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All that glitters is not gold! Independent directors' attributes and earnings quality: Beyond formal independence

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Abstract

Research Question/Issue: This paper examines the effect of additional independent directors' attributes, beyond formal independence, on earnings management practices.

Research Findings/Insights: I find that being non-busy, having accounting expertise, and being appointed by non-controlling shareholders are relevant directors' attributes—beyond formal independence—in their earnings management monitoring task, among the directors' attributes I have tested. Additionally, the paper shows that independent directors who possess such features simultaneously outclass all other directors—included the touted effective formally independent directors—in mitigating earnings management activities.

Theoretical/Academic Implications: I respond to calls for dismantling common wisdom on board independence, investigating factors leading to better monitoring, showing that independent directors are not *all-alike*. With specific reference to directors' monitoring task, when controlling for additional directors' attributes, *formal independence* becomes uninfluential in constraining earnings management activities. I also show that the co-existence of attributes makes independent directors more effective relative to board mates not sharing such attributes.

Practitioner/Policy Implications: Findings of this work might be useful for practitioners in attempting to design corporate governance mechanisms better able to monitor earnings management practices through independent directors and may serve as a stimulus for regulators when re-thinking regulations on board composition and structure.

KEYWORDS
corporate governance, board independence, independent directors, directors' attributes, earnings quality

1 | INTRODUCTION

The role and functioning of the board of directors are matters of continuous debate among policy makers, academics, and practitioners, and the rules related to these issues are never stable (Davies & Hopt, 2013). Indeed, at the European Union (EU) level, the European Commission has implemented an Action Plan aimed at remodeling company law to enhance corporate governance and the role of directors. In general, the presence of board-independent representatives capable of challenging management's decisions and acting as

effective monitors is widely viewed as a way to protect the interests of shareholders and, where appropriate, those of other stakeholders. Nevertheless, there is still little consensus about what a board should look like (Johnson et al., 2013), and findings of its impact on a company's life are "mixed at best" (Leblanc, 2004, p. 438). Moreover, some directors may lack the ability to work properly, thus not being able to affect the company's performance/results/outcomes (Johnson et al., 2013). Further, most studies worked on board composition and structure—focusing on board formal independence—with only a limited number of studies looking at additional individual attributes with the potential to shape directors' behavior (Sharpe, 2013).

Board of directors has a broad range of responsibilities that—based on theoretical work—are usually classified into two primary functions: monitoring and advising (Adams et al., 2007; Raheja, 2005). A specific monitoring task of the board of directors is to assure the quality of financial reporting, proxied by Earnings Management (EM) practices. EM hampers financial reporting quality, obscures real performance, and lessens shareholders' ability to make informed decisions, therefore generating agency costs (Xie et al., 2003). In recent years, considerable attention has been given to reporting quality by regulators and by the popular press (Loomis, 1999; Xie et al., 2003), and according to the SEC chairman Arthur Levitt, falsified reports and doctored records are a common problem, and there are "great expanses of accounting rot, just waiting to be revealed." The investigation of the relation between board of directors, specifically independent members, and EM is critical as lack in the monitoring task generates severe effects on firms' outcomes (Trueman & Titman, 1988).

Therefore, in this study, I aim at "understanding mechanisms that may affect the degree to which characteristics associated with 'potential' to influence outcomes result in the 'actual' influence being realized" (Johnson et al., 2013, p. 254) opening the independent directors' "black box"[1] (Dalton & Cannella, 2003). I do so by investigating whether and to what extent additional independent directors' characteristics influence EM practices, *above and beyond*, formal independence.

Specifically, I exploit the unique features of the Italian institutional setting, within the time window 2005–2017, with a hand-collected data sample of the entire board population of Italian listed companies, for a total of 2,249 firm-year observations and 21,193 directors (of whom 8,436 are declared to be independent, i.e., formally independent). The Italian setting is characterized by a relatively small and inefficient capital market, weak legal protection for both creditors and shareholders (La Porta et al., 1999), and highly concentrated ownership structure with the presence of principal–principal (PP) conflicts, particularly between the controlling and minority shareholders. In such a context, the independent directors' role remains central and yet unexplored as they compete in a specific labor market (Fama, 1980; Fama & Jensen, 1983), where performing poorly may undermine their reputation and future career (Zattoni & Cuomo, 2010). They have incentives to reinforce their monitoring tasks to protect their human capital and avoid legal liabilities (Carcello et al., 2002; Fama, 1980; Fama & Jensen, 1983).

In my first set of tests, I start with a validity test aiming to confirm common wisdom related to formally independent boards' ability to constrain EM practices. Next, I test my first hypothesis on the effect of additional independent directors' attributes on EM relative to the formally independent directors. This analysis heeds the call coming from recent studies suggesting further investigation on independent directors' effect on firms' outcomes (Dalton & Cannella, 2003; Johnson et al., 2013). Formal independence has been touted *as panacea* for board monitoring effectiveness, while I maintain that rather than independence—per se—additional independent directors' attributes are to be considered for proper monitoring. Using seven directors' characteristics, namely, *high visibility*, *detachment from the Chief Executive Officer (CEO)*, *tenure*, *busyness*, *accounting expertise*, *being appointed by non-controlling shareholders*, and *being* a *certified statutory auditor*, I aim at capturing additional monitoring ability of independent directors, above and beyond, formal independence. I find that being *non-busy*, having *accounting expertise*, and appointment by *non-controlling shareholders*, are most relevant attributes for independent directors in their EM monitoring task, among the tested directors' attributes. Findings enlighten on the fact that—in the Italian setting—independence per se might not be the proper solution in the EM monitoring role directors should play, while in Italy directors' attributes such as time to devote to the monitoring task, accounting knowledge, and appointment by minorities, are premium factors to constrain EM activities. On the contrary, directors' length of appointment, detachment from the CEO, and being visible do not seem to limit EM practices.

My second set of tests responds empirically to my second hypothesis, where I maintain that additional independent directors' attributes—proved to be more effective with reference to limiting EM—should naturally be even more effective where co-existent. To test my hypothesis, I first address the issue of independent directors' appointment being endogenous to the firm, using the Heckman process (Heckman, 1979; Lennox et al., 2012). Then, I assess whether and to what extent independent directors who pool at the same time *non-busyness*, *accounting expertise*, and are appointed by *non-controlling shareholders* are better able to monitor relative to peers. Results confirm my prediction with independent directors embedding simultaneously the three attributes identified above, outclassing any other independent director type. Findings show that when those attributes co-exist, formal independent directors' ability to limit EM practice does not differ from non-independent peers and that only the three identified characteristics are still valid attributes to limit EM practices.

A final set of tests aims at corroborating my inferences working on additional analysis and sensitivities. First, to alleviate concerns that my inferences are driven by confounding effects or a poor identification, I test a model that provides a direct assessment of each characteristic's additional effect to reinforce inferences on the first and second hypotheses. Second, I run a lagged first-difference (*LFD*) model to tackle reverse causality (Allison, 2009; England et al., 2007; Martin et al., 2012), on my first hypothesis. Third, I implement a

propensity score matching (PSM) to further validate my findings on Hypothesis 2. Results and inferences remain unchanged to all those sensitivity tests.

This study makes the following contributions to the academic debate on accounting and governance, and it can be an interesting hint for understanding mechanisms and dynamics in Italy's governance system. First, I add to the literature on independent directors being better able to monitor (e.g., Anderson et al., 2004; Beasley & Salterio, 2001; Beatty & Zajac, 1994; Byrd & Hickman, 1992; Dechow et al., 1996; Klein, 2002; Peasnell et al., 2005; Vafeas, 2005; Weisbach, 1988), showing that independent directors are not better "per se" and, after controlling for additional directors' characteristics, *formal independence* becomes ineffective concerning EM monitoring. Second, I respond to calls for dismantling common wisdom, investigating factors leading to better monitoring carried out by directors (Dalton & Cannella, 2003; DeZoort et al., 2002; Johnson et al., 2013), working on co-alignment of attributes and attempting to find a more efficient board combination, with reference to monitoring EM practices. Third, I investigate two directors' attributes not explored before: directors appointed by non-controlling shareholders and directors registered as statutory auditors, with the former appearing to alleviate minority expropriation.

