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Stock Market Reactions to Announcements of Board of Director Appointments: Evidence from Italy

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Abstract

The Board of Directors plays an important role in corporate governance. It is an internal mechanism that controls and monitors the actions of managers and aligns the utility functions between corporate owners and managers. The board of directors performs multiple functions that concern, for example, the replacement of the managers, financial policy, the preparation of strategic plans, and other actions that affect the performance of the firm. The board plays an important role since on the one hand it controls the actions of management and on the other it advises management regarding the strategies to be adopted. In this study, 100 announcements for the appointment to the board of directors of 100 Italian listed public companies during the period 2012-2014 are investigated. The results show a positive reaction within 20 days around the announcement date of the appointments. In four of the six study periods, Cumulative Abnormal Returns (CARs) are positive and statistically significant. The difference between the sub-sample composed of a higher presence of women, non-executives, and independents on the Board of Directors does not seem to perform better than the one composed of a *smaller* presence of women, non-executives, and independents.

JEL codes: G14; G30; G34

Keywords: boards of directors; corporate governance; agency theory; ownership structure; event studies; firm performance

1. Introduction

During recent decades, the academic literature has devoted considerable attention to the issue of corporate governance - ownership structure and board of directors - and its hypothetical

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relationship with the performance of public enterprises, opening up a new field of research known as “law and finance”. Studies of corporate governance have intensified as a result of the numerous financial scandals that have taken place in the world (e.g., Enron, Lehman Brothers, and World-Com in the US and Parmalat in Italy) and which prompted policymakers to intervene in order to regulate more rigorously the exercise of corporate governance².

However, even before the financial scandals and the laws and codes adopted in the various countries around the globe to regulate corporate governance, the debate on the optimal ownership structure, the centrality of the board and the opportunistic behavior of management arising from the relationship between principal and agent, had already been initiated, although primarily in theoretical terms.

Berle and Means (1932) were the first to examine the ownership structures of firms and in particular the problem of the separation of ownership and control, emphasizing the possible divergence between the interests of owners (founders of the company) and those executives managing the corporation's.

Jensen and Meckling (1976) examined the agency costs caused by the possible opportunistic behavior of managers whose utility function may diverge from the interests of the ownership (stockholders). They could manage the resources in an inefficient manner in order to maximize their own self interests.

Fama (1980), starting with the assumption that markets are fully efficient, emphasizes the importance of managerial resources as a monitor of managers' opportunistic behavior. If there exists a managerial market in which skills are traded, it is in the manager's best interest

² The first act of regulation was adopted in the UK with the introduction of the Cadbury Act (1992), subsequently revised by the Combined Code (2003). In 1999, the OECD published *Principles of Corporate Governance*, a document subsequently revised in 2004. In 2002 the Sarbanes-Oxley Act was issued in the US. In Italy the first code of conduct for listed companies dates back to 1999 (“Codice Preda”), subsequently revised in 2002, 2006 and lastly in 2010 a change was made on the subject of directors' remuneration. The last formal review is dated July 2014. For a detailed analysis, please refer to Alvaro, S., Ciccaglioni, P., and Siciliano, G. (2013). *L'autodisciplina in materia di corporate governance*. Quaderni giuridici. CONSOB – Commissione Nazionale per le Società e la Borsa -.

not to depreciate his skills in order to avoid reducing his potential market compensation and incentives. Thus, a manager who fails to maximize the firm's economic value undergoes a depreciation of his own value in the market of human resources.

Fama and Jensen (1983), however, point out that there is not necessarily a monotonically decreasing relationship between agency costs and the share held by managers. With an increase of the stake they own in the corporation, managers could help prevent their dismissal, since it becomes difficult for other managers to take over.

Demsetz (1983) does not believe that there is an appropriate ownership structure for all situations if the value of the firm's assets is to be maximized. As Demsetz (1983, p. 386) observes, "The ownership structure likely to maximize the value of the firm's assets depends on the technology of the tasks required of the firm's labor force, on the desired scale of operation and on the managerial ability of potential owners of the firm. No single ownership structure is suitable for all situations if the value of the firm's assets is to be maximized. In particular, from the viewpoint of the owner(s), the optimal distribution of profits is 100 percent to a single owner-manager only in special circumstances".

Jensen (1986) believed that by reasoning in terms of free cash flows, the debt may limit any opportunistic behavior, thus ensuring greater efficiency. He argued that excess cash resources should be distributed to the shareholders and thereby removed from the discretion of managers, who tend to reinvest them even in the absence of profitable investment opportunities.

