

DOES CORPORATE GOVERNANCE REALLY MATTER FOR FIRMS PERFORMANCE? EVIDENCE FROM ITALIAN IPOS MARKET

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Abstract

During recent years, corporate governance has received an increasing attention in the academic debate due to several scandals in financial world and consequent changes in the regulatory framework. Through this paper, we aim to take part in the stimulating debate about the relation between corporate governance and performance. Previous literature on this topic provided a solid theoretical framework for our research. This paper contributes to this investigation with an analysis of the Italian market, by the examination of the relation between the market performance of Italian IPOs and their governance structure. In particular, we find evidence of a positive relation between governance, which we measured by a new and original governance index made by 40 provisions, and IPOs performance occurred in the Italian market during period 1998-2008.

Keywords: Corporate Governance, IPO, Underpricing, Underperformance

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1. Introduction

During recent years, corporate governance has received an increasing attention in the academic debate due to several scandals in financial world and consequent changes in the regulatory framework. Through this paper, we aim to take part in the stimulating debate about the relation between corporate governance (CG) and performance. Previous literature on this topic, provided a solid theoretical framework for our research. The analysis by Gompers, Ishii and Metrick (2003) is one of the various researches on the relation between CG and performance. Their analysis is based on the construction of a twenty-four-provision index for corporate governance; then they matched this index against several performance indicators. Similarly to Gompers et Al., Brown and Caylor (2004) built a governance index including more provisions and compared their results with those from Gompers et Al. Both studies highlighted the positive impact that better governance has over firms' performance. This paper contributes to this investigation with an analysis of the Italian market, by the examination of the relation between the market performance of Italian IPOs and their governance structure. In particular, we

find evidence of a positive relation between governance, which we measured by a new and original governance index made by 40 provisions, and IPOs performance occurred in the Italian market during period 1998-2008. The paper proceeds as follows: Section 2 provides a brief review of previous literature on corporate governance. Section 3 contains a review of the characteristic of the IPOs market. Section 4 describes the methodology used in this research, through the rationales used to construct the governance index and the description of IPOs performance measurement. Section 5 contains the results of our analysis, providing evidence of the existence of a relation between the governance structure and stock performance of Italian IPOs over the last decade. Section 6 concludes.

2. Literature review on Corporate Governance

Economic literature has already defined the critical role that corporate governance can perform to improving the efficiency of the economic system and thus contribute to economic growth. For the most traditional literature, the issue of corporate governance focuses on the key issues arising from the

separation between ownership and management (Berle, Means, 1932), along with other issues that affect the influence that different components of governance can determine on business performance (Hermalin and Weisbach, 2003). Among the multiple mechanisms of corporate governance, the board is of particular importance. This body helps to mitigate the weaknesses of other governance mechanisms, as it constitutes a key tool to monitor the behavior of firm's managers and protect the interests of shareholders (Andres and Vallelado, 2008). There are several Authors that have investigated over time the characteristics of the board, through the assessment of various empirical studies that have shown conflicting results among them: several studies have analyzed the interaction between board size and financial performance (Jensen, 2005; Linck, Netter and Yang, 2008). Others scholars have considered if the composition of board between inside and outside directors can influence firms' performance (Adams and Mehran, 2004). A number of recent studies have considered if the presence of so-called CEO-duality (Brickley, Coles, Jarrell, 1997; Pi and Timm, 1993), may have the same effectiveness. Moreover, other studies have focused more attention about the structure and functioning of board, including the assessment of the number of meetings held during a year (Mace, 1986; Conger et al., 1998; Vafeas, 1999), the presence of committees aimed at ensuring a effective managing of the most complex issues that characterize banks' governance (Klein, 1998; John, Senbet, 1998; Davidson, Pilger, Szakmary, 1998; Shivdasani, Yermack, 1999). Consistent with the studies that have enlarged in the analysis of various characteristics of the board and other governance characteristics, in this paper we take into account various governance provisions, in order to understand how these can affect IPOs market performance.

3. The analysis of Italian IPOs performance

The listing process represents a big challenge for firms willing to become widely traded companies, and generally it culminates in an IPO. By this meaning, the listing process absorbs many resources and can be a high-stress period for entrepreneur; especially young firms are subject to market assessment and whims of investors. Not surprisingly, shareholders place their securities when markets are (over) optimistic and liquid. The literature strongly supports the idea that companies are listed taking advantage of favourable market condition: Loughran and Ritter (1995) baptise these temporary periods "window of opportunity". Thus alternate phases of "hot" and "cold" markets generates clusters of IPO. The analysis of the time series of IPO volumes highlight that it reflects favourable market condition (Dalle Vedove, et al., 2005). According to Lowry (2003) positive market momentum attracts additional investors in the market

and increase the demand for share. Lowry and Schwert (2002) in an analysis of US market highlight the strong positive relation between a significant performance in initial returns and subsequent IPOs volume. This generates a lead-lag relation between IPO initial returns and subsequent volume of issues. Their research also provided evidence of the negative correlation between a positive market performance and the cancellation of filed issues. As the Italian market is mainly composed by smaller firms (compared to other international market), and that most of them are family controlled firms, Borsa Italiana has invested many efforts to attract new firms to the listing, by creating new markets and segments and revising corporate governance rules, allowing smaller enterprise to list on the market.

Valuing an IPO is no different from valuing any other financial securities. To analyse an IPO is possible to use common methods like discounted cash flows and comparable firms' analysis, but generally, limited amount of historical data of firms limits this method. The best-known pattern associated with IPO is a significant initial return, which means that the price at the end of first trading day is significantly higher than the offer price (Stoll and Curley, 1970; Ibbotson, 1975; Reilly, 1977). Underpricing exists in every nation with a stock market, although the amount of underpricing varies from country to country. The figure 1 contains the graphical evidence of the underpricing phenomenon as it occurred in Italy over the last decade. The chart highlights how most of the firms presented a positive underpricing. The IPO set analysed in this research reveal an average initial return of 6,24% percent over 158 IPOs in 10 years. It also highlights that the 50% of firms registered a positive or null underpricing, while only the 23,5% registered a negative underpricing. This result is in line with Ritter's results who calculated it for the US securities market finding an average return of 18,8 percent (Ritter, 2008).

Another facet of IPO that has been deeply reviewed by literature during the last years is the stock lower price performance in a period after the offering (Asquith, 1983; Agarawal et al., 1992; Loughran and Vijh, 1997). Although efficient markets proponents would argue that there is no difference between an IPO and other stocks after the issue, several studies demonstrate the peculiar aspect of IPOs in the long-run, and confirm the importance of underperformance analysis (Ritter, 1991; Loughran and Ritter, 1995; Barber and Lyon, 1997).

4. Methodology

4.1. The construction of the Corporate Governance Index

The majority of researches in corporate governance maintain the existence of a relationship between corporate governance and firms' performance. In this

paper, we develop an analysis of corporate governance for Italian IPOs market. This research intends to analyse a broad index of corporate governance, so it is fundamental to proceed to a review previous studies on this topic. An important research on corporate governance was developed by Gompers et Al. (2003) who analysed an average of 1500 firms from September 1990 to December 1999. Their dataset includes 24 different provisions calculated for each company. Although most of these provisions are directly related to management's option to resist to a hostile takeover, such as "poison pills", "golden parachute" or more prosaic methods such as supermajority to approve mergers, this is one of the first researches in this sense. Gompers' construction of the index is straightforward: for every matched provision a firm earns one point. This simple scoring scheme, which is adopted, as well, in this paper, does not attempt to differentiate between provisions, but has the advantage of being transparent and easily reproducible. The governance index constructed as described above was named G-Index. As it is a sum of score for each provision, it varies from zero to 24. Their research maintains that firms with fewer shareholders right have lower firm valuation. Subsequent to the analysis by GIM, other authors built similar indexes. Brown and Caylor (2004) built a larger index based on 51 provisions, and coded the scoring system as Gompers. Their research considers 2327 firms with scores that varies from zero to 51, but none of the firms scored more than 38. Brown and Caylor selected several indicators to use as firm performance meter. They selected the three operating performance adopted by GIM, the Tobin's Q as selected by other researchers¹ and two measures of shareholders payout, dividend yield and share repurchases, respectively used by Fenn and Liang (2001) and Dittmar (2000). Their research highlighted how firms with better corporate governance, measured by larger Gov-Score Index, had better performance. This means those firms have higher return on equity, higher profit margins, are more valuable, pay out more cash dividends and repurchase more shares from their shareholders. In contrast, firms with poorer governance, as measured via lower Gov-Scores, have lower returns on equity, lower profit margins, are less valuable, pay out less cash dividends, and repurchase fewer shares. Opposite to these researches is the conclusion argued by Core, Guay and Rusticus (2006) whose provides an analysis of corporate governance and stock returns. In their analysis, they analysed the G-index, as proposed by Gompers, against operating performance. They choose the return on asset (ROA) as a performance indicator. As suggested by Barber and Lyon (1997) this is a more powerful measure of

operating performance. Core et Al (2006) evidence is not consistent with a causal relation between governance and returns.