2 | REVIEW OF LITERATURE AND HYPOTHESES DEVELOPMENT

During the last 30 years, corporate governance issues have been extensively investigated. In particular, the interest in corporate governance is mostly driven by the agency theory (Jensen & Meckling, 1976) and by the implications of the separation between ownership (shareholders) and control (managers), with one of the most debated solutions, potentially adoptable to improve governance functioning, being the use of a board of directors. The board of directors has a broad range of responsibilities that—based on theoretical work—are usually classified into two major functions: monitoring and advising (Adams et al., 2007; Raheja, 2005). Drawing from Linck et al. (2008), the monitoring function requires directors to scrutinize management to guard against harmful behavior, ranging from shirking to fraud (Linck et al., 2008), whereas advising involves helping management make right decisions about firm's strategy and actions.

Thus far, current research on board of directors is still far from unanimous agreement on proper board composition (Johnson et al., 2013), and findings of its impact on firm's life are not clear (Leblanc, 2004, p. 438). Some directors may lack the ability to work properly and influence firms' life (Johnson et al., 2013). Moreover, not many studies have looked for additional individual attributes, which have the potential to shape directors' behavior (Sharpe, 2013). Therefore, "understanding mechanisms that may affect the degree to which characteristics associated with 'potential' to influence outcomes result in the 'actual' influence being realized" (Johnson et al., 2013, p. 254) and opening the independent

directors' "black box" (Dalton & Cannella, 2003) are interesting issues. With specific reference to monitoring tasks, boards are charged with monitoring management to protect shareholders' interests and maximize shareholders' value. Hence, attention on financial information quality—*proxied by EM*—is crucial (Beasley, 1996; Dechow et al., 1996) and has received considerable attention by regulators (Xie et al., 2003), as it is widespread among companies that use it as a tool to meet earnings expectations (Loomis, 1999). When information is unreliable, it generates severe consequences for firms and puts at risk shareholders' value (Dechow et al., 1996). Hence, to the extent that EM hampers financial reporting quality, obscures real performance, and lessens shareholders' ability to make informed decisions, we can view EM as an agency problem (Xie et al., 2003).

On that path, several studies have examined the relationship between board structure and composition and EM levels (e.g., Beasley & Salterio, 2001; Peasnell et al., 2005; Vafeas, 2003). In the U.S. setting, the evidence is consistent with independent[2] directors contributing to reduce EM activities (Anderson et al., 2004; Beasley, 1996; Dechow et al., 1996; Klein, 2002). Outside the United States, findings are inconclusive at best (Brennan & McDermott, 2004). Other studies deepen on independent directors' personal activism and incentives, maintaining reputation, multiple directorships, tenure, expertise, and appointment process (see Anderson et al., 2004; Beasley, 1996; Coles et al., 2014; Dechow et al., 1996; Dhaliwal et al., 2010; Fama & Jensen, 1983; Ferris et al., 2003; Fich & Shivdasani, 2006; Xie et al., 2003). To my knowledge, all those studies investigated directors' additional attributes in isolation and overlooked at their impact relative to formal independence. Finally, they missed to enlighten on the effect of the co-existence of multiple attributes in the same director's midst.

Therefore, in this study, I hypothesize that the independent directors who possess additional attributes are better monitors in their EM monitoring duties, relative to formal independent directors, lacking such characteristics and, therefore, can better constrain EM practices. This consideration might be even more important in the Italian setting permeated by ownership concentration (La Porta et al., 1999), weak institutional environment (Leuz, 2010), and PP conflicts (Peng et al., 2008; Su et al., 2008), potentially resulting in minority expropriations (Dharwadkar et al., 2000; Johnson et al., 2000). In such context, independent directors compete in the outside directors' labor market (Fama, 1980; Fama & Jensen, 1983), bring to the board their experience, and offer different perspectives from executives (Roberts et al., 2005); and performing poorly may undermine their reputation and future career (Zattoni & Cuomo, 2010). Moreover, they need to protect their reputational capital and avoid legal liability (Carcello et al., 2002) as EM detection punishments also include board members (Mao, 2002). Therefore, the effect of independent directors' additional characteristics on EM monitoring ability is an unanswered yet crucial question.

The selection of additional relevant independent directors' attributes is crucial and undoubtedly imperfect, as to whether

independent directors have a complex portfolio of skills, and caution has to be used in making inferences. With that spirit, I identified seven additional characteristics that, at least in principle, are suitable to be assessed. Five have been proved to be—*directly or indirectly and in different settings*—potential drivers for directors' ability to work properly (see per Johnson et al., 2013) and specifically analyzed individually regarding EM practices.[3] Two additional attributes are relevant for the Italian context and have never been analyzed with reference to their impact on EM practices. The seven characteristics are *high visibility*, *detachment from the Chief Executive Officer (CEO)*, *short tenure*, *being non-busy director*, *having accounting expertise*, *being appointed by non-controlling shareholders*, and *being a certified statutory auditor*.

This analysis leads to my first hypothesis:

> **Hypothesis 1a–g.** All else being equal, independent directors holding additional attributes will be more effective in constraining earnings management, relative to formally independent only peers.

Below, I formally discuss the seven independent director's attributes investigated and elaborate on the hypothesized relations.

2.1 | High visibility

Group dynamics taking place in the boardroom are likely to affect directors' independence. In particular, board meeting mechanisms and boardroom practices often involve board members' unwillingness to contradict the CEO (Lorsch & MacIver, 1990) and other top managers and constrain directors' independent judgment (Cox & Munsinger, 1985). Directors may feel the threat of not being reappointed if they contradict or alienate the CEO (Hempel & Fay, 1994) and feel obliged to support the person who facilitated their appointment (Westphal, 1999), and they are unlikely to voice their opinion against the position taken by the majority of the board members (Hill & McDonnell, 2006). However, the independent directors who are more powerful, influential, widely known in the community, and have a more excellent reputational value to protect (Beasley, 1996; Dechow et al., 1996; Fama, 1980; Fama & Jensen, 1983) are less apt to be "*yes men*," are more willing to challenge managerial decisions, and are more credible in doing so (Milgram, 1974). The more reputable independent directors (i.e., more visible ones) are expected to be more effective (Finkelstein, 1992). Exposure to public attention can potentially play a key role in disciplining corporate decisions and can help shape corporate governance in terms of board independence and investor protection (Dyck et al., 2008; Joe et al., 2009), as exposure can affect directors' reputation. Such a threat can be highly effective, as "no insurance policy can protect a director from reputational penalties." (Dyck & Zingales, 2002). Exposure usually depends on the media role and effectiveness that is itself function of the institutional environment. According to a study by Dyck

et al. (2008), the impact exposure is likely to be more visible in institutional settings where executives and directors underestimate, ex ante, the degree of intervention and influence of the media, enforcement of investor protection is generally low, and corporate governance best practices are not generally well established. In the context of EM monitoring task, consistent with prior literature on the boardroom dynamics, it is reasonable to assume that independent directors with higher visibility, else equal, will be less prone to accommodate EM practices to a more considerable extent, relative to formally independent peers.

These mechanisms lead to the following hypothesis:

> **Hypothesis 1a.** All else being equal, independent directors with higher visibility will be more effective in constraining EM, relative to formal independent only peers.

2.2 | Detachment from the CEO

Research on board functioning and social ties indicates that personal relationships and political connections could impair independent directors' monitoring activity. Mace (1971, p. 99) quotes CEOs explaining their selection of outside directors who are "friendly, if you will" and "non-boat-rockers," with one CEO admitting to "selecting outside directors … much like a trial lawyer goes about the selection of a jury." Hwang and Kim (2009) find that the presence of connections—such as school links and close graduation time windows—between CEOs and directors are associated with higher CEO compensation. Again, Agrawal and Knoeber (2001) show that firms in which politics matters more are more likely to hire outside directors with a background in politics and law. Chaine and Goergen (2014) look at the effects of social and family ties between managers and board members on Initial Public Offerings (IPOs) and find that both links increase the pay-performance sensitivity on the performance of the IPO. Furthermore, CEO get the *benefit of the doubt* when the new directors have a closer relationship with managers (Fracassi & Tate, 2012). Consistent with prior literature on board functioning and social ties, it is reasonable to assume that independent directors' ties with the CEO will be associated with a more accommodating attitude toward aggressive financial reporting practices, and vice versa.