Many authors (e.g., Morck *et al.*, 1988; Demsetz and Villalonga, 2001; Earle *et al.*, 2005; Barontini and Caprio, 2006) have analyzed empirically the relationship between ownership structure and firm performance, finding mixed results.

An equally large literature has developed on the relationship between boards of directors and the performance of firms. In various studies, there has been an examination of the relationship between board size and firm performance (Yermack, 1996; Coles *et al.*, 2008) and

between the characteristics of the board (independent, executive, women directors, and so forth) and firm performance (Hermalin and Weisbach, 1991; Agrawal and Knoeber, 1996; Baghat and Bolton, 2008; Adams and Ferreira, 2009).

Yet another strand of literature has focused on the stock market reaction to the appointment of the boards (e.g., Rosenstein and Wyatt, 1990; Adams, Gray and Nowland, 2011).

The goal of this study is to verify whether there is an abnormal reaction of the Italian stock market to the announcements of the board of directors and whether abnormal returns differ according to the characteristics of the board members.

2. Board of Directors: A Literature Review

In the relationship involving ownership structure and control of public corporations, a crucial role may be played by the board of directors. The board of directors of a corporation, among other things, should play a monitoring role on the possible opportunistic behavior of the management of the firm (Fama and Jensen, 1983).

The board of directors performs multiple functions that concern, for example, the replacement of managers, financial policies, the preparation of strategic plans, and other actions that affect the performance of the company. The board plays an important role since on the one hand it oversees and can redirect the actions of management and on the other it advises management regarding the strategies to be adopted due to its wealth of knowledge (Fama and Jensen, 1983).

Firms that aim to have a qualified board should prefer a board of directors who have held multiple positions since they have thereby more experience (Perry and Peyer, 2005). Many empirical studies have examined the relationship between firm performance, board size and the characteristics of the board.

Hermalin and Weisbach (2003) emphasize the existence of an endogenous relationship between the characteristics of the board, the actions of the board, and the firm's performance. They analyzed the economic literature regarding ownership and board structure and how their characteristics can affect firm performance. They mention the notorious surveys demonstrating that there is a negative relationship between board size and company profitability and that both board compensation and board size have a significant relationship with the primary board decisions, such as a CEO replacement. Finally, Hermalin and Weisbach (2003, p. 20) suggest that the board is "...an institution that has arisen endogenously in response to the agency problem inherent in governing any organization".

Agrawal and Knoeber (2013) point out that boards of directors have often been measured on the basis of two characteristics: size and composition. Both theory and empirical evidence have long debated the effectiveness of the optimal size of the board and therefore the relationship between performance and board size. A more diverse board may, on the one hand, be less advantageous because less cohesive and coordinated (Lipton and Lorsch, 1992), whereas on the other it may be more effective as it brings together a greater breadth of knowledge thanks to the diversity of gender and background components. The optimal board size and composition is the one that can maximize the value of the firm by finding the right trade-off between greater knowledge in decisions made and greater ability to make collective decisions (Agrawal and Knoeber, 2013).

Jensen (1993) argues that a smaller board is more effective in carrying out monitoring activities. He recommends that to be most effective a board must be composed of a maximum of seven or eight members. On the same topic, Yermack (1996) empirically investigates the relationship between board size and Tobin's Q and finds that the smallest boards have a positive impact on performance. He analyzed 454 companies in the US between 1984 and 1991 and noticed an inverse relationship between Tobin's Q and board size. An increase in board size

leads to higher costs and a reduction in value for the enterprise. The loss of value for the company, which goes from six to twelve members, is the same as that which is estimated when the board goes from twelve to twenty-four members. Both profitability and operational efficiency decrease with the increase in board size. Moreover, companies that announce a *reduction* in board size actually experience *excess returns* around the announcement date, which is in contrast to what happens to firms that announce an *increase* in board size.

Raheja (2005) asserts that the structure of an optimal board is one that results from the optimal trade-off between maximizing the incentives for insiders to disclose additional information in their possession on the enterprise, minimizing costs for outsiders in design verification and maximizing outsiders' ability to reject unprofitable investment projects.

Coles, Naveen and Naveen (2008), however, studied a sample of 8,165 observations during the period 1992-2001 and observed that board size depends on the complexity of the enterprise and that there is no standard size. Both large and small boards can be optimal for firm value. Thus, the empirical evidence on the relationship between board size and performance has produced mixed results.

Likewise, there are mixed results on the relationship between board characteristics and firm performance. For example, Hermalin and Weisbach (1991) investigated the relationship between the proportion of outsiders and Tobin's Q but could not find any relationship.