4.2. Definition of provisions for corporate governance

Starting from the literature review, and considering the framework defined above, this paper applied forty provisions to newly listed firms on the Italian Stock market. The literature review provided above gives an idea of how an effective index of corporate governance should be constructed, and which are the main issues of previous researches. This section provides an explanation for each provision and identifies previous research on the same topic. This gives provision a strong literature support.

Provisions cover four main areas in firms' governance, which are:

- Boards of directors valuation (provisions 1 to 16)
- Shareholders/creditors protection (provisions 17 to 24)
- Remuneration schemes (provisions 25 to 32)
- Disclosure and internal dealing provision (33 to 40)

The provisions definition and literature support:

1. **Board of Directors Size:** Literature² seems to be coherent maintaining that a smaller board of directors is more efficient than a larger one. A medium size board could be more effective than a bigger one this research considers a board composed by 6 to 15 members optimal.
2. **Board of directors Composition:** The presence of independent non-executive directors on the board is widely considered as way to protect shareholders' value as well as other stakeholders. Literature³ maintains they reduce the agency costs associated with the separation of ownership and control, through the creation of appropriate employment contracts and the subsequent monitoring of managerial behaviour. This provision assigns a score to those firms in which the board is composed by more than 50 percent of independent directors.
3. **Board of Directors Annual election:** Board composition is a representation of shareholders' majority at the nomination. After that moment, any changes in ownership structure modify this situation, and may lead to a clash between shareholders' perspective and board management. A new election allows current shareholder to choose managers that will drive the firm according to their expectations. The Italian law establishes the duration of appointment up to three years, after which period the board decade.

¹ Demsetz and Lehn (1985); Morck, Shleifer and Vishny (1989); Bebchuck, Cohen and Ferrell (2009); Giovannini (2010).

² Jensen (1993), Lipton and Lorsch (1992), Yermack (1996), Hermalin and Weisbach (2003).

³ Fama (1980), Fama and Jensen (1983), Kaplan and Reishus (1990).

In any case ceasing directors could be re-elected. The Italian law leaves freedom of movement to firms, which could amend these rules. Companies, in their statute, can choose a shorter term for re-election and establish rules for (re-)election. In this paper, in accordance with US and UK practice, we consider a term of one year a good compromise between governance stability and the possibility to replace inefficient management. This term assure a strong power into the hand of shareholders avoiding unpunished behaviours.

4. **Board of Directors meeting:** The association between board meeting frequency and firms' performance is not a priori clear⁴. In this paper the analysis of board of directors meeting considers a monthly appointment to be reasonable. Analysed firms, in contrast, showed that disclosure on foreseen meeting is rare; in those cases where a minimum number of meetings is expected, it is rather far from what this research expects.
5. **CEO's interests in conflict:** Literature maintains that a conflict of interest arises when an executive, an officeholder or even an organization encounters a situation where official action or influence has the potential to benefit private interest. For what concern CEO conflicts of interest the Italian code of corporate governance requires to explicitly disclose information of possible conflict. In this research the focus is on the possible conflicts of interest of CEO, which is the main planner and executor of corporate strategy. For this reason the absence of stated conflicts of interest is a positive aspect for firms.
6. **CEO duality:** Literature is focusing on the debate whether is better to have one person to fulfil the CEO position and to be the chairman of the board of directors at the same time, rather than give the two positions to different people. In this paper a separation between the role of CEO and chairman is considered a positive aspect.
7. **Lead Independent Director:** The New code of corporate governance strongly leans toward the identification of a lead independent director. The new regulatory framework highlights the importance that a public company has an individual who is an independent director to chair the executive sessions of the board. Perhaps the most essential tool for establishing independence between executives and outside board members is the creation of a budget that provides the board financial independence. For the reasons mentioned above, firms appointing a LID were scored a point.
8. **Busy Board:** Fich and Shivdasani (2006) in their research analysed the busyness of directors.

Basing on previous literature of reputational capital, they argue that the number of boards that outside directors sit on is tied to the performance of the firms in which these directors are incumbents, either as CEOs or as outside directors. Basing on the literature research in this paper the absence of a busy board is a positive characteristic. For this reason, those firm in which, on average, directors held less than three directorships gained a score.

9. **Disclosure of code for conflicts of interest:** Literature since many years studies conflicts of interest in different fields. Several problems arise in those situations in which a conflict of interest is recorded. For this reasons, the governance regulation promoted by Borsa Italiana maintain the importance of a disclosure of conflicts of interest code. According to this provision, a firm that clearly highlights its behaviour in dealing with potentially conflictive operation is desirable. When attributing scores in this paper a clearly stated code of conduct worth one point.
10. **Internal Dealing Code:** Since July 2002, Borsa Italiana requires all publicly traded companies in the Italian stock market to adopt a self-regulation code on insider dealing satisfying some minimum requirements. The publicity of internal dealing operation concern with allowing general public to obtain information on managers' perspective.
11. **Managers' Education:** It is easily predictable that a higher level of managers' education increase firms' performance. Basing on the literature⁵ review in this paper we marked a score for those firms in which most of the managers held an MBA or equivalent diploma.
12. **Board meeting attendance:** This provision reflects the idea that a working board is a board in which directors attend most of the meeting. In this paper, the participation of directors to more than 75 percent of meeting is considered a good attendance. Although it seem obvious what stated above, none of the analysed company clearly stated information of directors attendance, neither in the Prospectus, nor in annual relations. Therefore, in first analysis none of the firms scored a point in this provision.
13. **Retirement age:** Literature largely debated on whether the prevision for a retirement age is necessary or not. Proponents of mandatory retirement ages maintain that new perspective and fresh outlooks are a firm needs, so periodical replacement of board directors increase company performance. Proposers also argue that directors who appointed a board for many years may be less independent from management. In addition, retirement ages for directors can provide boards with a way of getting non-performing directors off the board without having to ask for a

⁴ Vafeas (1999).

⁵ Roper (1999), Simons and Pelled (1999).

director's resignation. Basing on these premises in this paper the provision for a mandatory retirement age is a positive aspect. As well as the previous provision in the analysed firms none of them clearly stated a mandatory retirement age. Thus, none of them scored a point in this provision.