These mechanisms lead to the following hypothesis:

> **Hypothesis 1b.** All else being equal, independent directors with a greater level of detachment from the CEO, will be more effective in constraining EM, relative to formal independent only peers.

2.3 | Tenure

For how long can we consider a director independent? It is a legitimate and non-trivial question. The effect of tenure is twofold.

On the one hand, a long-term director engagement may be associated with greater experience (Vafeas, 2003; Vance, 1983), commitment (Buchanan, 1974), conformity to organizational values (Salancik, 1977), and "competence, because it provides a director with in-depth knowledge about the firm and its business environment" (Vafeas, 2003, p. 1044). On the other hand, Vafeas (2003, 2005), Xie et al. (2003), and Anderson et al. (2004) find evidence of a negative association between tenure and firm success, as tenure increases the likelihood of becoming friends with managers, hence being less likely to monitor them (Beasley, 1996). Management research documents the existence of a curvilinear relationship between the length of tenure and firm performance (Katz, 1982; Kosnik, 1990; Mallette & Fowler, 1992), and I work along that line with reference to independent directors EM monitoring task. I argue that independent directors' effectiveness on EM practices will be greater when directors are early in their tenure. They will work to gain an adequate understanding of a firm, its "culture," and the way it operates (Bacon & Brown, 1973; Beasley, 1996). Newly appointed directors will be relatively more skeptical, willing to invest time, and in a continuous attempt to understand firm dynamics. This approach then declines when directors stay too long on corporate boards, negating their independence through friendship and accommodating attitudes (Beasley, 1996; Vafeas, 2003).

These mechanisms lead to the following hypothesis:

> **Hypothesis 1c.** All else being equal, independent directors at the early ages of their tenure, will be more effective in constraining EM, relative to formal independent only peers.

2.4 | Busyness

Some prior research provides evidence about the positive association between multiple directorships and company success (Cotter et al., 1997; Ferris et al., 2003; Harris & Shimizu, 2004), consistent with numerous directorships being a sign of directors' reputation and monitoring ability (Fama, 1980; Fama & Jensen, 1983). However, multiple directorships may exacerbate one of the most relevant issues of outside directors' experience: the lack of time (Lipton & Lorsch, 1992). Time constraints (Harris & Shimizu, 2004) and limited attentional capacity (Kanfer & Ackerman, 1989) can lead busy directors to fail to perform their monitoring and service roles on the board effectively. Other studies find costs associated with multiple directorships (Beasley, 1996; Core et al., 1999; Fich & Shivdasani, 2006), indicating that boards relying heavily on outside directors who serve on several boards are likely to experience a decline in the quality of corporate governance. Moreover, directors' busyness[4] is detrimental to board monitoring quality and shareholder value (Falato et al., 2014). In line with this, Lin et al. (2003) argue that outsiders should have the necessary time to exercise their duties effectively, and it is reasonable to assume that this is true also in the context of EM monitoring.

These mechanisms lead to the following hypothesis:

> **Hypothesis 1d.** All else being equal, non-busy independent directors, will be more effective in constraining EM, relative to formal independent only peers.

2.5 | Accounting expertise

Independent directors with accounting expertise are worldwide expected to be better able to monitor management, due to well-developed and knowledge-based skills with which they can thoroughly evaluate managers' explanations and actions (Krishnan & Visvanathan, 2008), hence detecting potential earnings manipulation (Cunningham, 2008). In line with this, independent members with financial expertise have turned out to be more effective in mitigating EM relative to non-financial experts (Carcello et al., 2006). Defond et al. (2005) find a positive market reaction around the appointment of AC members with accounting expertise; and Bédard et al. (2004) find that the presence of at least one Audit Committee member with financial expertise is associated with a lower likelihood of aggressive EM. Xie et al. (2003) show, more generally, that financial knowledge is a relevant element in constraining managers' attitudes to engage in EM.

These mechanisms lead to the following hypothesis:

> **Hypothesis 1e.** All else being equal, financial expert independent directors, will be more effective in constraining EM, relative to formal independent only peers.

2.6 | Certified auditor

The weaknesses of corporate governance systems were highlighted by several financial scandals (Bajra & Cadez, 2017) in the early 21st century, which called for action and remedies worldwide. The VIII EU Directive introduced legislative reforms designed to restore investor confidence in the European capital markets (Braiotta & Zhou, 2008). The objectives thereof are "to ensure that investors and other interested parties can rely on the accuracy of the audited accounts, to prevent conflicts of interest for auditors and to enhance the EU's protection against Enron-type scandals" (Commission of the European Communities, 2004), and mandates for registration of statutory auditor and audit firms in any Member State. The VIII EU Directive states that all statutory auditors and audit firms shall be recorded in a public register in accordance with Articles 16 and 17. Article 16 disciplines the information that shall be provided by the statutory auditors. In the Italian system, the register is managed by the Ministry of Economy, which is also in charge of examining knowledge and the overall oversight of the register and its members. As certified auditors are in a specific register and they need to pass an exam focused on auditing

matters, it is reasonable to assume that they possess an embedded superior ability to deal with accounting issues and EM monitoring task—relative to formally independent directors.

This lead to the following hypothesis:

> **Hypothesis 1f.** All else being equal, certified auditors independent directors, will be more effective in constraining EM, relative to formal independent only peers.

2.7 | Non-controlling directors' appointment

It is a common belief that, without vigilant oversight, large shareholders are prone to exploit minority shareholders' portion of the firm's wealth (Faccio et al., 2001). Ownership structure, in Italy, generates agency problems between "dominant blockholders" and minority shareholders (Melis, 2004; Melis et al., 2012). One of the key governance problems of Italian companies is not the potential conflict between principal and agent—as for the Anglo-American companies—but rather the one between principal and principal: that is, controlling and minority shareholders (Melis, 2000; Pearce & Merchant, 2017; Zattoni & Minichilli, 2009). This conflict happens because the controlling and the minority shareholders both have different levels of information and power and may pursue different interests (Pearce & Merchant, 2017). Small shareholders have no (or limited) influence on both shareholders' assembly meetings and, consequently, on board decision making. To ensure the representation of minority shareholders on the board of directors, the Italian law requires at least one seat on the board of directors to be reserved for minority shareholders (Melis & Zattoni, 2017). A recent study of the Organization for Economic Cooperation and Development (OECD) (2012) on mechanisms of firms' board appointments shows that only Israel, Spain, and Italy impose by law the appointment of minority representation members on the board, despite the large presence of PP conflicts worldwide. In monitoring EM activities, independent directors appointed by non-controlling shareholders are expected to be particularly vigilant. The Italian institutional setting is characterized by concentrated ownerships (Melis & Zattoni, 2017) and a poor investor protection environment (La Porta et al., 1997). This makes EM practices relatively easier to make and harder their detection process. The non-controlling independent directors can hence be reasonably considered the "ultimate guardian" of shareholders rights.

These mechanisms lead to the following hypothesis:

> **Hypothesis 1g.** All else being equal, independent directors appointed by the non-controlling shareholders list, will be more effective in constraining EM, relative to formal independent only peers.

A detailed description on how additional attributes are computed is presented in Appendix A.

2.8 | On the co-existence of attributes

My first set of hypotheses is a call coming from recent studies suggesting further investigations on independent directors' effect on firms' outcomes (Dalton & Cannella, 2003; Johnson et al., 2013). They aim at identifying which directors' characteristics—among the ones selected in my study—make independent members better able to deter EM practices, relative to formal independence. Once such effective attributes are discovered, an inborn observation comes naturally because—most probably—the co-existence of such features within the same director will lead him to outclass the formally independent directors' peers, and the directors holding other additional attributes among the ones investigated.

These mechanisms lead to my Hypothesis 2:

> **Hypothesis 2.** All else being equal, independent directors where effective additional attributes co-exist, will be more effective in constraining EM, relative to formal independent only peers.

