson, L., and Davis, J. (1991), "Stewardship Theory or Agency Theory: Corporate Governance Shareholder Returns", *Australian Journal of Management,* Vol. 16 No. 1, pp. 49-64.

Erhardt, N., Werbel, J., and Shrader, C. (2003), "Board of director diversity and firm financial performance", *Corporate Governance,* Vol. 11 No. 2, pp. 102-111.

Fama, E., and Jensen, M. (1983), "Separation of ownership and control", *Journal of law and economics,* Vol. 26, pp. 301-325.

Finkelstein, S., and Hambrick, D. (1995), "*Strategic Leadership. Top Executives and Theri Effects on Organisations",* Minneapolis/St. Paul: West Publishing Company.

Fooladi, M. (2012), "Board characteristics and firm performance", *Journal of Modern Accounting and Auditing,* Vol. 8 No. 5, pp. 688-694.

Francoeur, C., Labelle, R., and Sinclair-Desgagne, B. (2008), "Gender diversity in corporate governance an top management", *Journal of business ethics,* Vol. 81 No. 1, pp. 83-95.

Haniffa, R., and Hudaib, M. (2206), "Corporate Governance Structures and Performance of Malaysian Listed Companies", *Journal of Business Finance and Accounting,* Vol. 33 No. 7/8, pp. 1034-1062.

Hermalin, B., and Weisbach, M. (1991), "The Effects of Board Composition and Direct Incentives on Firm Performance", *Financial Management,* Vol. 20 No. 4, pp. 101-112.

Himmelberg, C., Hubbard, R., and Palia, D. (1999), "Understanding the Determinants of Managerial Ownership and Link Between Ownership and Performance", *Journal of Financial Economics,* Vol. 53, pp. 353-384.

Hitt, M., Hoskisson, R., and Kim, H. (1997), "International diversification: Effects on innovation and firm performance in product-diversified firms", *Academy of Management Journal,* Vol. 40 No. 4, pp. 767-798.

Jackling, B., and Johl, S. (2009), "Board structure and firm performance: evidence from India's top companies", *Corporate Governance: An International Review,* Vol. 17 No. 4, pp. 492-509.

Jianakoplos, N.A., and Bernasek, A. (1998), "Are women more risk averse?", *Economic Inquiry,* Vol. 36, pp. 620-630.

Jensen, M., and Meckling, W. (1976), "Theory of the Firm: Managerial Behaviour, Agency Costs, and Ownership Structure", *Journal of Financial Economics,* Vol. 3 No. 4, pp. 305-360.

Judge, W., Naoumova, Q., and Koutzevol, N. (2003), "Corporate governance and firm performance in Russia:an empirical study", *Journal of World Business,* Vol. 38 No. 4, pp. 385-396.

Kent, P., and Stewart, J. (2008), "Corporate GOvernance and Disclosures on the Transition to International Financial Reporting Standards'", *Accounting and Finance,* Vol. 48 No. 4, pp. 649-671.

Kent, P., Routledge, J., and Stewart, J. (2010), "Innate and Discretionary Accruals Quality and Corporate Governance", *Accounting and Finance,* Vol. 50, pp. 171-195.

Kiel, G., and Nicholson, G. (2003), "Board composition and corporate performance: How the Australian experience informs contrasting theories of corporate governance", *Corporate governance: An International Review,* Vol. 17, pp. 728-743.

Klein, A. (1998), "Firm performance and board committee structure", *Journal of Law and Economics,* Vol. 41 No. 1, pp. 275-304.

Lefort, F., and Urzúa, F. (2008), "Board independence, firm performance and ownership concentration: Evidence from Chile", *Journal of Business Research,* Vol. 61 No. 6, pp. 615-622.

Li, M., and Simerly, R. (1998), "The Moderating Effect of environmental Dynamism on the Ownership and Performance Relationship", *Strategic Management Journal,* Vol. 19, pp. 169-179.

Linden, P., and Matolcsy, Z. (2004), "Corporate GOvernance Scoring System What Do They Tell Us?", *Austrialian Accounting Review,* Vol. 14, pp. 9-16.

Lipton, M., and Lorsh, J. (1992), "A Modest Proposal for Improved Corporate Governance", *The Business Lawyer,* Vol. 48 No. 1, pp. 59-77.