14. **Rules for directors' shareholding:** According to Jensen and Warner (1988) and Morck, Shleifer, and Vishny (1989), share ownership can be an important source of incentives for management and boards of directors. Without entering in a deep analysis on this paper the presence of a regulation for share ownership of directors worth one point for firms.
15. **Extraordinary operation by simple majority:** This provision analyse whether it is possible for directors to operate an extraordinary operation with a simple majority. This provision is intended to monitor the control that the board (as a collective organ) has over operation that can revolution the whole enterprise. If it is possible to buy or sell real estate property, company division, business branch, brands, etc with a simple majority, this could represent a weak in the corporate governance, and could leads to insufficient protection for shareholders. In this provision, a requirement of a broader majority is valued a point
16. **Extraordinary operation by a single director:** As stated for the previous provision the board of directors, which is a collective organ should act as such. The possibility for a single director to conclude extraordinary operation is a threat for the shareholders. In this provision, as well as the previous one, where there is a clearly stated proxy to operate individually, the firm scored zero point; otherwise, where proxies are not assigned, the firm scores one point.
17. **Shareholder's agreement:** The shareholders' agreement involves several aspect of corporate governance, depending on the scope it is adopted for. On the one hand, it generates a large coalition of shareholders, whose virtually act as a single shareholder. This modify the relationship between the mass of shareholders and the directors, reducing the agency cost and allowing a more powerful control over directors and top executives managers. On the other hand it modifies the power relation between shareholders, avoiding, or at least limiting the participation of smaller shareholders to firm governance. This happens because smaller shareholders have to face an entity that could dispose of more voting rights. In this research, the absence of shareholder's agreement is considered to be positive.
18. **Minorities Directors:** For what concern the Italian market, in 2005 a reform has amended the appointment strategy of Italian listed corporations. Concerning the election of the corporate boarder, the provisions of the TUF has been modified as follows. CONSOB has been required to enact a specific regulation on the procedures to apply for the election of at least one member for the board of directors by minority shareholders. This paper emphasizes the importance of minority directors, and assigned a score to those firms that have one⁶.
19. **Preferred shares with voting rights:** A firm's equity could be allocated trough common and preferred stock. In this paper, we consider a positive aspect if solely common shares or non-voting preferred stocks, are issued. In these cases, the firm scores one point.
20. **Nomination Committee:** According to Chtourou, Bédard and Courteau (2001) and Klein (1998), the presence of a nomination committee is important for board effectiveness and monitoring ability because it reviews information in order to select candidates for nomination to the board. Those firms that identified some directors for constituting the nominating committee were scored one point.
21. **Nominating Committee (majority independent):** This provision is strictly related to the provision above. It considers whether the nominating committee is composed by most independent members. This paper maintains that a majority of independent members in nominating committees increases the governance quality. According to current regulation if a firm choose to issues a nominating committee it has to be composed by most independent directors. For this reason in this research, this provision was introduced in order to evaluate the composition prior to governance code reform.
22. **Nominating committee (entirely independent):** According to the two previous provisions, this one considers whether the nominating committee only composed of independent directors. This would increase the committee effectiveness, and guarantee a wiser choice of board's members.
23. **Slate voting:** this provision analyse the methods used to appoint directors to the board. The corporate governance code reform introduced a mandatory slate voting system for both majority and minority directors. In this research, we welcomed the opinion of previous literature⁷ assigning a score to those firms that implement a slate voting system.
24. **Secret ballot:** This provision is based on the idea that for some decisions the secret ballot could generates better results than the disclosed vote.

⁶ It is important to remember that this paper analysed the IPO in the Italian market starting from 1999, so before the introduction of the current governance code. So there are some firms that do not have a minority director.

⁷ Imberti (2008).

- The key aim is to ensure the shareholders records a sincere choice by forestalling attempts to influence the voter. For those firms that implemented the secret ballot a positive score is assigned. It has to be mentioned that the secret ballot generates several difficulties in term of vote calculation (generally it implies a vote for each shareholder rather than a vote for each share).
25. **Performance-Linked Incentives:** the first research about the effect of performance-linked incentives against firm's performance dates back at least to the scientific management studies of Taylor (1911).⁸ This research analysed the retribution scheme of listed firms, assigning a score to those who adopted a performance-linked retribution plan This analysis does not take into account the achievement of performance objectives by managers or directors, it simply consider the definition of such scheme.
26. **Remuneration Committee:** As stated for provision 20, internal committees increase firms' performance. Literature has encountered a growing interest in the remuneration of directors, which generated several researches on this subject. It is common idea that remuneration committee should act as an independent arbiter of executive compensation on behalf of shareholders. As noted by Williamson (1985) the absence of an independent compensation committee could raise the suspicion of directors writing their own contract with one hand and signing it with the other. The presence of the remuneration committee is analysed to assign a score to firms.
27. **Remuneration Committee (Majority independent):** As analysed for the Nominating committee, as well for this provision, the emphasis concern the composition of the remuneration committee. As stated in the previous point, the Cadbury proposal recommend a committee composed most by non-executive directors. According to the governance code proposed by Borsa Italiana, the committee is appointed by a majority of independent directors. This provision is intended to analyse whether the committee is composed according to previously stated requirements, even when those requirements were not mandatory.
28. **Remuneration Committee (Entirely independent):** Although the current regulation does not require a committee composed exclusively by independent members, in this thesis such composition is considered a "plus". This provision maintain the idea that a remuneration committee completely independent, as well as others committee, improve board quality.
29. **Golden Parachute:** In literature a strong debate about the effectiveness of golden parachute developed in the last decades⁹. In this paper, golden parachutes are considered having a negative effect on firm performance, so their absence is scored a point.
30. **Directors' length of service:** This provision is based on the idea that directors serving for more than one year in firm's management increase democracy in board's decision. In this paper firms gain a score when more than 50 percent of their directors maintained their role for at least one year. Considering the peculiarity of the Italian firms, and, as stated in provision three, directors are generally appointed for three years, so in this analysis all the firms scored a point.
31. **Directors ownership¹⁰:** As stated in provision fourteen, directors ownership can be an effective methods to incentives them¹¹. Therefore, directors' ownership is inversely related to agency. At some given levels¹² of director shareholdings, the gains directors can make through increasing compensation and perquisites probably outweigh the losses in the stock of wealth through decreased firm performance. This provision analyses whether directors own a percentage between 1 percent and 30 percent. These limits identify a non-negligible ownership share, and allow, as well, the separation between ownership and control, which is crucial for listed companies.
32. **Shareholders vote for executive remuneration:** remuneration of top executive is a key for firm success. This should follow the performance of managers and directors, as stated in provision 26. The possibility for shareholders to vote over the remuneration scheme is fundamental for balancing the "power" between managers and owners. This provision analyse whether the vote of shareholders is clearly required for executives' compensation.
33. **Internal Control Committee:** This committee was introduced with the regulation of 2006 with the aim of safeguard the company's assets, the efficiency and effectiveness of business transactions¹³, the reliability of financial

⁸ Banker, Lee and Potter (1996), Murphy (1999).

⁹ Comment and Schwert (1995), Davidson, Pilger and Szakmary (1998), Chakraborty (2007).

¹⁰ Jensen and Meckling's (1976), Demsetz and Lehn (1985), Morck, Shleifer, and Vishny (1988).

¹¹ According to previous researches these incentives are effective for both executive and non-executive directors. They may be useful for top management in general.

¹² Morck et al. (1988) find that firm performance first rises as ownership increases up to 5%, then falls as ownership increases up to 25% and then rises at higher ownership levels

¹³ At least one member of the committee must have an adequate experience in accounting and finance, to be

information, the compliance with laws and regulations. To such purpose, the internal control committee is made up of non-executive directors, the majority of which are independent. The presence of this committee guarantees the respect of best practice recommendation, and adequacy of internal control. In case such committee is present, firms score a point.

34. **Internal Control Committee (majority independent):** For the internal control committee, as well as others committees provisions, we analysed whether it is composed mainly by independent members. The presence of a majority of independent directors in the committee guarantees the democracy of relationship between large shareholders and minorities, performing a deep analysis of internal control system. It allows transparency in operation. Firms that clearly stated such a composition of the committee scored one point.
35. **Internal Control Committee (entirely independent):** On the base of the scheme used to monitor others committees, this provision conclude the analysis of the internal control mechanism. If the internal control committee is composed exclusively by independent members this could be considered an effective methods to control over internal procedures. For this reasons the presence of an independent committee assigns a score to those firms that adopted it.
36. **Investor Relator:** Borsa Italiana defines the investor relator as *“the person appointed by a listed company to manage relations with investors and intermediaries.”* In the lasts few years, a culture of greater corporate transparency is becoming increasingly widespread. The investor relator plays a role of “trait d’union” between company top managements and the professional analysts. For the reasons listed above, we consider the presence of the Investor relator a positive element for a firm. Thus, those firms that appointed an investor relator scored a point.
37. **Other Committees:** According to previous literature, internal committees in the board of directors can increase firm profitability. The literature¹⁴ suggests suggests that the composition of standing board committees is important, so this paper analysed whether firms appointed other committees or not. Those who did scored a point.
38. **A regulatory framework different from the national one:** This provisions assumes the idea that a regulatory framework different from the national one could mine the participations of shareholders. This should not be intended as supremacy of the national framework over

international ones, but simply as a way to distinguish those firms operating under the national law and those who operates under different one. In case a firm is not operating under the Italian regulatory framework, it scores zero point instead of one.