3 | THE UNIQUENESS OF THE ITALIAN SETTING

Italy represents an ideal setting to investigate the effectiveness of independent directors for several reasons. In Italy, the financial market is not particularly large and developed; thus, its function of external monitoring mechanism might not be properly exercised (Brunello et al., 2003; Zattoni & Minichilli, 2009), and the market for corporate control is almost absent (Bianco & Nicodano, 2006). Moreover, Italy is usually described in the literature as a country that features weak legal protection of minority investors and inefficient law enforcement (La Porta et al., 1997). In contrast to any other major European corporate system, in Italy, neither institutional investors (e.g., as in the United Kingdom) nor banks (e.g., as in Germany) have a significant influence on corporate governance characteristics and mechanisms (Bianco & Casavola, 1999), with banks' incentives to monitor relatively low (Zattoni & Minichilli, 2009). Moreover, banks do not own significant stakes in the companies, and they are generally excluded from belonging to any corporate governance body (Di Pietra et al., 2008), causing bank insiders' monitoring—which should act as a substitute of external markets for corporate control—to be ineffective (Brunello et al., 2003; Franks & Mayer, 1998).

As far as the *ownership structure* is concerned, it generates agency problems between "dominant blockholders" and minority shareholders (Melis, 2004; Melis et al., 2012). More precisely, in the presence of high ownership concentration and dominance of large shareholders—frequently families—the key governance problem of Italian companies is not the potential conflict between principal and agent (i.e., shareholders and top managers) characterizing Anglo-American companies, but the one between principal and principal (PP)—that is, controlling and minority shareholders—(Melis, 2000;

Pearce & Merchant, 2017; Zattoni & Minichilli, 2009). The conflict arises because controlling and minority shareholders have different levels of information and power and may pursue different interests (Pearce & Merchant, 2017). Finally, the Italian institutional setting shows a large presence of family firms extensively involved in the firms' management (Faccio & Lang, 2002; La Porta et al., 1999) and pyramidal groups[5] (Enriques & Volpin, 2007).

Furthermore, there are a few peculiarities of the governance system in Italy. According to the Italian TUF (financial markets functioning regulation), minority shareholders are entitled to take part in enterprise management (De Poli & de Gioia Carabellese, 2017). Granting minority shareholders the right to appoint at least one member of the board of directors surely represents an important step towards a more effective protection of outside investors' interests (Malberti & Sironi, 2007; Moscariello et al., 2019). Indeed, the Italian regulation has been mentioned as a possible leading example concerning the adoption of corporate governance instruments able to stimulate shareholders' activism (Dyck et al., 2008; Ventoruzzo, 2010). In Italy, according to the TUF, the election of candidates occurs through lists of contenders. A listed company's corporate charter must include a provision allowing grouped minority shareholders to appoint at least one director. A quota of directors, expressed either in terms of percentage or numbers, shall be reserved to the minority list. In practical terms, before the shareholders' meeting, a qualified percentage of shareholders are entitled to submit a list of prospective directors. The minority shareholders' list is the one that, without any connection with the majority, have managed to achieve the highest consensus at the annual shareholders' meeting. The first candidate of the most successful minority list will be appointed as a director (as will the second candidate of the same list, provided that the board of directors' quota allows for the appointment of an additional director). Technically speaking, the directors appointed are not explicitly regarded and defined as minority directors, although it is quite evident that, having been chosen from the list of the successful minority directors, they will (also) represent the "voice" of the minorities (Hirschman, 1970).

The Italian Corporate Governance Code (*Codice di Autodisciplina*) issued by CONSOB (the equivalent of SEC for Italy) is flexible regarding board independence, stating that firms should appoint a reasonable number of independent directors. Then it specifies that firms shall consider a director as independent whenever a director in the focal firm: does not own any share in the focal firm (nor in its subsidiaries) that allows any potential "influence" over the firm; has not covered managerial positions in the last 3 years; does not have any commercial or professional relationship with the firm; has not received any compensation besides the one as a director in the previous 3 years; has not been a director for more than 9 years in the past 12 years; is not an executive in any company of the firm's group; is not connected in any respect with the auditor; and is not a close relative of any individual under the situation of any of the previous points. It is, at the end, worth mentioning that, in Italy, there is no legal restriction on interlocking directorates, and per se, they are not even relevant for antitrust purposes.

4 | DATA AND VARIABLE DEFINITIONS

The sample comprises the boards of directors of all non-financial companies listed on the Milan Stock Exchange from 2005 to 2017. In addition to the advantages above relative to the "common" U.K.-U.S. setting, focusing on a single country helps isolate confounding effects (Barth et al., 2008). Italy has the advantage of large differences among firms, enabling us to check for cross-sectional variations across boards.

The data sample is a composite sample since the model gathers the final dataset on three different levels: (i) company-related data, (ii) governance data, and (iii) independent board members' profiles and characteristics.

4.1 | Company level

The initial sample comprises all Italian companies listed on the Milan Stock Exchange, over 13 years from 2005 to 2017. Following the previous literature on EM, I excluded companies in the finance sector because of their peculiar accounting requirements and regulations. After financial companies are excluded, the total number of firm-year observations equals 2,978, represented by 219 unique companies. All necessary financial data at the company level were collected from the COMPUSTAT Global database. I eliminated 186 firm-year observations due to missing COMPUSTAT data.

4.2 | Governance data

All governance data were hand-collected from official sources, such as corporate governance reports and annual financial statements. Company websites were used to retrieve missing data.[6] Finally, press releases and other documents were used as a last resort source to fill in missing information. This process resulted in the loss of 143 firm-year observations for which corporate governance information was not available.

4.3 | Board member data

The final sample resulting from the process described above (2,649 firm-year observations) represents the board composition and board structure data collection's starting point. The number of directors' seats for the sample amounts to 21,193, of which 8,436 are formally independent. Independent directors' and CEOs' profiles[7] were then investigated in detail by collecting information from their curricula vitae, corporate governance reports, financial statements, LinkedIn profiles, and Factiva database. Due to lack of information at the independent director level, another 694 directors' seats were excluded from the sample (238 firm-year observation). Finally, the collection of CEO-related information reduced the sample by 432 directors' observations (162 firm-year observations), leading to a final sample of

2,249 observations (219 unique firms) and 7,310 independent director seats under investigation. Notice that any time independent directors' or CEO information for a given firm-year was missing, the firm-year was excluded from the sample. Table 1 explains the sampling process. Panel A identifies the firm-year observations, while panel B shows the final sample for independent directors.

As a dependent variable, I use three different EM metrics. The dependent variable assesses whether earnings are representative of a company's real (underlying) performance, that is, its EM. Past research concurs that no single empirical measure is definitively better than the others (Dechow et al., 2010); thus, I use three different proxies to assess EM. The first measure selected is absolute discretionary accruals, estimated using the cross-sectional modified Jones model, as described by Dechow et al. (1995). The second EM metric is absolute discretionary accruals, estimated using DeFond and Park's (2001) model, wherein estimates are performed at company level.[8] Moreover, researchers have documented a "kink" in the distribution of reported earnings around zero: a statistically small number of firms with small losses and a statistically large number of firms with small profits (Burgstahler & Dichev, 1997; Degeorge et al., 1999). A common interpretation of this pattern is that firms with unmanaged earnings slightly less than the heuristic target of zero (i.e., firms with small losses) intentionally manage earnings to report a small profit. I then construct a third EM measure following Barth et al. (2008) to check properly for loss avoidance (Dechow et al., 2010). In sum, the three metrics capture EM levels: across firms, working on abnormal accruals levels relative to other firms (Dechow et al., 1995); within firms, comparing "normal" accruals levels for a firm given its characteristics relative to reported accruals (DeFond and Park, 2001); and at firm level, assessing firms' specific target beatings (Barth et al., 2008). A detailed

TABLE 1 Sample selection process

Panel A: Firm-level observations	
Population of non-financial listed companies, 2005–2017	2,978
Observations with missing accounting/financial data	−186
Observations with missing corporate governance data	−143
Sample before dropping profiles missing data	2,649
Observations dropped because of missing independent director data	−238
Observations dropped because of missing CEO data	−162
Final sample	**2,249**
Unique firms	*219*
Panel B: Independent director information	
Directors' seats available on the boards of companies from panel A	21,193
Where	
Independent directors sitting on the boards	**8,436**
Independent directors dropped because of missing information	694
Independent directors dropped because of missing CEOs' data to capture detachment	432
Final number of available independent directors' profiles	**7,310**

explanation of the variable measurement for each EM proxy is reported in Appendix B.