Lo, K. (2003), "Economic consequences of regulated changes in disclosures: The case of executive compensation", *Journal of Accounting and Economics,* Vol. 35 No. 3, pp. 285-314.

Luckerath-Rovers, M. (2011), "Women on the boards and firm performance", *Journal of Management & Governance,* Vol. 17 No. 2, pp. 491-509.

Lundberg, M.A., Fox, P.W., and Punccohar, J. (1994), "Highly confident but wrong: Gender differences and similarities in confidence judgements", *Journal of Educational Psychology,* Vol. LXXXVI, pp. 114-121.

Mallin, C. (2004). "*Corporate governance",* Oxford: Oxford University Press.

McConnell, J., and Servaes, H. (1990), "Additional Evidence on Equity Ownership and Corporate Value", *Journal of Financial Economics,* Vol. 27, pp. 595-612.

Monks, R., and Minow, N. (2003), "*Corporate governance",* 3rd edn., Madden, MA: Blackwell Publishing Ltd.

Morck, R., Shleifer, A., and Vishny, R. (1988), "Management Ownership and Market Valuation: An Empirical Analysis", *Journal of Financial Economics,* Vol. 20, pp. 293-315.

Nicholson, G., and Kiel, G. (2004), "A Framework For Diagnosing Board Effectiveness", *Corporate Governance: An International Review,* Vol. 12 No. 4, pp. 442-460.

Nicholson, G., and Kiel, G. (2007), "Can Directors Impact Performance? A Case-based Test of Three Theories of Corporate Governance", *Corporate Governance: An International Review,* Vol. 15 No. 4, pp. 585-608.

O'Connell, V., and Cramer, N. (2010), "The relationship between firm performance and board characteristics in Ireland", *European Management Journal,* Vol. 28 No. 5, pp. 387-399.

Pi, L., and Timme, S. (1993), "Corporate Control and Bank Efficiency", *Journal of Banking and Finance,* Vol. 17 No. 2/3, pp. 515-530.

Platt, H., and Platt, M. (2012), "Corporate board attributes and bankruptcy", *Journal of Business Research,* Vol. 65 No. 8, pp. 1139-1143.

Rose, C. (2007), "Does female board representation influence firm performance? The Danish evidence", *Corporate Governance: An International Review,* Vol. 15 No. 2, pp. 404-413.

Rose, P. (2007), "The corporate governance industry", *Journal of corporate law,* Vol. 32 No. 4, pp. 887-926.

Shleifer, A., and Vishny, R. (1986), "Large shareholders and corporate control", *Journal of Political Economy,* Vol. 94, pp. 461-488.

Stain, G., and Plaza, S. (2011), *"The role of independent director in CEO supervision and turnover",* Study No. 133, Business School University of Navarra.

Vafeas, N. (1999), "Board Meeting Frequency and Firm Performance", *Journal of Financial Economics,* Vol. 53 No. 1, pp. 113-142.

Vafeas, N., and Theodorou, E. (1998), "The Relationship between Board Structure and Firm Performance in the UK", *The British Accounting Review,* Vol. 30 No. 4, pp. 383-407.

Williams, R., Fadil, P., and Armstrong, R. (2005), "Top Management Team Tenure and Corporate Illegal Activity: The Moderating Influence of Board Size", *Journal of Managerial Issues,* Vol. 17, pp. 479-493.

Williamson, O. (1983), "Organization Form, Residual Claimants, and Corporate Control", *Journal of Law and Economics,* Vol. 26 No. 2, pp. 351-366.

Witelson, S.F., Glezer, I.I., and Klgor, D.L. (1995), "Women have greater density of neurons in posterior temporal cortex", *The Journal of Neuroscience*, Vol. 15, 3418-3428.

Yang, J. (2011), "Does adopting high-standard corporate governance increase firm value? An empirical analysis of Canadian companies", *International Business and Economic Research Journal,* Vol. 10 No. 9, pp. 17-28.

Yatim, P., Kent, P., and Clarkson, P. (2006), "Governance structures, ethnicity, and audit fees of Malaysian listed firms", *Managerial Auditing Journal,* Vol. 21 No. 7, pp. 757-782.