Hart (1995) doubts the effectiveness of the board in practice. Assuming that the board is composed of executives, who are members of the management team and non-executives, who are the outsiders, he finds it difficult for various reasons for them effectively to effectively fulfill the role of monitoring. The executives should actually monitor themselves and the non-executive may not be incentivized, since they have no significant financial interests in the firm or because they are involved with other boards and therefore may have little time to take care of the interests of the company.

Agrawal and Knoeber (1996) studied the relationship between insider ownership and firm performance in a sample of American firms in 1987. In this study, seven variables of governance are introduced, including board outsiders. They observed a negative and statistically significant relationship between board outsiders and Tobin's Q.

Baghat and Black (2002) documented that firms with more independent members in the board do not record better performance and that the increase in the numbers of independents on the board is more common in enterprises with weak or poor performance records. Baghat and Bolton (2008), however, by studying a sample of firms during the period 1990-2004, noticed a negative relationship between board independence and operating performance as measured by Return on Assets (ROA).

On the other hand, many researchers have investigated the relationship between board characteristics and performance using the event-study methodology in order to measure the stock market reaction to the announcement of changes in boards. The pioneering study in this area is that of Rosenstein and Wyatt (1990), who analyzed 1,251 announcements during the period 1981 to 1985 and observed that the appointment of an outsider in the board provides a wealth of relevant knowledge and increases the value of the firm. They find a positive reaction from the market, which translates into an increase in stock prices on average by about 0.2% when the company appoints an additional outside director, especially if he/she comes from a financial institution. Instead, on average there is no reaction if the additional member of the board is an insider. Rosenstein and Wyatt (1990) hypothesize that the appointment of independent directors may be interpreted as signaling a change in strategy by companies.

DeFond, Hann and Hu (2005) examined 850 new appointments for the 1993-2002 period of outsider directors with financial accounting experience, findings that the CARs are positive during the three days around the announcement date only when the outsiders are independent.

Perry and Peyer (2005), for the period 1994-1996, analyzed 349 announcements regarding the appointment of new directors, with the result that the average cumulative abnormal returns are negative but not statistically significant for those defined as “sending firms” in which executives hold a lower share ownership and when the board of the sender companies does not have a majority of independent directors. By contrast, however, the CARs are not negative for the sender firms in which the executives hold two or more outside directorships.

Farrell and Hersch (2005) examined 111 appointments of only women directors for the US during the period 1990-1999 and found no significant reaction by the stock market. By contrast, Kang, Ding and Charoenwong (2010) investigated the reaction of the stock market in Singapore using a sample of 53 appointments of women directors made during the period 1994-2004. Between the day of the announcement and the following one they observed positive and statistically significant CAAR equal to 1.22%. Furthermore, Campbell and Minguez-Vera (2010) also observed that cumulative abnormal returns are positive and significant, after studying 47 appointments of women directors in Spain in the period 1989-2001. Interestingly, Adams, Gray and Nowland (2011) did research on 1,126 appointments of outside directors between 2004 and 2006 in Australia and the CARs are positive and statistically significant in the three days around the announcement date. They divided the sample into two sub-samples consisting of 67 announcements of women directors and 1,059 of men directors and noticed that the announcement of outside women directors generates higher, always positive and statistically significant CARs in all time frames observed, unlike what takes place with the appointment of men.

An original and interesting work belongs to Koch, Fenili and Cebula (2011), who researched the reaction of the security prices of Apple, Inc. stock shares during the period of illness of Steve Jobs, founder and CEO of the company. The authors studied nine events during

the period 2004-2009 to test the stock market reaction of the Apple stock, since Steve Jobs was one of the best-known CEOs in the world and “the mind” that had revived the company by increasing its market capitalization from 2.4 billion to 210.1 billion dollars between 1997 and 2010. Many analysts and commentators attributed its growth to Steve Jobs and believed that the company was dependent on its CEOs more than any other company. The impact of the announcements on the price of the Apple securities is mixed and the results achieved do not have a definite explanation. The authors reported almost always negative but never statistically significant cumulative abnormal returns. The only event where there is a negative and statistically significant CARs equal to -10.5% is the day when Steve Jobs took part in the Worldwide Developers Conference and presented the new iPhone with more functions and in the meantime Apple announced a new price strategy. The combination of events makes it impossible to accurately determine which of the two –Steve Jobs' health or his announced new business strategy - is the more significant event. Although they found negative abnormal returns, the authors cannot attribute these results to a single event, and in particular it is not clear which of the events take precedence over the other. Koch, Fenili and Cebula (2011) conclude that Jobs' health had an impact on the market capitalization of the company but that this impact was not always negative and also not so strong as many believed.