4.4 | Variables of interest

All variables of interest are measured as described in Appendix A. I draw from past literature and use characteristics able to influence board monitoring capabilities in relation to EM and, at the same time, that suffer from low bias and noise, plus additional characteristics specific of the Italian setting but largely generalizable in terms of implications. A guide in this choice has been the comprehensive work by Johnson et al. (2013) reviewing the management literature on board composition, which provided an extensive list of measures to be used to assess board functioning.

4.5 | Controls

The model includes controls for a battery of factors potentially relevant to EM levels. Selected variables are related to three main areas: governance attributes, company characteristics, and directors' characteristics. Concerning governance, the controls are the presence of an AC (e.g., Klein, 2002; Xie et al., 2003); CEO duality (e.g., Klein, 2002); board size (e.g., Dechow et al., 1996; Peasnell et al., 2005); and the presence of a Big 4 auditor (e.g., De Angelo, 1981; Dechow et al., 1996). Finally, the natural logarithm of the average cash compensation of independent directors sitting on the board (COMPENS) is included to control the misalignment of independent directors' incentives (Bryan et al., 2000). About company characteristics, I include a battery of financials associated with EM levels in previous studies. Furthermore, since the board's seniority itself may drive board functioning, Board_Age, CEO_Tenure, and Directors'_Equity are additional controls.[9] Finally, I include a dummy variable taking the value of one if there is at least one woman among the independent directors and zero otherwise. A detailed description of all variables is in Appendix C.

Table 2 shows descriptive statistics for the final sample: panel A reports the descriptive statistics for each variable at the board level, while panel B provides information about independent directors used to construct the variable of interest.

The dependent variables are the absolute value of discretionary accruals (*ABS_DISACCR*), the absolute value of abnormal working capital accruals (*ABS_AWCA*), and small positive earnings (*SPOS*) (Barth et al., 2008). Both *ABS_DISACCR* and *ABS_AWCA* show values that are aligned with those reported by previous studies in the Italian setting (e.g., Marra et al., 2011; Marra & Mazzola, 2014), with means (medians) equal to 0.076 (0.054) and 0.083 (0.067), respectively. The mean value of companies reporting small positive earnings, *SPOS*, is 0.177. Regarding the variables of interest, on average, 40% of directors sitting on the board are formally independent. Concerning the attributes besides labelled independence, the descriptive statistics are as follows.

TABLE 2 Descriptive statistics

	Mean	Median	St. dev.	Min.	Max.
Panel A: Descriptive statistics all variables ($n = 2,249$)					
Dependent variables (earnings management)					
ABS_ DISACCR	0.076	0.054	0.125	0.000	0.372
ABS_AWCA	0.083	0.067	0.135	0.000	0.465
SPOS	0.177	0.000	0.163	0.000	1.000
Variables of interest					
IND_Form	0.396	0.000	0.193	0.000	1.000
IND_Visibility	0.234	0.222	0.264	0.000	1.000
IND_Detached	0.265	0.245	0.234	0.000	0.669
IND_Tenure	0.243	0.172	0.185	0.000	0.679
IND_Busyness	0.325	0.310	0.164	0.000	0.864
IND_AccExp	0.294	0.225	0.184	0.000	0.815
IND_Aud_Exp	0.322	0.342	0.236	0.000	0.750
IND_NC_Shareh	0.277	0.288	0.224	0.000	0.456
CO_EXISTENCE	0.196	0.000	0.155	0.000	1.000
IND_ALL	0.228	0.232	0.186	0.000	0.386
Control variables					
AC	0.850	1.000	0.370	0.000	1.000
DUAL	0.370	0.000	0.460	0.000	1.000
BDSZ	9.420	8.000	2.854	2.000	22.000
AUD	0.800	1.000	0.350	0.000	1.000
FAMILY	0.560	1.000	0.590	0.000	1.000
COMPENS	37,480	249,000	49,500	4,000	2,856,000
ROI	0.071	0.083	0.541	−0.452	0.920
SIZE	15.990	15.920	1.322	9.500	24.980
CFO	0.062	0.052	0.124	−0.316	0.802
LEV	0.632	0.595	0.244	0.093	0.902
Board_Age	55.500	54.200	19.000	37.800	71.200
CEO_Tenure	10.250	9.000	4.500	1.000	31.000
Directors_Equity	0.282	0.000	0.302	0.000	1.000
Diversity	0.072	0.000	0.138	0.000	1.000
Instruments					
FIRM_AGE	15.600	12.000	8.500	0.000	39.000
CEO_AGE	51.400	49.000	0.170	0.000	1.000
FIRM_DIVERSIFIC	2.850	2.200	0.250	1.000	11.000
Panel B: Descriptive statistics of the directors' characteristics ($n = 7,310$)					
Visibility	17.800	24.000	27.500	4.000	126.000
Detached	3.500	4.000	5.000	0.000	8.000
Busyness	4.950	4.000	3.350	0.000	63.000
Tenure	6.200	6.750	3.850	1.000	41.000
Acc_Exp	0.280				
Aud_Exp	0.320				
NC_Shareh	0.260				

Note: Panel A reports the descriptive statistics of all the variables used to perform the analyses. See Appendices B and C for detailed variable description. Panel B reports the independent directors' attributes used to construct the variables of interest. For detailed variable description on *Visibility, Detached, Busyness, Tenure, Acc_Exp, Aud_Exp, and NC_Shareh*, see Appendix A.

Some control variables appear to be similar to those reported in previous studies in the Italian setting (e.g., Marra et al., 2011; Marra & Mazzola, 2014; Prencipe et al., 2008). The average board size is 9.42 members, and the average age of those sitting on the board is 55.50 years. The percentage of independent directors holding shares in the company is 28%, and 7% of companies have at least one female director. Big 4 auditors cover 80% of the firms included in the sample, while 56% of the firms can be defined as family firms; that is, they are under the control of a major shareholder. Finally, the financial data show that the mean (median) of the return on investment is 7% (8%), operating cash flows amount to 6% (5%) of total assets, and companies have relatively high leverage (63% of total assets, on average). The correlation matrix coefficients (not tabulated here for brevity) and VIF test show that none of the variables exhibit multi-collinearity issues.

Panel B of Table 2 also provides a detailed description of the additional characteristics at individual level in the Italian setting.

5 | METHODOLOGY AND RESULTS

To test my hypotheses, I start with a preliminary validity test through the following ordinary least squares (OLS)—and *Probit* for SPOS—regression models:

$$EM = \alpha_0 + \beta_1 IND\_Form + Controls\gamma + Firm\_FE + Year\_FE + \varepsilon, \quad (1)$$

which aims at confirming consolidated wisdom on independence in our setting (i.e., Italy). In this equation, our metric for EM will be alternatively *ABS_DISACCR*, *ABS_AWCA*, and *SPOS*, respectively, as defined above. The variable *IND_Form* represents the proportion of formally independent directors sitting on the board. We expect β_1 to be negatively associated with EM. Table 3 presents the results of our validity test.

I find that *IND_Form* is negatively related and statistically significant across all our EM specifications, showing that the EM level decreases as independent directors' presence increases. For *IND_Form*, the percentage of independent directors sitting on the board is negative and significant (*ABS_DISACCR*, coeff. −0.036, sign. 0.013; *ABS_AWCA*, coeff. −0.029, sign. 0.004; *SPOS*, coeff. −0.056, sign. 0.009), confirming the consistency of our setting with previous studies.