39. **Disclosure of a corporate governance code:** Borsa Italiana promoted the adoption of the corporate governance code for listed and issuing firms. This code, which is the base for most of the previous provisions, is intended to assure transparency in corporate governance practice and to safeguard shareholders minorities’ rights. The appliance to the prescription of this code should assure a correct and safe governance, for this reason those firms who adopted the code where scored one point.
40. **Ethic code:** Literature provided several definition of ethics code, in agreement with Shaw and Barry (1995), ethics codes are one attempt to improve the organizational climate so that individuals can behave ethically. Slightly different is the vision of both Arrow (1974) and Stone (1975), they noted that ethical controls are necessary because the legal system and markets do not necessarily lead to organizational behaviour that takes into consideration moral impacts of business decisions. Thus, the founders try to maintain alive their ideas, so that they become part of the corporate culture and help socialize new individuals into the culture. The reasons listed just above highlights the importance for firms to adopt a code of ethics, for this reason, those who did scored a point.

4.3. Calculating the IPOs underpricing

Literature identified several methods to calculate the underpricing of a new issue. These indexes vary from a raw index of initial return to market adjusted ones. The easiest method to calculate underpricing is to adopt the following raw index

$$U_i = \frac{P_{i,c} - P_{i,o}}{P_{i,o}}$$

Where:

- $P_{i,o}$ is the offering price

- $P_{i,c}$ is the closing market price on the first day

This index compares the closing price to the offer price. The result is adjusted by -1 in order to obtain positive value when the share realizes a positive return and a negative value otherwise.

According to Ritter (2002) the opening market price is close to an unbiased indicator of the closing market price on the first day, so results are insensitive to whether the opening or closing market price is used; however, the vast majority of empirical work uses the first closing price to measure the first-day return.

evaluated by the Board of Directors at the time of his/her appointment.

¹⁴ Klein (1998).

Similarly to this index, another example of raw index is calculated applying a log-normal standardisation, and formulated as

$$U_i = \ln\left(\frac{P_{i,c}}{P_{i,o}}\right)$$

Other authors (Cenni et al., 2001; Tykvová and Walz, 2007), basing on the timing of the IPO process maintain that a fair indicator should consider market changes occurred between the day in which the offering price is established and the first trading day. For this reason, they propose to separate the underpricing index from a component that reflects the changes of the average market conditions.

$$U_i = \ln\left(\frac{P_{i,c}}{P_{i,o}}\right) - \ln\left(\frac{I_c}{I_o}\right)$$

Having

- I_c as a market index at the first trading day
- I_o as the market index at the offer time

4.4. Calculating the long-run performance

Since normative pricing models, such as the CAPM, have little empirical support, there is no consensus on how to measure long-run performance. Various researchers considering the same market came to different results, the main explanation comes from the variety of methods available to calculate underperformance to illustrate this point, consider a simple scenario in which a sample contains 100 firms, 99 of which have one thousand euro market capitalization and one firm that has a thousand million euro market capitalization. Assume that the small firms have all underperformed by an equal percentage rate (50%) while the large firm has overperformed by 50%. It is easy to see that an equal weighted measure of abnormal performance will indicate severe mispricing (50%), while value weighting will lead the researcher to conclude that the sample abnormal performance is virtually zero (Brav, Geczy and Gompers, 2000). The most adopted, but still discussed, methods to calculate underperformance are Buy-And-Hold and Cumulative-Abnormal-Return. In literature, there are opposites opinions about which index gives a fairer vision. Barber and Lyon (1997) highlight how CAR technique gives a distorted view of long-run performance. Opposite to this, Fama (1998) Mitchell and Stafford (2000), Gompers and Lerner (2003) claim CAR superiority because they assert that B&H, with its product could overestimate the underperformance.

To calculate CAR index one has to start from calculating abnormal return with the formula

$$ar_{i,t} = \ln\left(\frac{P_{i,t}}{P_{i,o}}\right) - \ln\left(\frac{I_t}{I_o}\right)$$

Where

- $P_{i,t}$ is the closing price in day t
- I_t is the chosen market index value in day t

Once the abnormal returns are calculated for every selected interval it is possible to proceed aggregating this data together obtaining

$$AR_i = \sum_{t=1}^s ar_{i,t}$$

$$CAR = \frac{1}{N} \sum_{i=1}^N AR_i$$

Where s represent the number of selected interval and N represent the total number of selected IPOs.

Parallel to the development of CAR index, the buy-and-hold abnormal returns (BHAR) are calculated as the difference of corresponding compounded daily companies' and an index representing market conditions. In this research, the chosen market index is the S&P/Mib that has been substituted by FTSE MIB the 1st June 2009. The choice of this index comes from its good representation of market conditions and data availability over time.

The BHAR is defined as

$$BHAR = \frac{1}{N} \sum_{i=1}^N \left[\prod_{t=1}^s (1 + r_{i,t}) - \prod_{t=1}^s (1 + E(r_{i,t})) \right]$$

Where

- $E(r_{i,t})$ is the expected return of shares in the t-period. In this research, we have considered the S&P/MIB, which was substituted by the FTSE MIB
- $r_{i,t}$ is the return of share 'i' in the t-period

5. The relation between Corporate Governance and IPOs performance

5.1. Descriptive analysis

Gompers et Al. (2003) and Brown and Caylor (2004) in previous studies identified a positive relation between several measures of firm performance and some corporate governance indices. Gompers, Ishii and Metrick (2003) use Investor Responsibility Research Center (IRRC) data, and conclude that firms with fewer shareholder rights have lower firm valuations and lower stock returns. They classify 24 governance factors into five groups: tactics for delaying hostile takeover, voting rights, director/officer-protection, other takeover defences, and state laws. According to Cremers and Nair (2003) G-Index is an index of anti-takeover protection rather than a broad index of governance because of the factors they consider. Similar for certain aspect is the research by Brown and Caylor; they created a summary metric, Gov-Score, to measure the strength

of a firm's governance. In their analysis, the researchers computed Gov-Scores for 2,327 individual firms using data obtained from Institutional Shareholder Services (ISS). The Gov-score is composed by 51 factors as either 1 or 0 depending on whether the firm's governance standards are minimally acceptable. Although their results are not completely homogeneous, they both found a positive relation between corporate governance and firm performance.

Considering that previous literature found a correlation between firms' performance and corporate governance, we expect to find a similar result for the Italian Market. The main idea is that better governance leads to higher stock performance. Our analysis focuses on the relation between corporate governance and IPOs performance, which represents a slightly different aspect of the topic analysed in the literature presented above.

From this research, in the light of the analysed literature, we expect to obtain a positive relation between the governance index and firms' performance. To test the research question, we analysed the IPOs issued on the Italian stock market in the last decade. Since the number of IPOs on the Italian market were not exaggerated, it has been possible to analyse almost all the IPOs in the selected period. From the panel we excluded those firms for which we could not find any information and financial firms due to their peculiar regulation, which may have modified the results of the research.

The analysed panel is composed by 158 firms that entered in the market as follows. Figure 2 highlights a peak of issuing firms in two periods. The first coincide with the new economy boom, which generated a high level of IPOs especially of firms operating in the new technologies. The second peak is registered in the biennium 2006-2007. The raise between 2006 and 2007 may be a consequence of the natural upturn of the market. It is followed by a decrease in the number of IPOs, which is mainly due to the recent financial crisis (2008).

Table 1 contains a brief description of main firms characteristics over the sample analyzed. For what concern the governance indicator, the data used to score the firms were extrapolated from the issuing prospectus. To obtain additional information, where missing, we reviewed other documents and the bylaw. Although this extensive research some information, especially those of older IPOs, were still missing. In theory, the index should range from 0 to 40, as it is composed by forty provisions, but in the first version of the index, none of the firm scored less than 4 or more than 24. In particular, although the effort we spent to collect those information, 6 of the 40 provisions included in our analysis were not achieved by any one of the firms included in the sample: we considered this characteristic has to be address to the difference occurring between the Italian legal system and corporate bylaw, and other legal system considered by other researches.