More recently, however, Baghat and Bolton (2013) studied the impact of the Sarbanes-Oxley Act on the relationship between corporate governance and performance during the period 1998-2007, on a sample of 13,000 firm-year observations, and found a negative relationship between board independence and operating performance for the period 1998-2001 and a positive and statistically significant relationship for the period 2003-2007. In addition, they also tested the reaction of the market through market-adjusted cumulative abnormal returns and discovered that during the three days around the announcement date the CARs were positive (0.48%) for the companies that complied with the Sarbanes-Oxley Act and increased the

independent directors. This finding is consistent with the Renas and Cebula (2005) prediction that public corporations shown to be visibly complying with the Sarbanes-Oxley Act would reap benefits for their shareholders.

In Italy, the situation is arguably much more complex than in the U.S. Most companies have a high ownership concentration and both the share of independents and women is lower than in most other countries. The presence of women on boards is still marginal/minimal even if the relative share of women board members has grown over the last ten years. Interestingly, in 2011 Parliament passed a law which provides that from 2015 a third of the boards must be composed of women.

Undoubtedly, Italy has accelerated the pace of its reforms in the realm of corporate governance, starting from the Legislative Decree of 1998 (also known as Draghi Reform) and then the Corporate Governance Code of 1999, including its 2011 and 2014 revision. The Corporate Governance Code in its present form recommends the adoption of a set of best practices regarding governance with the inclusion of the principle “comply or explain”.³

The numerous efforts made regarding regulation and the compliance with the Code of almost all listed companies have not however eliminated the skepticism that is apparent in much of the literature on the quality of Italian corporate governance and this may be due to the gap between the level of compliance and what is stated in the report (Bianchi *et al.*, 2011).

Bianco, Ciavarella and Signoretti (2011) investigated the gender composition of the boards of directors of listed companies in Italy and reported that only 6.8% of the boards is composed of women and that 55.6% of the companies, in which there is at least one woman, operates in the Information Technology sector and high-tech industries. In addition, they observed that in 47.3% of the companies in which at least one woman sits on the board there is

³ Please refer to the study by Alvaro, S., Ciccaglioni, P., and Siciliano, G. (2013). L'autodisciplina in materia di corporate governance. *Quaderni giuridici*. CONSOB – Commissione Nazionale per le Società e la Borsa -.

a family control model. The analysis did not suggest any relationship between the presence of women in boards and Tobin's Q; however, it was found that the presence of women on boards increases the number of board meetings, especially in companies that have a non-family ownership.

Among the studies on the Italian context, the contributions of Barontini and Caprio (2002), Belcredi and Rigamonti (2008) and Celenza, Manfredi and Rossi (2014) can be highlighted. Barontini and Caprio (2002) examined the relationship between the composition, the turnover of the board, and the performance of a sample of listed companies in Italy over the period 1976-1996. The results show, for the sample of firms studied, that there is a positive and statistically significant relationship between board size and firm size, while the relationship between board size and ownership concentration is always statistically significant and negative, much like the relationship between board turnover and firm performance.

Belcredi and Rigamonti (2008) analyzed the relationship between ownership structure, board structure and performance of a large sample of Italian listed companies, finding that board size is larger in bigger firms and when the parent company holds a smaller share of cash flow rights. They also observed a strong relationship between the structure of the board and the proprietary model as well as between ownership concentration and firm valuation.

In other words, family firms, or at least high ownership concentration firms, tend to compose the board of directors “on a human scale”.

Celenza, Manfredi and Rossi (2014) researched the relationship between the ownership structure, the board of directors, and the performance of a sample of listed companies in Italy for the period 2002-2012. In addition to the performance measures widely used in the literature, the authors also included the efficiency of intellectual capital as an additional variable. The results obtained do not appear to be particularly significant. The relationship between performance and the fraction of women directors alternates the signs and when it is positive it

is highly significant. Greater interest seems to be found in the statistically significant positive relationship between the ROA and non-executive directors and between the ROA and the third block-holder for two sub-periods out of four. The relationship between performance and board size is almost always negative, but, with the exception of one sub-period, it is never statistically significant.

3. Sample and Survey Methodology

The research sample in the present study consists of 100 announcements of boards of directors made by 100 companies listed on the Italian stock market during the period 2012-2014. Most of the announcements were made between April and June of each year. The information on the announcements was acquired from various sources and subsequently the minutes of the Board of Directors of each company in the sample were checked for verification.