Yoshimori, M. (2005), "Does corporate governance matter? why the corporate performance of Toyota and Canon is superior to GM and Xerox", *Corporate Governance: An International Review,* Vol. 13 No. 3, pp. 447-457.

Zahra, S., and Pearce, J. (1989), "Boards of directors and corporate financial performance: a review and integrative model", *Journal of Management,* Vol. 15 No. 2, pp. 291-334.

TABLES

Table 1: The minimum number of independent directors required by Italian law (Italian listed companies)

Corporate governance system	Number of directors on the board or management board	Required number of independent directors on the board
Traditional	If <= 7	At least 1
	If >7	At least 2
One-Tier		At least 1/3
Two-Tier	If >4	At least 1

Source: Legislative Decree 58/98 and Italian Civil Code

Table 2: Descriptive statistics (N=154; years 2011-2013)

Dependent Variable	*Mean*	*Std. Dv.*	*Min*	*Max*
ROA	0.20	6.51	-48.34	30.73
Between		6.05		
Within		2.44		
Independent Variable				
NUMBER OF DIRECTORS	10.55	4.38	3	32
Between		4.27		
Within		1		
NUMBER OF MAIN	4.09	2.43	0	15
SHAREHOLDERS		2.35		
Between		0.64		
Within				
% OF THE MAIN	0.43	0.20	0	0.84
SHAREHOLDER		0.19		
Between		0.04		
Within				
TOTAL % OF MAIN	0.62	0.19	0	0.97
SHAREHOLDERS		0.19		
Between		0.04		
Within				
% OF SHARES ON THE	0.38	0.19	0.03	1
MARKET		0.19		
Between		0.04		
Within				
NUMBER OF WOMEN	1.28	1.10	0	7
DIRECTORS		0.91		
Between		0.62		
Within				
% OF WOMEN DIRECTORS	0.12	0.10	0	0.5
Between		0.08		
Within		0.56		
NUMBER OF INDEPENDENT	5.02	3.73	1	25
DIRECTORS		3.64		
Between		0.84		
Within				
% OF INDEPENDENT	0.46	0.18	0.14	1
DIRECTORS		0.17		
Between		0.06		
Within				
NUMBER OF BOARD	9.94	5.24	2	40
MEETINGS PER YEAR		4.95		
Between		1.75		
Within				
BOARD MEETINGS DURATION	2.28	0.90	0.62	6
PER YEAR		0.86		
Between		0.26		
Within				
TOTAL ASSETS	13.38	2.22	8.70	20.65
Between		2.19		
Within		0.38		

Table 2 shows the main descriptive statistics of the variables used in the analysis: NUMBER OF DIRECTORS is the number of directors for each company, NUMBER OF MAIN SHAREHOLDERS is the number of main shareholders per year, % OF THE MAIN SHAREHOLDER is the percentage of main shareholders (those holding at least 2% of company capital shares) for each company per year, TOTAL % OF MAIN SHAREHOLDERS is the percentage of total capital shares owned by all main shareholders (those holding at least 2% of company capital shares), % OF SHARES ON THE MARKET is the percentage of shares on the market, NUMBER OF WOMEN DIRECTORS is the number of females on the board, % OF WOMEN DIRECTORS is the percentage of females on the board, NUMBER OF

INDEPENDENT DIRECTORS is the number of independent directors on the board for each company at year-end, % OF INDEPENDENT DIRECTORS is the percentage of independent directors on the board for each company per year, NUMBER OF BOARD MEETINGS PER YEAR is the number of board meetings per year, BOARD MEETINGS DURATION PER YEAR is the duration (in average, expressed in hours) of the board meetings per year, TOTAL ASSETS is the logarithm of the company total assets at year-end.
Source: data elaborated by the authors