Table 1. Main governance characteristics over the sample analyzed

Value	Mean	Median	Dev. St.	Max	Min	25° Perc	75° Perc
Governance Score	13,34	13,00	4,70	24,00	4,00	10,00	17,00
SALES (million €)	544,56	113,93	2.159	21.956,64	1,53	34,73	247,90
EBITDA/SALES	0,1556	0,1333	0,2928	0,9530	-2,3306	0,0980	0,2256
Number of Board Members	7,78	7	2,74	16	3	5	9
Number of Independent (% of Board Members)	0,3397	0,3333	0,1520	0,8181	0,0000	0,2500	0,4000
Number of No-Exec. (% of Board Members)	0,5349	0,5714	0,2359	1,0000	0,0000	0,3750	0,7272
Underpricing	0,0623	0,0211	0,2182	1,3900	-0,8985	-0,01391	0,1090
Raw Underpricing	0,0310	0,0209	0,2921	0,8712	-2,2884	-0,0140	0,1035
AR ₁₂	-0,1408	-0,0357	0,6260	1,7511	-2,9042	-0,3294	0,2328
AR ₂₄	-0,2945	-0,1649	0,8860	1,5345	-4,6992	-0,6608	0,2647
AR ₃₆	-0,5595	0,0211	0,2182	1,9008	-4,6992	-1,1869	0,1897
CAR ₁₂	-0,0584	-0,0371	0,6835	3,4778	-2,5333	-0,2434	0,1880
CAR ₂₄	-0,1313	-0,0167	0,7440	3,0268	-2,7122	-0,3955	-0,6153
CAR ₃₆	-0,2136	-0,0963	0,8755	2,5862	-2,7644	-0,6153	0,3086
BHAR ₁₂	-0,0107	-0,0876	0,4799	3,4046	-0,8879	-0,3046	0,1761
BHAR ₂₄	-0,0348	-0,1296	0,4741	2,6749	-1,1654	-0,3266	0,1970
BHAR ₃₆	0,0001	-0,1583	0,7014	3,0663	-2,4030	-0,3535	0,1022

Furthermore, for what concern the financial analysis, to calculate the IPO performance we have used daily market data obtained from DataStream. As said in the previous section, the IPOs performance is

generally associated to two different indicators, one for the short (underpricing) and for the long-run (underperformance).

The underpricing indicators used for the short-term analysis are the linear one, which is indicated as *Underpricing*, and the lognormal one, which is indicated as *Raw Underpricing*. In Table 2 the underpricing phenomenon respectively occurring in IPOs from 1998 to 2000, from 2001 to 2005, from

2006 to 2008 is showed. By this meaning, the analysis of the Italian market highlighted that the mean underpricing is in line with the literature background. This confirms that the selected market acts as the others market for what concern IPOs placement.

Table 2. Underpricing phenomenon over the Italian IPOs

IPOs from 1998 to 2000							
Value	Mean	Median	Dev. St.	Max	Min	25° Perc	75° Perc
Underpricing	0,1296	0,0118	0,3100	1,3900	-0,1111	-0,0435	0,1975
Raw Underpricing	0,0952	0,0118	0,2191	0,8712	-0,1177	-0,0444	0,1802
IPOs from 2001 to 2005							
Value	Mean	Median	Dev. St.	Max	Min	25° Perc	75° Perc
Underpricing	0,0123	0,0025	0,2365	0,5662	-0,8985	-0,0197	0,0697
Raw Underpricing	-0,0470	0,0025	0,4454	0,4486	-2,2884	-0,0199	0,0673
IPOs from 2006 to 2008							
Value	Mean	Median	Dev. St.	Max	Min	25° Perc	75° Perc
Underpricing	0,0648	0,0520	0,1001	0,3857	-0,1333	0,0000	0,1031
Raw Underpricing	0,0587	0,0506	0,0905	0,3262	-0,1431	0,0000	0,0981

In table 3 the long run underperformance occurred for Italian IPOs are showed, considering the daily prices occurred on the markets for three timing interval: 12, 24 and 36 months. The results of the underperformance calculation, which we considered separately for IPOs from 1998 to 2000, from 2001 to 2005, from 2006 to 2008, confirm the idea maintained by the reviewed literature: this analysis over the selected panel, highlighted how the selected panel performed less than the market on average. As the analysis above gave a strong support to the development of this research, we have matched the obtained results against the forty-provision corporate governance indicator, in order to highlight the relation between those two indicators.

5.2. Main findings

The economic literature has long defined the critical role that corporate governance can perform in order to improve the efficiency of the financial system and contribute to economic growth process. Consistent with this conceptual framework, this paper contributes to this investigation through the analysis of the Italian market. By the examination of the relation between CG and IPOs performance, we tried to verify the effectiveness as explanatory variable of a new governance index, along with other significant variables, with reference to two main areas of investigation related to IPOs performance, the short

term underpricing and the long run underperformance.

Regarding the first area of investigation on the relationship between quality of governance and short term underpricing, a positive relation between quality of governance and underpricing phenomenon was founded. By this meaning, even if we expected that a good governance could help to mitigate the inefficiency of capital markets, firms which are characterized by a good governance seem to performance better in terms of their first-day return, confirming the bandwagon hypothesis. In order to assess the underpricing phenomenon among the firms included in the sample, as well as to ensure the robustness of the estimation and overcome any signs of endogeneity, different versions of the model were estimated, with increasing complexity and variables, whose main results are shown in Table 4. In this case, it must be mentioned as the results presented show an interesting index of governance capacity to explain the underpricing phenomenon which characterized the sample of firms considered in this sample. Other financial characteristics, like the ratio of Ebitda to Sales, and the presence of no-executive board members, seem to increase the underpricing phenomenon. Otherwise, board size dimension pays a role in order to mitigate the underpricing, with a value which is significant throughout all the regressions we tested.

Table 3. Long-run performance of Italian IPOs

IPOs from 1998 to 2000							
Value	Mean	Median	Dev. St.	Max	Min	25° Perc	75° Perc
AR ₁₂	-0,1979	-0,0089	0,8362	1,7511	-2,9042	-0,4529	0,2847
AR ₂₄	-0,6200	-0,3869	1,0688	1,0237	-4,4514	-0,9905	-0,0083
AR ₃₆	-0,9248	-0,7662	1,1587	1,2535	-4,6992	-1,4502	-0,1521
CAR ₁₂	-0,0516	-0,0886	0,7901	2,3855	-2,5333	-0,2636	0,2294
CAR ₂₄	-0,2041	-0,1309	0,8506	2,4984	-2,7122	-0,5133	0,2093
CAR ₃₆	-0,3367	-0,2504	0,9420	2,4985	-2,7644	-0,6740	0,2212
BHAR ₁₂	-0,0328	-0,1446	0,6357	3,4046	-0,8879	-0,3607	0,2040
BHAR ₂₄	-0,1628	-0,1937	0,3484	1,0235	-0,6868	-0,3672	-0,0858
BHAR ₃₆	-0,1503	-0,2082	0,3294	1,2635	-0,5094	-0,3587	-0,0865
IPOs from 2001 to 2005							
Value	Mean	Median	Dev. St.	Max	Min	25° Perc	75° Perc
AR ₁₂	-0,1464	-0,0800	0,5893	0,7540	-2,1313	-0,2788	0,2141
AR ₂₄	-0,1773	-0,0298	0,7324	1,5345	-1,9609	-0,4822	0,3017
AR ₃₆	-0,3989	-0,2973	0,9893	1,6893	-2,5334	-1,0431	0,3032
CAR ₁₂	-0,1119	-0,0592	0,8855	3,4778	-2,1961	-0,2483	0,1855
CAR ₂₄	-0,0950	0,0301	0,8686	3,0268	-2,1056	-0,3366	0,2869
CAR ₃₆	-0,1468	-0,0613	0,8881	2,5862	-2,3662	-0,5598	0,3447
BHAR ₁₂	0,0225	-0,0594	0,3973	1,2105	-0,4958	-0,2745	0,1341
BHAR ₂₄	0,0579	-0,0062	0,5297	1,0728	-1,1654	-0,3431	0,3615
BHAR ₃₆	0,1030	-0,0356	0,9058	1,8651	-2,4030	-0,4270	0,5946
IPOs from 2006 to 2008							
Value	Mean	Median	Dev. St.	Max	Min	25° Perc	75° Perc
AR ₁₂	-0,0922	-0,0336	0,4528	0,7539	-1,159	-0,280	0,2334
AR ₂₄	-0,0955	-0,0158	0,7577	1,4330	-2,6795	-0,3985	0,3311
AR ₃₆	0,0888	0,1574	0,9403	1,9008	-1,4094	-0,4141	0,5469
CAR ₁₂	-0,0199	-0,0012	0,2225	0,4814	-0,4255	-0,1607	0,1123
CAR ₂₄	-0,0748	0,0281	0,3596	0,6003	-0,9817	-0,2541	0,1085
CAR ₃₆	0,0569	0,0663	0,4080	0,9510	-0,7116	-0,1022	0,2016
BHAR ₁₂	-0,0160	-0,0503	0,3449	1,0826	-0,5685	-0,2145	0,1655
BHAR ₂₄	0,0332	-0,0243	0,5262	2,6749	-0,6115	-0,2680	0,1901
BHAR ₃₆	0,2636	-0,0252	0,9334	3,0663	-0,3655	-0,1480	0,1797