For the construction of the selected sample, the following criteria were adopted:

- a) The availability of the announcement date⁴ of the appointment of the Board and the possibility to observe the data found on the corporate minutes;
- b) The availability of data on the composition of the board, namely: size of the board, the number of independents on the board, the number of executives on the board, the number of non-executives on the board, the number of women on the board, and the number of men on the board;
- c) The availability of the time series of stock prices for each company included in the sample whose data were acquired by *Datastream*;

⁴ To better identify the announcement, different sources of information were chosen and in particular "Il Sole 24 Ore" - the leading Italian financial newspaper - the website of Borsa Italiana Spa, the sites of the individual companies, and the minutes of the boards of directors. The date of the announcement in these types of investigations is not so easy to identify because very often, even before the appointment, there are "rumors" about the possible appointed candidates. This aspect is very common especially in companies where the Ministry of Economy and Finance is a shareholder and the appointment of board members is politically discretionary. Typically in these companies the first names that appear in the press are the ones that are likely to be "burned" because the final choice falls on other names.

d) Sector diversification (industry, finance, services, and so forth) for listed companies.

The final sample investigated is fairly equally distributed with respect to the number of announcements per year: 37 (2012), 29 (2013) and 34 (2014). Almost all of the announcements (91 out of 100) take place within the months of April, May, and June of each year. Only nine cases out of the 100 the announcement falls outside that period. Regarding the sectoral distribution of the sampled companies, they belong to about 70 different micro-sectors.

Lastly, in the construction of the sample there was an attempt to carefully check whether there were any other kinds of announcements on the same date (e.g., dividends, changes in business strategy, M&As, and so forth) for the same company in order to avoid the “contamination” of the announcement. If on the same date there is more than one announcement relating to different events, it becomes difficult to separate which event prevails over the other; therefore, those companies that had several announcements were removed from the final sample.

The abnormal returns were estimated using the methodology proposed by Fama *et al.* (1969) and Warner, Watts and Wruck (1988)⁵:

$$R_{it} = \alpha_i + \beta_i r_{m,t} + \varepsilon_{it} \quad (1)$$

where α_i and β_i are the estimated parameters for each stock, $\varepsilon_{i,t}$ the random term or residual of the estimate, $R_{it} = \log_e(P_{it}) - \log_e(P_{i,t-1})$, and where P_{it} , e , and $P_{i,t-1}$ indicate the daily closing prices adjusted to time t and time $t-1$, and $r_{m,t}$ the return of the benchmark portfolio, respectively, which in the present work was assumed to be equal to the FTSE MIB⁶.

⁵ The Market Model has been used in several works of this type (e.g. DeFond, Hann and Hu, 2005; Perry and Peyer, 2005; Kang, Ding and Charoenwong, 2010; Koch, Fenili and Cebula, 2011; Baghat and Bolton, 2013).

⁶ The FTSE MIB is a value-weighted index and is the main reference index for the Italian equity market. This index consists of stocks of primary liquidity and dimension belonging to different sectors of the Italian stock market.

The values of α_i and β_i were estimated using the time window (-250, -11), including 240 observations (Brown and Warner, 1985). The choice of a longer time horizon is more accurate and reduces the risk of biased estimates of the parameters α_i and β_i , which were both assumed to be stable over time. The hypothetical instability of the coefficients is a real risk especially in equity markets that are still undersized.

Moreover, the decision to estimate the parameters by considering the window that ranges from 200 to 250 days before the announcement date is in line with the approach used in similar studies (e.g., Warner, Watts and Wruck, 1988; DeFond, Hann and Hu, 2005; and Perry and Peyer, 2005).

The Abnormal Returns (ARs) were calculated as the difference between the expected returns and the actual values for t (-10, +10):

$$AR_{it} = R_{it} - \alpha_i - \beta_i R_{mt} \quad (2)$$

from which it is possible to aggregate the individual AR values using the following formula:

$$\overline{AR} = \frac{1}{N} \sum_{i=1}^N AR_i \quad (3)$$

and then the CAR:

$$CAR_{it} = \sum_{t=-10}^{t=10} AR_{it} \quad (4)$$

For the statistical significance of the results, the method suggested by Brown and Warner (1985)⁷ with the relative standardization of the CARs was adopted, considering six different time windows that contain both the event and the pre- and post-event: [(-10, 0); (0,5); (-5, 5); (0, 10); (-10, 10); (-1, 1)].

⁷ Brown and Warner (1980 and 1985) suggest calculating the t-test as the ratio between the average AR and the relative standard deviation of the estimation period that is earlier than the verification period in order to avoid increases in variance that may occur around the announcement period.

The announcement of the board could be either good news, bad news, or neutral news; therefore, the market reaction cannot be known *a priori*. Compared to other studies, in this paper the entire board is examined as a block, without any distinction based on the elements that compose that block.