Next, to test my first hypothesis (on the additional independent directors' attributes role in constraining EM), I use the following model:

$$\begin{aligned} EM = {} & \alpha_0 + \beta_1 IND\_Form + \beta_2 IND\_Visibility + \beta_3 IND\_Detached \\ & + \beta_4 IND\_Tenure + \beta_5 IND\_Busyness + \beta_6 IND\_AccExp \\ & + \beta_7 IND\_Aud\_Exp + \beta_8 IND\_NC\_Shareh + Controls\gamma + Firm\_FE \\ & + Year\_FE + \varepsilon. \end{aligned}$$

$$(2)$$

Equation 2 checks whether, and to what extent, additional directors' characteristics, above and beyond the independence

label, can explain directors' impact in constraining firms' EM activities. This model is repeated over the three different EM metrics.

In my hypothesis, I expect additional attributes to influence EM above the independency "*tag*," and I expect *IND_Additional* (I refer to additional as characteristics in addition to formal independence) to have a statistically significant negative association with EM levels, after controlling for formally defined board independence.

Columns 1 to 3 of Table 4 show results on Equation 2 using different EM metrics. First, we notice that—across all regressions—*IND_Form* is not statistically significant at conventional level, showing that additional characteristics when individually measured absorb formal independence explanatory power. As expected, additional directors' features beyond formal independence seem to influence EM levels, and such characteristics seem to be able to improve firms' financial reporting quality when held by independent directors sitting on a board.

More in detail (for brevity, I comment on Column 1—*ABS_DISACCR*—only, as results are consistent across models, unless further explanation is useful), *IND_Visibility* is weakly negatively associated with EM (two models out of three, at 10% level) showing that more visible directors have a greater influence on reporting lower EM, most likely due to reputational incentives. Besides, detachment from the CEO (*IND_Detached*), length of tenure (*IND_Tenure*), and being registered as a certified statutory auditor (*IND_Aud_Exp*) seem not to have any significant effect on EM practices. Finally, *IND_Busyness*, *IND_AccExp*, and *IND_NC_Shareh* are strongly significant and negatively associated with EM across all models at 1% level. These results show that an independent director with proper "time to devote," or accounting expertise, or appointed by the minority shareholder is better able to improve EM, relative to independent peers lacking these features. Regarding control variables, SIZE, CFO, and ROI are negatively associated with EM levels confirming past evidence in the Italian setting and more broadly in the EM literature (e.g., Klein, 2002; Marra et al., 2011; Park & Shin, 2004). On the governance controls, CEO duality (DUAL) weakens EM, board size (BDSZ) improves EM, while—differently from prior studies—the presence of an Audit Committee (AC) and a Big 4 auditor (AUD) does not marginally affect EM levels. Most of the other board characteristics do not affect EM levels (*Board_Age*, *Directors_Equity*, *Diversity*, among others). Chi-square tests in panel B of Table 4 on differences in regression coefficients are all largely statistically significant, validating our inferences. Taken together, the results of Table 4 show that formal independence is most probably not as touted, per se, the solution to improve financial reporting quality.

The second hypothesis (*co-existence of identified effective attributes being able to foster earnings quality*) aims at assessing whether or not the co-existence at independent director level of attributes identified as able to influence EM makes them more effective compared with peers in fostering EM. Thus far, results on Hypothesis 1 show that *IND_Busyness*, *IND_AccExp*, and *IND_NC_Shareh* are attributes able to improve EM—above and beyond—formal independence. Therefore, I hypothesize that the co-existence of more effective attributes

TABLE 3 Earnings quality and independent directors' ability: a validity test

Dependent variable	Exp sign	ABS_DISACCR	ABS_AWCA	SPOS
Variables of interest				
IND_Form	(−)	**−0.036** (0.013)**	**−0.029*** (0.004)**	**−0.056*** (0.009)**
Controls				
AC	(+)	−0.033 (0.134)	−0.025 (0.235)	−0.025 (0.144)
DUAL	(−)	0.041* (0.084)	0.032* (0.082)	0.027** (0.031)
BDSZ	(?)	−0.012*** (0.003)	−0.012** (0.022)	−0.021** (0.045)
AUD	(+)	−0.042 (0.232)	−0.032 (0.237)	−0.023 (0.105)
FAMILY	(−)	−0.021* (0.064)	−0.007* (0.079)	−0.005* (0.065)
COMPENS	(?)	−0.006 (0.304)	−0.008 (0.321)	−0.005 (0.145)
ROI	(−)	−0.057*** (0.003)	−0.057** (0.014)	−0.054*** (0.005)
SIZE	(−)	−0.014 (0.124)	−0.012 (0.115)	−0.014* (0.098)
CFO	(−)	−0.121** (0.012)	−0.105** (0.011)	−0.102*** (0.003)
LEV	(+)	0.088*** (0.001)	0.094*** (0.0035	0.104*** (0.005)
Board_Age	(?)	−0.027* (0.090)	−0.012 (0.104)	−0.017* (0.075)
CEO_Tenure	(?)	0.035** (0.031)	0.042** (0.034)	0.022** (0.021)
Directors_Equity	(+)	−0.014 (0.444)	−0.013 (0.298)	−0.021 (0.342)
Diversity	(?)	−0.022 (0.202)	−0.022 (0.111)	−0.040 (0.119)
Constant		0.093*** (0.002)	0.087*** (0.005)	0.099*** (0.005)
Firm fixed effects		Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes
Cluster std. errors (firm)		Yes	Yes	Yes
Adjusted R^2		0.299	0.306	0.343
Observations		2,249	2,249	2,249

Note: This table reports estimation results of the following OLS (columns 1 and 2) and Probit (column 3) regressions:

$$EM = \alpha_0 + \beta_1 IND\_Form + \gamma\ Controls + Firm\_FE + Year\_FE + \varepsilon.$$

See Appendices B and C for detailed variable description. All continuous variables are winsorized at the 1% level. The z statistics are reported in parentheses next to the coefficient estimates. The reported p values are based on two-tailed significance levels.

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

within the same independent director should increase the director's capacity to improve EM.

In my setting, I cannot rule out the possibility that independent directors' choice is endogenous for the firm. In my specific analysis, endogeneity could distort the results under the assumption that better companies (i.e., with better EM) will select better independent directors to join their boardroom (i.e., the choice is endogenous to the company). Endogeneity is a widespread empirical issue in management research (Larcker & Rusticus, 2010; Lennox et al., 2012; Nikolaev & van Lent, 2005; Peel, 2014), and relevant researchers point out that exclusion restrictions have to be justified by theoretical arguments (e.g., Lennox et al., 2012) because exclusion restrictions are inherently untestable (e.g., Bertomeu et al., 2016; Larcker & Rusticus, 2010). However, in an attempt to address potential self-selection bias, I estimate a Heckman (1979) two-stage model, similar to Huang et al. (2017) and Kuang et al. (2020). First, I

create a dummy variable named *CO_EXISTENCE*, coded one if the majority of independent directors, in a given firm, hold at the same time the three additional characteristics for independent directors proven effective, and zero otherwise. Next, in the first stage regression, I estimate the presence of directors' attributes proven to be effective by fitting a probit model with standard errors clustered by year and a battery of controls as per Model (2). I test four identical models for the co-existence of attributes, *CO_EXISTENCE*, *IND_Busyness*, *IND_AccExp*, and *IND_NC_Shareh*, respectively, where annual industry averages of each measure is used as the exclusive instrument. The instrument is measured at the end of year $t − 2$ with at least 10 observations present per year-industry observation. Then all inverse Mills ratios—*based on the normal density and cumulative distribution functions*—from the first-stage regression are computed and included as control in our regressions for financial restatements.