Table 4. Regression results for underpricing phenomenon

	Underpricing			Raw Underpricing		
	(a)	(b)	(c)	(a)	(b)	(c)
Constant	0.423 (-0.825)	0.317 (0.710)	-0.083 (-0.144)	0.006 (0.011)	-0.209 (-0.345)	-0.653 (-0.825)
Governance Index	0.109* (1.871)	0.129** (2.172)	0.304** (1.808)	0.251** (2.479)	0.291** (2.612)	0.478** (2.071)
Family	0.019 (0.291)	0.044 (0.611)	0.066 (0.884)	0.091 (1.013)	0.138 (1.408)	0.157 (1.526)
State	0.086 (0.722)	0.021 (0.156)	-0.091 (-0.577)	0.166 (1.016)	0.087 (0.467)	-0.047 (0.217)
Sold \geq 20%	0.019 (0.276)	0.056 (0.712)	0.072 (0.901)	0.027 (0.277)	0.162 (1.437)	-0.095 (0.864)
VC & PE	0.075 (0.977)	0.110 (1.333)	0.112 (1.324)	0.107 (1.020)	0.196 (1.599)	0.167 (1.441)
Bank	0.113 (1.314)	0.134 (1.487)	0.136 (1.486)	0.154 (1.310)	-0.034 (-1.213)	0.195 (1.555)
Ln Sales	-0.026 (-1.416)	-0.028 (-1.134)	-0.024 (-1.104)	-0.032 (-1.242)	3.678 (1.624)	-0.029 (-0.975)
Ebitda/Sales	0.238 (1.550)	0.304 (1.661)	0.344** (1.710)	0.376** (1.793)	0.422 (1.697)	0.519** (1.875)
Ln (Board Size)	-0.139** (-1.721)	-0.209** (-2.077)	-0.265** (-2.382)	-0.132** (-1.796)	-0.210* (-1.936)	-0.271** (-1.775)
Indep (% indep.)		-0.119 (-0.562)	-0.168 (-0.738)		-0.096 (-0.335)	-0.146 (-0.467)
No exec. (% no-exec.)		0.305 (1.623)	0.411** (2.065)		0.473 (1.853)	0.585** (2.142)
CEO duality		0.039 (0.574)	0.043 (0.598)		-0.014 (-0.158)	-0.012 (-0.121)
Nominating Committee			-0.135 (-1.494)			-0.158 (-1.278)
Remuneration Committee			-0.007 (-0.062)			-0.084 (-0.506)
Internal Control Committee			-0.105 (-0.903)			-0.033 (-0.208)
Pre 2006			0.041 (0.596)			0.027 (0.287)
Number of Observation	127	127	127	127	127	127
Adj-R ²	0.089	0.140	0.211	0.093	0.111	0.196

The regression estimates the relation between underpricing phenomenon and firms' characteristics: in particular the results (coefficient) for dependent variables Underpricing and Raw Underpricing are showed (numbers in parenthesis represent the t-Statistic value). Governance Index is the natural logarithm of Governance Score, Family is a dummy variable equal to 1 when the majority of property owners before the quotation belong to a family, State is a dummy variable equal to 1 when the majority of property owners before the quotation belong to state, Sold \geq 20% is a dummy variable equal to 1 when the majority owners sold more than 20% during the IPO, VC&PE is a dummy variable equal to 1 when a Venture Capitalist or Private Equity is present as investor before the IPO, Bank is a dummy variable equal to 1 when a bank is present as investor before the IPO, Ln sales is the natural logarithm of sales value, Ebitda/Sales is the ratio of Ebitda to sales, Ln (Board Size) is the natural logarithm of number of board members, Indep (% Indep.) is the ratio of number of Independent directors to number of board members, No exec. (% no-exec.) is the ratio of number of non executive directors to number of board members, CEO Duality is a dummy variable equal to 1, Nominating Committee is a dummy variable equal to 1 when a nominating committee is present, Remuneration Committee is a dummy variable equal to 1 when a remuneration committee is present, Internal Control Committee is a dummy variable equal to 1 when an internal control committee is present, Pre 2006 is a dummy variable equal to 1 if the IPOs is before 2006. Alternative models have been developed to test robustness to different included/excluded variables. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Adj.-R² is adjusted R-squared.

Regarding the second area of investigation on the relationship between quality of governance and long run underperformance, the different performance achieved after the IPO deal were analyzed. Tables 5, 6 and 7 show the relation existing between different long run performance, which we measured by AR, CAR and BHAR respectively 12, 24 and 36 months after the IPO. By this meaning, the analysis took account of the construction of several model assumptions so as to test the robustness of the variables considered most significant.

In Table 5 the regression results for performance after 12 months show a positive and significant sign for governance index, which means that firms with a better governance are capable to perform better than others 1 year after the deal. Together with the governance quality, other characteristics seem to play a role in order to explain better performance achieved by those firms: firms which are family owned perform better, as well as the ones where a bank is present as investor before the deal. Also financial characteristics like the increase of sales after the IPO shows a

positive and significant sign, whilst the natural logarithm of sales and the ratio of Ebitda to Sales show a positive sign which is significant only referring to Abnormal Return. Similarly to

underpricing phenomenon, also the presence of non-executive board members seems to influence positively the long run performance.

Table 5. Regression results for performance after 12 months

	AR ₁₂		CAR ₁₂		BHAR ₁₂	
	(a)	(b)	(a)	(b)	(a)	(b)
Constant	-1.511 (-2.183)	-1.667 (0.054)	-0.412 (-0.411)	-0.822 (-0.702)	0.501 (0.975)	0.286 (0.451)
Governance Index	0.184** (2.425)	0.126** (2.319)	0.145* (1.794)	0.545* (1.805)	0.138** (2.140)	0.020* (1.810)
Family	0.239** (2.107)	0.269*** (2.320)	0.290* (1.774)	0.275** (1.683)	0.191** (2.272)	0.201** (2.329)
State	0.181 (0.827)	0.062 (0.251)	0.412 (1.244)	0.074 (0.202)	0.109 (0.670)	0.005 (0.028)
Sold ≥ 20%	0.035 (0.287)	0.038 (0.306)	-0.161 (-0.879)	-0.123 (-0.683)	-0.029 (-0.316)	-0.018 (-0.201)
VC & PE	0.105 (0.801)	0.083 (0.633)	0.004 (0.023)	-0.018 (-0.103)	0.036 (0.372)	0.028 (0.287)
Bank	0.289** (2.067)	0.302** (2.165)	0.404** (1.921)	0.401** (1.937)	0.231** (2.225)	0.243** (2.338)
Ln Sales	0.067** (2.068)	0.066** (1.944)	-0.016 (-0.331)	-0.019 (-0.382)	0.030 (1.256)	0.031 (1.228)
Δ sales (% var.)	8.060*** (3.109)	7.462*** (2.790)	7.183*** (2.612)	7.239*** (2.652)	5.063** (2.631)	5.066*** (2.542)
Ebitda/Sales	0.713*** (2.524)	0.833*** (2.710)	0.666 (1.583)	0.814 (1.855)	0.320 (1.527)	0.407* (1.776)
Ln (Board Size)	-0.190 (-1.189)	-0.233 (-1.353)	-0.107 (-0.462)	-0.242 (-0.984)	-0.183 (-1.543)	-0.239* (-1.859)
Indep (% indep.)	0.315 (0.938)	0.383 (1.073)	0.257 (0.520)	0.229 (0.457)	0.230 (0.921)	0.233 (0.877)
No exec. (% no-exec.)	0.646** (2.171)	0.745** (2.428)	0.137 (0.350)	0.310 (0.792)	0.521** (2.358)	0.624*** (2.694)
CEO duality	0.024 (0.223)	0.074 (0.663)	-0.147 (-0.944)	-0.146 (-0.929)	-0.001 (-0.021)	0.027 (0.323)
Nominating Committee		-0.321** (-2.276)		-0.436** (-2.195)		-0.227** (-2.154)
Remuneration Committee		0.110 (0.603)		-0.231 (-0.839)		-0.030 (-0.226)
Internal Control Committee		-0.074 (-0.406)		-0.150 (-0.568)		-0.032 (-0.242)
Pre 2006		0.001 (0.004)		-0.123 (-0.769)		-0.020 (-0.254)
Number of Observation	128	128	128	128	128	128
Adj-R ²	0.146	0.244	0.124	0.233	0.145	0.248