In other words, it is not possible to discriminate the reaction according to the variables considered in the event (size, number of independents, number of executives, number of non-executives, number of women on the board, and number of men on the board). However, to avoid this problem, a second analysis can be used in order to understand which of the variables considered in the announcement are the most significant to the market valuation. In particular, the entire sample was reorganized according to the individual variables and then divided into two “portfolios” in decreasing order, and, subsequently, a test on the average for each variable was undertaken.

For example, the CAR is divided into two sub-samples that include 50 companies ranked on the basis of the variable board size and the difference between the CARs of firms with a larger board and the CARs of companies with a smaller board size is tested in order to measure whether the difference is statistically significant, and so on for the other variables.

In this study, the following hypotheses are formulated:

H1. The announcement of the board is news that produces a reaction by the market, which can be either positive or negative.

In accordance with the reasoning given by Lipton and Lorsch (1992) and Jensen (1993) and with the empirical evidence of Yermack (1996), the second hypothesis is formulated:

H2. The difference between the CAR of firms with a larger board and the CAR of firms with a smaller board is negative and statistically significant, such that:

$$CAR_{L_BS} - CAR_{S_BS} < 0.$$

Kang, Ding and Charoenwong (2010), Campbell and Minguez-Vera (2010) and Adams, Gray and Nowland (2011) observed positive and statistically significant cumulative abnormal returns in three different countries (Singapore, Spain, and Australia) if women directors are appointed. Bianco, Ciavarella and Signoretti (2011), however, found no such relationship between the presence of women on the boards and Tobin's Q, but observed that the presence of women increases board meetings.

In accordance with the results present in the literature and with the new legislation which came into effect in Italy regarding the compulsory presence of women on the boards, since the diversity of gender and profession is an indicator of the enhanced effectiveness of boards, the third hypothesis is formulated:

H3. The difference between the CAR of companies with a board comprised of a larger relative representation women than those of companies with a board composed of a smaller relative representations of women is positive and statistically significant:

$$CAR_{H_WoB} - CAR_{L_WoB} > 0.$$

Agency theory suggests that non-executive directors provide greater control and monitoring on executives and help to realign the interests of managers with those of shareholders (Fama and Jensen, 1983). International best practices and the Corporate Governance Code in Italy emphasize the usefulness of non-executives both in relation to their professionalism and to their propensity to realign the divergences between executives and the ownership/shareholders. In other countries, non-executive directors are treated as outsiders because they generally have no dealings with the company and can effectively play the role of “controllers” of the actions of the executives. In Italian family businesses, executive positions are held mostly by family members (Belcredi and Rigamonti, 2008). The results of the international literature on the relationship between the number of outsiders (non-executive) and

firm performance appear to be mixed [for example, Agrawal and Knoeber (1996) and Yermack (1996) found negative results].

Following the tenets of agency theory and the recommendations of the Corporate Governance Code, in this study the following two additional hypotheses are formulated:

H4. The difference between the CAR of companies with a board composed of a greater number of executives and those of companies with a board made up of a smaller number is negative and statistically significant: $CAR_{H_EX} - CAR_{L_EX} < 0$.

H5. The difference between the CAR of companies with a board composed of a greater number of non-executives and those of companies with a board made up of a smaller number is positive and statistically significant: $CAR_{H_NEX} - CAR_{L_NEX} > 0$.

Rosenstein and Wyatt (1990) assert that the appointment of an additional outsider to the board increases the value of the firm since it could signal a change in strategy. DeFond, Hann and Hu (2005) found a positive CAR if the outsiders are independent and Adams, Gray and Nowland (2011) found positive abnormal returns if the outsiders are appointed. Baghat and Bolton (2013) observed that during the three days around the announcement date the CAR are positive (0.48%) for companies that comply with the Sarbanes-Oxley Act and increase the independent directors.

Consistent with the results of previous studies and with the Codes adopted in various countries, including Italy, where it is believed that independents express an “independent and unbiased judgment”, thus improving the action of control and monitoring, the sixth and final hypothesis is formulated:

H6. The difference between the CAR of companies with a board composed of several independent members and those of companies with a board composed of a smaller number of independents is positive and statistically significant: $CAR_{H_IND} - CAR_{L_IND} > 0$.

4. Results and Discussion

Table 1 shows the descriptive statistics of the observed variables. The total number of members of the board is 1,014 during the period examined, with 801 being men and 213 being women. The size of the boards varies from a minimum of 3 to a maximum of 25 members. The average number of board members is 10.14 (the median is 9.00). The men who sit on the boards, as expected, clearly outnumber the women: 78% of the members of the boards are men compared to 22% being women.