Table 3: Matrix correlation

	ROA	NUMBER OF DIRECTORS	NUMBER OF INDEPENDENT DIRECTORS	% OF INDEPENDENT DIRECTORS	NUMBER OF WOMEN DIRECTORS	% OF WOMEN DIRECTORS	NUMBER OF MAIN SHAREHOLDERS	% OF THE MAIN SHAREHOLDER	TOTAL % OF MAIN SHAREHOLDERS	% OF SHARES ON THE MARKET	NUMBER OF BOARD MEETINGS PER YEAR	BOARD MEETINGS DURATION PER YEAR	TOTAL ASSETS
ROA	1												
NUMBER OF DIRECTORS	0.01	1											
NUMBER OF INDEPENDENT DIRECTORS	-0.04	0.84	1										
% OF INDEPENDENT DIRECTORS	-0.10	0.29	0.72	1									
NUMBER OF WOMEN DIRECTORS	0.02	0.38	0.29	0.04	1								
% OF WOMEN DIRECTORS	0.02	-0.06	-0.08	-0.12	0.82	1							
NUMBER OF MAIN SHAREHOLDERS	0.09	0	0.04	0.02	0	-0.02	1						
% OF THE MAIN SHAREHOLDER	0.10	-0.26	-0.32	-0.21	-0.03	0.10	-0.40	1					
TOTAL % OF MAIN SHAREHOLDERS	0.10	-0.38	-0.38	-0.21	-0.09	0.09	0.24	0.65	1				
% OF SHARES ON THE MARKET	-0.10	0.38	0.38	0.21	0.09	-0.09	-0.24	-0.65	-1	1			
NUMBER OF BOARD MEETINGS PER YEAR	-0.14	0.36	0.36	0.30	0.13	-0.03	-0.02	-0.27	-0.35	0.35	1		
BOARD MEETINGS DURATION PER YEAR	-0.03	0.35	0.35	0.15	0.15	0.03	-0.16	-0.26	-0.41	0.41	0.25	1	
TOTAL ASSETS	-0.01	0.34	0.43	0.26	0.20	0.03	0.14	-0.25	-0.28	0.28	0.26	0.26	1

Table 3 shows the correlation between the variables used in the model: NUMBER OF DIRECTORS is the number of directors for each company, NUMBER OF INDEPENDENT DIRECTORS is the number of independent directors on the board for each company at year-end, % OF INDEPENDENT DIRECTORS is the percentage of independent directors on the board for each company per year, NUMBER OF WOMEN DIRECTORS is the number of females on the board, % OF WOMEN DIRECTORS is the percentage of females on the board, NUMBER OF MAIN SHAREHOLDERS is the number of main shareholders per year, % OF THE MAIN SHAREHOLDER is the percentage of the main shareholder (those holding at least 2% of company capital shares) for each company per year, TOTAL % OF MAIN SHAREHOLDERS is the percentage of total capital shares owned by all main shareholders (those holding at least 2% of company capital shares), % OF SHARES ON THE MARKET is the percentage of shares on the market, NUMBER OF BOARD MEETINGS PER YEAR is the number of board meetings per year, BOARD MEETINGS DURATION PER YEAR is the duration (on average, expressed in hours) of the board meetings per year, TOTAL ASSETS is the logarithm of the company total assets at year-end.

Source: data elaborated by the authors

Table 4: Panel regression results (random effects)

NUMBER OF DIRECTORS	0.320
	(0.250)
NUMBER OF MAIN SHAREHOLDERS	0.364*
	(0.210)
% OF THE MAIN SHAREHOLDER	6.146*
	(3.404)
TOTAL % OF MAIN SHAREHOLDERS	536.1***
	(201.1)
% OF SHARES ON THE MARKET	542.6***
	(201.3)
NUMBER OF WOMEN DIRECTORS	-0.300
	(0.458)
% OF WOMEN DIRECTORS	0.744
	(4.842)
NUMBER OF INDEPENDENT DIRECTORS	-0.609
	(0.400)
% OF INDEPENDENT DIRECTORS	-3.614
	(5.353)
NUMBER OF BOARD MEETINGS PER YEAR	-0.111*
	(0.0644)
BOARD MEETINGS DURATION PER YEAR	-3.214***
	(0.874)
BOARD MEETINGS DURATION PER YEAR x % OF INDEPENDENT DIRECTORS	4.701***
	(1.673)
TOTAL ASSETS	0.384*
	(0.219)
SECTOR1	3.245**
	(1.368)
SECTOR2	0.354
	(1.536)
SECTOR3	0.398
	(1.234)
T2	-0.360
	(0.321)
T3	-0.255
	(0.347)
Constant	-543.3***
	(201.2)
Observations	504
Prob>Chi2	0.0012

Note: *** p<0.01, ** p<0.05, * p<0.1
(Standard errors in parentheses)

Source: data elaborated by the authors