The regression estimates the relation between performance after 12 months and firms' characteristics: in particular the results (coefficient) for dependent variables AR₁₂, CAR₁₂ and BHAR₁₂ are showed. Governance Index is the natural logarithm of Governance Score, Family is a dummy variable equal to 1 when the majority of property owners before the quotation belong to a family, State is a dummy variable equal to 1 when the majority of property owners before the quotation belong to state, Sold ≥ 20% is a dummy variable equal to 1 when the majority owners sold more than 20% during the IPO, VC&PE is a dummy variable equal to 1 when a Venture Capitalist or Private Equity is present as investor before the IPO, Bank is a dummy variable equal to 1 when a bank is present as investor before the IPO, Ln sales is the natural logarithm of sales value, Δ sales (% var.) is the percentage increase of sales one year after the IPO, Ebitda/Sales is the ratio of Ebitda to sales, Ln (Board Size) is the natural logarithm of number of board members, Indep (% Indep.) is the ratio of number of Independent directors to number of board members, No exec. (% no-exec.) is the ratio of number of non executive directors to number of board members, CEO Duality is a dummy variable equal to 1, Nominating Committee is a dummy variable equal to 1 when a nominating committee is present, Remuneration Committee is a dummy variable equal to 1 when a remuneration committee is present, Internal Control Committee is a dummy variable equal to 1 when an internal control committee is present, Pre 2006 is a dummy variable equal to 1 if the IPOs is before 2006. Alternative models have been developed to test robustness to different included/excluded variables. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Adj.-R² is adjusted R-squared.

Similarly, in Table 6 the regression results for performance after 24 months are showed. Also in this state, a positive and significant sign for governance index is discovered, confirming that firms with a

better governance are capable to perform better than others also 2 year after the deal. Again, other characteristics seem to play a role in order to explain better performance achieved by those firms, although

the results in this case are disbelieving: the family and bank variable continue to show a positive sign, which is not always significant. Also financial characteristics

like the increase of sales after the IPO and the ratio of Ebitda/Sales show a positive sign, which is not significant referring to BHAR.

Table 6. Regression results for performance after 24 months

	AR ₂₄		CAR ₂₄		BHAR ₂₄	
	(a)	(b)	(a)	(b)	(a)	(b)
Constant	-1.682 (-1.023)	-0.971 (-0.505)	-1.279 (-1.136)	-1.435 (-1.106)	2.567*** (2.604)	3.267*** (2.746)
Governance Index	0.617* (2.516)	0.888** (2.671)	0.003* (1.817)	0.258* (1.963)	0.545** (3.262)	0.774** (2.301)
Family	0.262 (1.039)	0.310 (1.191)	0.422** (2.338)	0.407** (2.256)	0.195 (1.286)	0.140 (0.877)
State	0.132 (0.268)	0.079 (0.137)	0.561 (1.546)	0.203 (0.505)	0.134 (0.454)	0.063 (0.178)
Sold ≥ 20%	0.211 (0.798)	0.196 (0.741)	-0.128 (-0.637)	-0.105 (-0.532)	0.118 (0.741)	0.123 (0.748)
VC & PE	-0.412 (-1.404)	-0.528* (-1.788)	-0.023 (-0.111)	-0.055 (-0.271)	-0.047 (-0.273)	-0.057 (-0.320)
Bank	0.442 (1.468)	0.451 (1.495)	0.497** (2.142)	0.496** (2.180)	0.282 (1.556)	0.289 (1.540)
Ln Sales	0.111 (1.422)	0.080 (1.011)	0.018 (0.323)	0.013 (0.236)	-0.041 (-0.882)	-0.056 (-1.145)
Δ sales (% var.)	9.817* (1.698)	6.802 (1.147)	8.147*** (2.704)	8.062*** (2.691)	0.995 (0.285)	0.801 (0.218)
Ebitda/Sales	1.901*** (3.102)	1.785*** (2.720)	1.258*** (2.747)	1.364*** (2.853)	0.486 (1.316)	0.564 (1.386)
Ln (Board Size)	-0.178 (-0.489)	-0.032 (-0.078)	-0.002 (-0.008)	-0.112 (-0.405)	-0.007 (-0.033)	0.086 (0.344)
Indep (% indep.)	0.748 (0.988)	1.274 (1.529)	0.288 (0.523)	0.347 (0.624)	0.500 (1.100)	0.690 (1.336)
No exec. (% no-exec.)	0.658 (1.009)	0.523 (0.769)	0.300 (0.694)	0.481 (1.114)	0.582 (1.484)	0.541 (1.282)
CEO duality	-0.177 (-0.726)	-0.157 (-0.617)	-0.180 (-1.024)	-0.154 (-0.872)	-0.166 (-1.137)	-0.092 (-0.589)
Nominating Committee		-0.457 (-1.415)		-0.510** (-2.330)		-0.192 (-0.968)
Remuneration Committee		0.863** (1.905)		-0.038 (-0.129)		0.061 (0.221)
Internal Control Committee		-0.499 (-1.180)		-0.197 (-0.689)		0.069 (0.266)
Pre 2006		0.053 (0.196)		-0.165 (-0.941)		-0.245 (-1.459)
Number of Observation	107	107	107	107	107	107
Adj-R ²	0.135	0.191	0.151	0.201	0.138	0.193

The regression estimates the relation between performance after 24 months and firms' characteristics: in particular the results (coefficient) for dependent variables AR₂₄, CAR₂₄ and BHAR₂₄ are showed (numbers in parenthesis represent the t-Statistic value). Governance Index is the natural logarithm of Governance Score, Family is a dummy variable equal to 1 when the majority of property owners before the quotation belong to a family, State is a dummy variable equal to 1 when the majority of property owners before the quotation belong to state, Sold ≥ 20% is a dummy variable equal to 1 when the majority owners sold more than 20% during the IPO, VC&PE is a dummy variable equal to 1 when a Venture Capitalist or Private Equity is present as investor before the IPO, Bank is a dummy variable equal to 1 when a bank is present as investor before the IPO, Ln sales is the natural logarithm of sales value, Δ sales (% var.) is the percentage increase of sales one year after the IPO, Ebitda/Sales is the ratio of Ebitda to sales, Ln (Board Size) is the natural logarithm of number of board members, Indep (% Indep.) is the ratio of number of Independent directors to number of board members, No exec. (% no-exec.) is the ratio of number of non executive directors to number of board members, CEO Duality is a dummy variable equal to 1, Nominating Committee is a dummy variable equal to 1 when a nominating committee is present, Remuneration Committee is a dummy variable equal to 1 when a remuneration committee is present, Internal Control Committee is a dummy variable equal to 1 when an internal control committee is present, Pre 2006 is a dummy variable equal to 1 if the IPOs is before 2006. Alternative models have been developed to test robustness to different included/excluded variables. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Adj.-R² is adjusted R-squared.

Finally, in Table 7 the regression results for performance after 36 months are showed. Also in this case, a positive and significant sign for governance index is discovered, confirming that firms with a better governance are capable to perform better than

others also 3 year after the deal. Other characteristics seem to pay a role in order to explain better performance achieved by those firms: the presence of a family, the presence of a bank as investor, the ratio of Ebitda to Sales pay a positive and significant role,

together with governance quality, in order to understand the performance achieved by the firms after 36 months the IPO deal.