The data on board size are consistent with the total number of listed companies in Italy. Indeed, the Consob report (2013) shows that the average number of components/board members is 9.9 and the boards range from 2 to 25 members in size.

Please insert table 1 about here

The number of independents varies from 1 to 16 members with a mean value equal to 4.72 (the median is 4.00). In addition, 46% of the components of the sample is made up of independents and the total is 472 members. In this case as well, the data are similar to the entirety of listed companies in Italy, where there is an average of 4.5 independents with a relative weight of 43.9% (Consob, 2013).

The number of non-executives outnumbers the executives. As expected for a country with a high ownership concentration, the power is concentrated in the hands of the company's major shareholders or in the hands of "trusted people" designated by them. However, in the sample examined there are 256 executives as opposed to 290 non-executives and the median value is the same for both (2.00).

Table 2 contains data on the cumulative abnormal returns (CAR) for the six time windows observed. The cumulative abnormal returns are always positive and statistically significant in 4 windows out of 6.

Please table 2 about here

The greatest significance is observed, however, within 3 days around the announcement date (1.20%) and within 11 days around the date (1.01%). Within 5 days after the announcement the CAR is equal to 0.68%, and during the whole period of 20 days around (ten days before and ten days following) the announcement date, the CAR is 0.59%. At the date of announcement the average abnormal returns are also positive but not statistically significant (0.27%).

From the standpoint of informational efficiency, however, it seems that the market anticipates the reaction compared to the announcement date (Figure 1).

Please insert figure 1 about here

Two days before the date of announcement of the boards, the market response is positive and the trend continues up until the following two days. The CAR maintains the trend for the whole period of 20 days around the announcement date. An analysis of the data clearly shows that the market reacts positively to the announcement of the boards, which could be consistent with the signaling hypothesis. The announcement of a new board might imply a company's change of strategy and decision inconsistency as compared to the past. Furthermore, it becomes difficult to establish how the individual members of the board can affect the reaction of stock prices, although it is appropriate to point out that 472 out of 1,014 appointments are independent (46.54%) and 28.59% are non-executive members. The results could therefore be consistent with the line of reasoning given by Rosenstein and Wyatt (1990) on the hypothesis of a signaling market.

Therefore, hypothesis 1 can be accepted since there is a reaction by investors. It can be excluded that the market reacts differently in the three years examined because there were no apparent statistically significant differences from the AAR of the three years. The test on the means (not shown here) does not report any significant difference between 2012 and 2013, 2012 and 2014 and between 2013 and 2014.

Table 3 illustrates the results of the second analysis, which seeks to test hypotheses H2-H6.

The CARs of firms that have a larger board are negative whereas the CARs of companies that appoint a smaller board (≤ 9) are positive and equal to 1.32%.

Please insert table 3 about here

The test between the means of the two sub-samples does not report any statistically significant difference/discrepancy. The market reacts positively when fewer people sit on the board, in line with the arguments of Jensen (1993) and with the empirical evidence of Yermack (1996). Therefore, hypothesis 2 cannot be rejected.

Companies that appoint more men on the board obtain positive CAR (3.20%) as compared to those companies in which the male presence is lower (-2.02%), and this difference is statistically significant at the 5% level (rejects the null hypothesis at the 95% confidence level).

More women on the board do not increase company values, but on the contrary seem to reduce them. The sub-sample made up of more women generates a negative performance (-2.20%), and the one in which there are fewer women achieves a particularly positive performance (3.40%). The difference between the means is statistically significant at the 5% level.

In contrast to the results obtained by Kang, Ding and Charoenwong (2010), Campbell and Minguez-Vera (2010), and Adams, Gray and Nowland (2011) and consistent with the reasoning given by Bianco, Ciavarella and Signoretti (2011), this study does not show any substantive improvement in terms of market response when more women sit on the boards. The balance between the two genders is not rewarded by the market. Hypothesis 3 must therefore be rejected.

The executives do not seem to guarantee better performance as compared with non-executives and as compared to the sub-sample in whose boards there are fewer executives. The sub-sample made up of the highest number of executives seems to record a negative CAR of -2.00%, while the CAR of the portfolio consisting of fewer executives records positive CAR equal to +3.18% and the difference between the two means is statistically significant at beyond the 5% level. The results obtained on the executives, although contradictory, seem to be consistent with the assumptions of the agency theory. On the one hand, it emerges that the portfolio made up of more executives performs worse whereas on the other hand it emerges that the portfolio consisting of a smaller number of non-executives records higher CAR, although the difference is not statistically significant. Therefore, with regard to the results achieved on the non-executives, they might be more consistent with the arguments of Knoeber and Agrawal (1996) and Yermack (1996), who find a negative relationship between the number of outsiders (non-executive) and firm performance. Consequently, Hypothesis 4 can be accepted, but H5 must be rejected.