TABLE 4 Accounting quality and independent directors additional attributes

Dependent variable:		ABS_DISACCR	ABS_AWCA	SPOS
Panel A: Regression analysis				
Variables of interest				
IND_Form	(−)	−0.028 (0.112)	−0.026 (0.136)	−0.056 (0.125)
IND_Visibility	(−)	−0.015* (0.059)	−0.016 (0.106)	−0.013* (0.099)
IND_Detached	(−)	−0.034 (0.113)	−0.036 (0.106)	−0.023 (0.103)
IND_Tenure	(−)	−0.018 (0.104)	−0.017* (0.097)	−0.023 (0.136)
IND_Busyness	(−)	**−0.048*** (0.001)	**−0.044*** (0.002)	**−0.041*** (0.006)
IND_AccExp	(−)	**−0.038*** (0.000)	**−0.040*** (0.000)	**−0.045*** (0.000)
IND_Aud_Exp	(−)	−0.011* (0.089)	−0.032 (0.115)	−0.021 (0.100)
IND_NC_Shareh	(−)	**−0.052*** (0.000)	**−0.048*** (0.000)	**−0.071*** (0.000)
Controls				
AC	(+)	−0.027 (0.106)	−0.025 (0.134)	−0.022 (0.204)
DUAL	(−)	0.021* (0.082)	0.024* (0.053)	0.024** (0.034)
BDSZ	(?)	−0.012** (0.026)	−0.023** (0.042)	−0.014** (0.043)
AUD	(+)	−0.025 (0.124)	−0.042 (0.209)	−0.025 (0.125)
FAMILY	(−)	−0.014* (0.064)	−0.015* (0.076)	−0.022** (0.045)
COMPENS	(?)	−0.007 (0.108)	−0.003 (0.111)	−0.005 (0.155)
ROI	(−)	−0.045*** (0.005)	−0.045*** (0.001)	−0.045*** (0.001)
SIZE	(−)	−0.025** (0.035)	−0.021** (0.032)	−0.024* (0.051)
CFO	(−)	−0.127*** (0.007)	−0.099*** (0.009)	−0.103** (0.010)
LEV	(+)	0.088*** (0.004)	0.095*** (0.000)	0.094*** (0.004)
Board_Age	(?)	−0.034 (0.108)	−0.054 (0.129)	−0.014 (0.134)
CEO_Tenure	(?)	0.025* (0.056)	0.024** (0.044)	0.026** (0.026)
Directors_Equity	(+)	−0.016 (0.100)	−0.012 (0.112)	−0.012 (0.202)
Diversity	(?)	−0.024 (0.205)	−0.034 (0.399)	−0.035 (0.189)
Constant		0.073*** (0.001)	0.077*** (0.003)	0.088*** (0.006)
Firm fixed effects		Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes
Cluster st. errors (firm)		Yes	Yes	Yes
Adjusted R^2		0.279	0.246	0.300
Observations		2,249	2,249	2,249

Panel B: Chi-square test on differences in coefficients

Column 1:

H_0: **IND_Busyness = 0** $\chi^2 = 16.75$ prob. $\chi^2 = 0.000$

H_0: **IND_AccExp = 0** $\chi^2 = 29.12$ prob. $\chi^2 = 0.000$

H_0: **IND_NC_Shareh = 0** $\chi^2 = 17.74$ prob. $\chi^2 = 0.000$

H_0: **IND_Busyness = IND_AccExp = IND_NC_Shareh** $\chi^2 = 31.15$ prob. $\chi^2 = 0.000$

Column 2:

H_0: **IND_Busyness = 0** $\chi^2 = 16.79$ prob. $\chi^2 = 0.000$

H_0: **IND_AccExp = 0** $\chi^2 = 33.79$ prob. $\chi^2 = 0.000$

H_0: **IND_NC_Shareh = 0** $\chi^2 = 15.39$ prob. $\chi^2 = 0.000$

H_0: **IND_Busyness = IND_AccExp = IND_NC_Shareh** $\chi^2 = 20.96$ prob. $\chi^2 = 0.000$

Column 3:

H_0: **IND_Busyness = 0** $\chi^2 = 13.43$ prob. $\chi^2 = 0.000$

H_0: **IND_AccExp = 0** $\chi^2 = 18.54$ prob. $\chi^2 = 0.000$

TABLE 4 (Continued)

Dependent variable:	ABS_DISACCR	ABS_AWCA	SPOS
H_0: **IND_NC_Shareh = 0**		$\chi^2 = 38.97$ prob. $\chi^2 = 0.000$	
H_0: **IND_Busyness = IND_AccExp = IND_NC_Shareh**		$\chi^2 = 24.07$ prob. $\chi^2 = 0.000$	

Note: Panel A reports the estimation results of the following OLS (column 1 and 2) and Probit (column 3) regressions:

$EM = \alpha_0 + \beta_1 IND\_Form + \beta_2 IND\_Visibility + \beta_3 IND\_Detached + \beta_4 IND\_Tenure + \beta_5 IND\_Busyness + \beta_6 IND\_AccExp + \beta_7 IND\_Aud\_Exp + \beta_8 IND\_NC\_Shareh + Controls\ \gamma + Firm\_FE + Year\_FE + \varepsilon.$

Panel B reports the chi-square tests on difference in coefficients on the three main variables of interest resulting significant in the regression model. Chi-square tests are for the null that coefficients are not different from zero and that the coefficients are not statistically different one to the other. See Appendices B and C for detailed variable description. All continuous variables are winsorized at the 1% level. The z statistics are reported in parentheses next to the coefficient estimates. The reported *p* values are based on two-tailed significance levels.

*Significance at the 10% level.

**Significance at the 5% level.

***Significance at the 1% level.

First and second stage Heckman equations are as follows:

Stage 1:

$$DIRECTOR\_Charact_t = \alpha_0 + \alpha_{1-4} Average\_DIRECTOR\_Charact + Other\_Explanatory\gamma + Year\_FE + \varepsilon \quad (3)$$

where **DIRECTOR_Charact** is the dummy identifying the presence/absence of the characteristics defined above (CO_EXISTENCE, IND_Busyness, IND_AccExp, and IND_NC_Shareh) and **Average_DIRECTOR_Charact** measures the industry average—excluding the focal firm—of each characteristic, respectively, and measured as illustrated above.

Stage 2:

$$EM = \alpha_0 + \beta_1 CO\_EXISTENCE + \beta_2 IND\_Form + \beta_3 IND\_Visibility + \beta_4 IND\_Tenure + \beta_5 IND\_Busyness + \beta_6 IND\_AccExp + \beta_7 IND\_Aud\_Exp + \beta_8 IND\_NC\_Shares + \kappa Mills\_Ratio\_X + Controls\gamma + Firm\_FE + Year\_FE + \varepsilon \quad (4)$$

where *EM* is alternatively one of the metrics identified in Appendix B; **CO_EXISTENCE** is the variable capturing directors' attributes co-existence, and the remaining part of the model is identical to Equation 2 as defined earlier in the text. Finally, *Mills_Ratio_X* are vectors from the selection equation all included as additional control variable to address selection bias. Regression results on Hypothesis 2 are reported in Table 5.

Panel A of Table 5 reports the first stage results. The pseudo R^2 are all above 34%. All exclusion restrictions across all models load significantly. Moreover, firms with dual CEOs (DUAL) and more leveraged (LEV) are less likely to have directors with our additional attributes. While firms with higher profitability (ROI), more cash flows from operations (CFO), and with a greater diversity (Diversity) are more likely to have "on board" directors holding our additional attributes.

Panel B of Table 5 provides the results of the second stage. This set of tests explains the effect of the co-existence of additional characteristics identified as more effective in Hypothesis 1. For all models, the adjusted R^2 are above 30%, and the inverse Mills ratio are all

highly significant, suggesting that self-selection is an issue when estimating the effects of additional attributes. As it can be seen from column 1 (as usual, I comment on one Column only, unless further explanations are needed), the *CO_EXISTENCE* variable is negative and significant (coeff: -0.048; *p* value: 0.001), showing that the co-existence of additional attributes (non-busyness, expertise in accounting, and being appointed by non-controlling shareholders) is a winning combination as it significantly reduces EM levels. Interestingly, *IND_Form*—our baseline comparison for formal independence—does not load significantly, as well as *IND_Detached* and *IND_Aud_Exp*, *IND_Visibility*, and *IND_Tenure*. These results seem to suggest the CO_EXISTENCE variables outclass formal independence, and all other additional independent directors' characteristics analyzed. It is worth noticing that the three additional attributes included in the CO_EXISTENCE variable also load significantly when measured individually. Controls are in line with the findings reported in Table 4, to which I refer for parsimony.

6 | ADDITIONAL ANALYSIS AND SENSITIVITY TESTS

I run a battery of additional analysis and sensitivity tests.