Table 7. Regression results for performance after 36 months

	AR ₃₆		CAR ₃₆		BHAR ₃₆	
	(a)	(b)	(a)	(b)	(a)	(b)
Constant	-3.092 (-1.218)	-0.726 (-0.252)	0.107 (0.061)	-0.374 (-0.192)	1.109 (0.720)	2.069 (1.112)
Governance Index	0.614* (1.765)	1.548* (1.989)	0.180* (1.872)	0.445* (1.818)	0.723** (2.672)	0.763** (1.545)
Family	0.553 (1.452)	0.566 (1.431)	0.482 (1.780)	0.401 (1.450)	0.303 (1.326)	0.173 (0.695)
State	0.572 (0.788)	0.376 (0.399)	0.741 (1.355)	-0.083 (-0.124)	0.155 (0.329)	-0.479 (-0.788)
Sold ≥ 20%	0.305 (0.740)	0.195 (0.463)	-0.084 (-0.294)	0.025 (0.092)	0.542** (2.139)	0.668** (2.586)
VC & PE	-0.481 (-1.099)	-0.625 (-1.406)	-0.248 (-0.839)	-0.338 (-1.181)	0.348 (1.246)	0.398 (1.406)
Bank	0.663 (1.460)	0.549 (1.179)	0.805** (2.424)	0.875*** (2.726)	0.698** (2.410)	0.785** (2.697)
Ln Sales	0.138 (1.194)	0.069 (0.587)	-0.039 (-0.466)	-0.053 (-0.640)	0.050 (0.719)	0.031 (0.414)
Δ sales (% var.)	8.813 (1.033)	3.530 (0.391)	6.404 (1.620)	5.871 (1.496)	8.491 (1.530)	9.771 (1.010)
Ebitda/Sales	1.941** (2.383)	1.789** (2.047)	1.809*** (3.029)	1.881*** (3.046)	0.592 (1.118)	0.572 (1.010)
Ln (Board Size)	0.085 (0.170)	0.620 (1.048)	-0.159 (-0.431)	-0.342 (-0.829)	-0.374 (-1.162)	-0.366 (-1.001)
Indep (% indep.)	0.897 (0.725)	1.919 (1.300)	1.052 (1.225)	0.841 (0.920)	0.156 (0.202)	0.048 (0.051)
No exec. (% no-exec.)	1.048 (1.068)	0.705 (0.670)	0.344 (0.593)	0.617 (1.070)	1.508** (2.433)	1.683** (2.539)
CEO duality	-0.451 (-1.171)	-0.405 (-1.031)	-0.338 (-1.256)	-0.317 (-1.214)	-0.118 (-0.495)	-0.026 (-0.111)
Nominating Committee		-0.182 (-0.350)		-0.719** (-2.168)		-0.024 (-0.072)
Remuneration Committee		1.080 (1.689)		0.021 (0.048)		-0.109 (-0.266)
Internal Control Committee		-0.309 (-0.539)		-0.519 (-1.243)		-0.110 (-0.303)
Pre 2006		-0.379 (-0.701)		-0.114 (-0.324)		-0.569 (-1.734)
Number of Observation	92	92	92	92	92	92
Adj-R ²	0.142	0.201	0.198	0.241	0.129	0.189

The regression estimates the relation between performance after 36 months and firms' characteristics: in particular the results (coefficient) for dependent variables AR₃₆, CAR₃₆ and BHAR₃₆ are showed (numbers in parenthesis represent the t-Statistic value). Governance Index is the natural logarithm of Governance Score, Family is a dummy variable equal to 1 when the majority of property owners before the quotation belong to a family, State is a dummy variable equal to 1 when the majority of property owners before the quotation belong to state, Sold ≥ 20% is a dummy variable equal to 1 when the majority owners sold more than 20% during the IPO, VC&PE is a dummy variable equal to 1 when a Venture Capitalist or Private Equity is present as investor before the IPO, Bank is a dummy variable equal to 1 when a bank is present as investor before the IPO, Ln sales is the natural logarithm of sales value, Δ sales (% var.) is the percentage increase of sales one year after the IPO, Ebitda/Sales is the ratio of Ebitda to sales, Ln (Board Size) is the natural logarithm of number of board members, Indep (% Indep.) is the ratio of number of Independent directors to number of board members, No exec. (% no-exec.) is the ratio of number of non executive directors to number of board members, CEO Duality is a dummy variable equal to 1, Nominating Committee is a dummy variable equal to 1 when a nominating committee is present, Remuneration Committee is a dummy variable equal to 1 when a remuneration committee is present, Internal Control Committee is a dummy variable equal to 1 when an internal control committee is present, Pre 2006 is a dummy variable equal to 1 if the IPOs is before 2006. Alternative models have been developed to test robustness to different included/excluded variables. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Adj.-R² is adjusted R-squared.

Conclusions

With this paper, we aimed to find a relation between Italian IPOs performance and corporate governance. The analysis was conducted over a panel of firms that were issued in the last decade in the Italian stock market. The selected panel does not include financial firms due to their peculiar regulation that may have caused distorted results. Previous literature emphasised the IPOs' well-known characteristic of short term underpricing and long run underperformance. Since the selected panel is entirely composed by IPOs, we decided to adopt, as performance proxy, both Cumulative Abnormal Return (CAR) and Buy-And-Hold Abnormal return (BHAR) indexes. The choice of these indexes fit with the characteristic of IPOs mentioned above, thus we expected to find more significant results through the use of this indexes rather than other indicators such as sales or ROE. For what concern the corporate governance structure, which is the other main point of this paper, it was evaluated through a forty-provision index, composed by four main areas: Board of Directors; Shareholders and Creditors protection; Remuneration schemes; Disclosure and internal dealing procedures. The provisions are constructed as Boolean questions; in case of positive compliance of a firm with a provision, one point is assigned to that firm. Thus, theoretically the score may varies from zero to forty (none of the firms scored more than 24 and no less than 4). The obtained results provide a significant overview of the relation between CG and performance of IPOs, even if it could be possible to improve this research including an analysis of those firms that were excluded for the lack of information. Although these possible improvements this research highlighted the existence of a relation between CG and firms' performance. It also provided evidence that the Italian IPOs market behaved similarly to other international financial market in the last decades. The highlighted relation is, in fact, coherent with previous literature.

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Annexes

Figure 1. The number of IPOs grouped by similar underpricing.

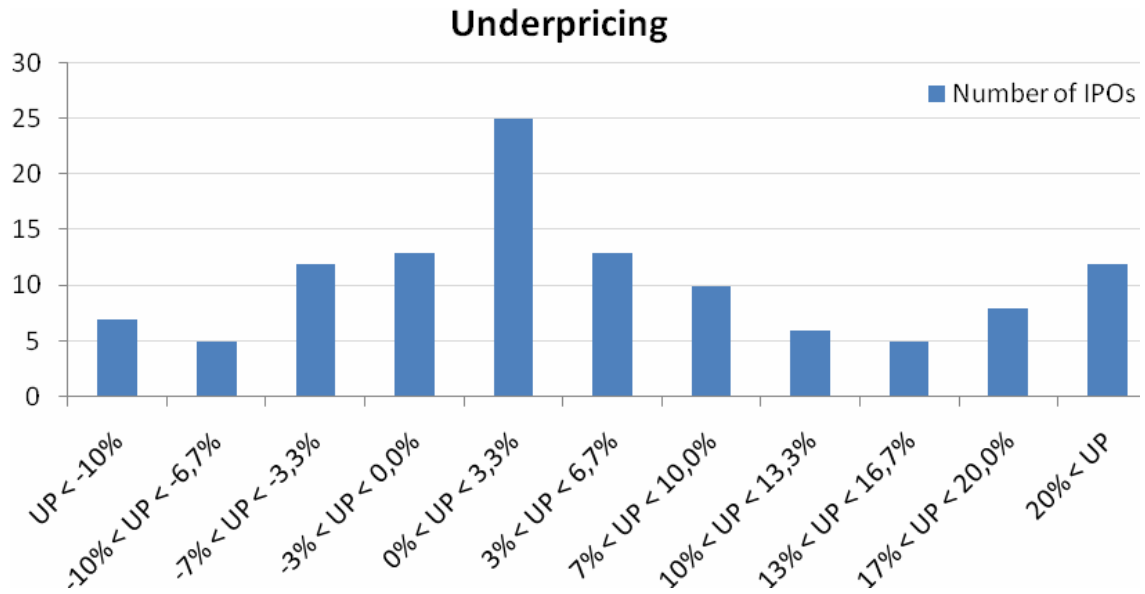


Figure 2. Number of IPOs in the selected panel for each year