With regard to the sixth and final hypothesis, it should be noted that the portfolio with a higher number of independents records a negative CAR equal to -1.05%, whereas the sub-sample corresponding to fewer independents obtains positive CAR (2.23%), although the difference is not statistically significant at the 5% level. The results of this study would seem to be in contradiction to those of Rosenstein and Wyatt (1990), DeFond, Hann and Hu (2005), Adams, Gray and Nowland (2011), and Baghat and Bolton (2013) and closer to the positions of Agrawal and Knoeber (1996) and Yermack (1996). In any case, Hypothesis 6 must be rejected.

5. Conclusion

The goal of this paper is to analyze a sample of 100 announcements regarding the appointment of the boards of directors of listed companies in Italy during the period 2012-2014. The empirical analysis is divided into two stages. In the first, all the announcements are analyzed using the event study methodology and considering six time windows around the announcement date. The results obtained lead to the conclusion that the market reacts positively to the announcement of the boards and therefore they are likely to be consistent with the *signaling hypothesis*.

In the second stage, however, the sample has been divided into two sub-samples of 50 announcements each, constructed after having reordered the variables examined in decreasing order and also after having conducted a test between the means of the CAR. The results reported in this second step of the analysis lead to the conclusion that the stock market does *not* react positively when more women sit on the board and that the presence of men guarantees higher CAR. Similarly, when more executives sit on the board, the market reacts negatively, just as it reacts negatively when the boards are occupied by a greater number of independents. Lastly, the non-executives do not seem to guarantee the desired effect. When the number of non-executives on the board is higher, the CARs are lower than when fewer non-executive members sit on the board.

The results obtained seem to be consistent with the signaling market hypothesis. However, they suggest the need for further studies in order to verify the extent to which women, independents, and non-executives do not (or do) truly represent a significant element for the board and create implications for the value of the firm.

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Table 1. Descriptive statistics for the selected variables

Board Composition	Average	Median	S.D.	Min	Max	Total
Size	10.14	9.00	3.60	3.00	25.00	1,014.00
Men	8.01	7.00	3.13	2.00	20.00	801.00
% Men	0.78	0.78	0.11	0.43	1.00	78.47
Women	2.13	2.00	1.20	0.00	5.00	213.00
% Women	0.22	0.22	0.11	0.00	0.57	21.53
Executive	2.56	2.00	1.42	0.00	7.00	256.00
% Executive	0.27	0.27	0.14	0.00	0.60	26.59
Non-Executive	2.93	2.00	2.26	0.00	15.00	290.00
% Non-Executive	0.28	0.28	0.18	0.00	1.14	28.29
Independent	4.72	4.00	2.53	1.00	16.00	472.00
% Independent	0.46	0.43	0.15	0.17	0.83	45.69

Table 2. Abnormal Returns and Cumulative abnormal returns (CAR)

The Table shows the results of the event study for 100 announcements of board of directors in the period 2012-2014. Abnormal Returns are calculated with the OLS market model using as “market portfolio” – FTSE MIB-. Regression parameters are estimated using the procedure from $t = -250$ to $t = -11$, where $t = 0$ is the day the board is announced. The test of significance is calculated using the Brown and Warner (1985) procedure. T-test and Z-test significance at the 10%, 5% and 1% levels are denoted by *, ** and ***, respectively.

Event window	CAR	T test	Z test	Pos/Neg
(-5,5)	1.01%	1.48	3.05***	55:45
(0,5)	0.68%	4.47***	2.72***	61:39
(0,10)	0.00%	0.01	1.52	52:48
(-10, 0)	0.85%	2.03**	0.85	46:54
(-10,10)	0.59%	1.42	1.80*	51:49
(-1,1)	1.20%	3.97***	3.43***	56:44

Table 3. Cumulative abnormal returns (CAR) for portfolio and variables

Panel A	(1)	(2)	(3)	(4)
Board size	Biggest (≥ 9)	Smaller (≤ 9)	Difference	T test
CAR	-0.14	1.32	-1.45	0.58
Panel B	(1)	(2)	(3)	(4)
	High	Low	Difference	T test
% Men				
CAR	3.20	-2.02	5.22**	2.11
% Women on board				
CAR	-2.20	3.40	-5.62**	2.28
% Executive				
CAR	-2.00	3.18	-5.17**	2.09
% Non executive				
CAR	0.41	0.77	-0.37	0.15
% Independent				
CAR	-1.05	2.23	-3.28	1.31

Figure 1. Trend AAR and CAR in the window $t - 10, 10$