First, in Hypothesis 1, I shed light on additional attributes that influence EM levels, above and beyond formal independence. In doing so, the interest is also on the interplay of such characteristics as directors' characteristics not isolated by nature. The regression outcome shows three additional attributes as being able to outclass other directors' characteristics regarding monitoring effectiveness. Though Equation 2 does not isolate one specific characteristic's effect, it might cast doubt on confounding effects being at play. To alleviate concerns that my inferences are driven by confounding effects or a poor identification, I elaborate on a model that allows me to compare independent directors sharing all analyzed characteristics with independent directors sharing all but one. This analysis provides a direct assessment of each characteristics' additional effect and re-assures also on inferences on the first and second hypotheses. To that end, I run the following:

TABLE 5 Directors' additional attributes co-alignment and EM

Panel A: First stage Heckman logit estimation: determinants of indep. additional characteristics

Variables	Exp. sign	CO_EXISTENCE	IND_Bysyness	IND_AccExp	IND__NC_Shareh
Average_CO_EXISTENCE	(+)	**0.431*** (0.000)**			
Average _IND_Bysyness	(−)		**0.541*** (0.000)**		
Average _IND_AccExp	(−)			**0.557*** (0.000)**	
Average _IND_NC_Shareh	(+)				**0.345*** (0.001)**
AC	(+)	−0.032 (0.131)	−0.036 (0.133)	−0.034 (0.113)	−0.028 (0.128)
DUAL	(−)	−0.311** (0.041)	−0.309** (0.049)	−0.319*** (0.002)	−0.245** (0.015)
BDSZ	(?)	0.456 (0.514)	0.235 (0.424)	0.135 (0.411)	0.235 (0.314)
DUAL	(+)	0.016* (0.092)	0.013* (0.077)	0.011* (0.071)	0.014* (0.074)
FAMILY	(−)	−0.026* (0.085)	−0.031* (0.076)	−0.023** (0.043)	−0.034* (0.073)
COMPENS	(?)	−0.003 (0.236)	−0.004 (0.198)	−0.007 (0.134)	−0.003 (0.138)
ROI	(−)	−0.221*** (0.003)	−0.208*** (0.002)	−0.154*** (0.004)	−0.123*** (0.003)
SIZE	(−)	−0.124 (0.133)	−0.114 (0.357)	−0.112 (0.352)	−0.113 (0.231)
CFO	(−)	−0.085** (0.035)	−0.086** (0.045)	−0.082** (0.042)	−0.055** (0.043)
LEV	(+)	0.141** (0.046)	0.161* (0.051)	0.162* (0.052)	0.155* (0.054)
Board_Age	(?)	−0.034 (0.197)	−0.031 (0.131)	−0.035 (0.135)	−0.024 (0.110)
CEO_Tenure	(?)	−0.081 (0.100)	−0.080 (0.100)	−0.051 (0.121)	−0.061* (0.098)
Directors_Equity	(+)	0.134 (0.135)	0.153 (0.115)	0.098 (0.106)	0.133 (0.113)
Diversity	(?)	0.061* (0.052)	0.061* (0.072)	0.063* (0.068)	0.063* (0.072)
Intercept		−0.044*** (0.001)	−0.045*** (0.002)	−0.043*** (0.002)	−0.029*** (0.004)
Year controls		Yes	Yes	Yes	Yes
# observations		2,249	2,249	2,249	2,249
Pseudo R^2		0.342	0.353	0.346	0.350

Panel B: Second stage OLS: Independent additional characteristics and EM

Dependent variable	Exp sign	ABS_DISACCR	ABS_AWCA	SPOS
Variables of interest				
CO_EXISTENCE	(−)	**−0.048*** (0.001)**	**−0.042** (0.027)**	**−0.074*** (0.005)**
IND_Form	(−)	−0.026 (0.144)	−0.034 (0.124)	−0.067 (0.147)
IND_Visibility	(−)	−0.014* (0.096)	−0.014 (0.132)	−0.017 (0.15)
IND_Detached	(−)	−0.035 (0.115)	−0.032 (0.122)	−0.034 (0.163)
IND_Tenure	(−)	−0.045 (0.104)	−0.014* (0.094)	−0.024 (0.114)
IND_Busyness	(−)	**−0.026*** (0.002)**	**−0.045*** (0.005)**	**−0.043*** (0.003)**
IND_AccExp	(−)	**−0.023*** (0.005)**	**−0.042*** (0.004)**	**−0.050*** (0.003)**
IND_Aud_Exp	(−)	−0.017 (0.102)	−0.024 (0.103)	−0.034 (0.101)
IND_NC_Shareh	(−)	**−0.017*** (0.001)**	**−0.050*** (0.004)**	**−0.072*** (0.001)**
Mills_Ratio_CO_Existence	(?)	0.098*** (0.005)	0.088*** (0.004)	0.096*** (0.004)
Mills_Ratio_ IND_Bysyness	(?)	0.102** (0.023)	0.098** (0.025)	0.106** (0.035)
Mills_Ratio_IND_AccExp	(?)	0.141*** (0.006)	0.121*** (0.005)	0.131*** (0.007)
Mills_Ratio_IND_NC_Shareh	(?)	0.109** (0.018)	0.128** (0.016)	0.066*** (0.004)
Controls				
AC	(+)	−0.035 (0.135)	−0.021 (0.113)	−0.032 (0.214)
DUAL	(−)	0.025* (0.085)	0.013** (0.019)	0.012** (0.012)
BDSZ	(?)	−0.015** (0.025)	−0.025** (0.045)	−0.031* (0.055)
AUD	(+)	−0.026 (0.185)	−0.034 (0.204)	−0.02% (0.103)
FAMILY	(−)	−0.016* (0.066)	−0.030* (0.060)	−0.020** (0.022)
COMPENS	(?)	−0.006 (0.169)	−0.003 (0.111)	−0.003 (0.143)

(Continues)

TABLE 5 (Continued)

Panel B: Second stage OLS: Independent additional characteristics and EM				
Dependent variable	Exp sign	ABS_DISACCR	ABS_AWCA	SPOS
ROI	(−)	−0.046** (0.015)	−0.041*** (0.002)	−0.054** (0.022)
SIZE	(−)	−0.027** (0.045)	−0.017* (0.051)	−0.022** (0.024)
CFO	(−)	−0.114** (0.036)	−0.088** (0.033)	−0.103** (0.012)
LEV	(+)	0.076** (0.015)	0.088*** (0.002)	0.056** (0.019)
Board_Age	(?)	−0.035 (0.104)	−0.052 (0.110)	−0.013 (0.124)
CEO_Tenure	(?)	0.024* (0.050)	0.022** (0.042)	0.025** (0.047)
Directors_Equity	(+)	−0.017 (0.123)	−0.012 (0.124)	−0.022 (0.126)
Diversity	(?)	−0.024 (0.173)	−0.034 (0.152)	−0.022 (0.172)
Constant		0.065*** (0.006)	0.072*** (0.006)	0.074*** (0.005)
Firm and year fixed effects		Yes	Yes	Yes
Cluster st. errors (firm)		Yes	Yes	Yes
Adjusted R^2		0.304	0.303	0.308
Observations		2,249	2,249	2,249

Note: Panel A reports the estimation results of the first stage Heckman logit estimation: Determinants of independent additional characteristics, using the following model:

DIRECTOR_Charact $_t$ = α_0 + α_{1-4} **Average_DIRECTOR_Charact** + Other_Explanatoryγ + Year_FE + ε

DIRECTOR_Charact is the dummy identifying the presence/absence of the characteristics defined above (*CO_EXISTENCE*, *IND_Busyness*, *IND_AccExp* and *IND_NC_Shareh*). **Average_DIRECTOR_Charact** measures the industry average of each characteristic respectively and measured as illustrated above. Panel B reports the estimation results of the second stage OLS (column 1 and 2) and logit (column 3) regressions:

EM = α_0 + β_1**CO_EXISTENCE** + β_2IND_Form + β_3IND_Visibility + β_4IND_Tenure + β_5IND_Busyness + β_6IND_AccExp + β_7IND_Aud_Exp + β_8IND_NC_Shares + κ **Mills_Ratio_X** + Controlsγ + Firm_FE + Year_FE + ε

EM is alternatively one of the metrics identified in Appendix B; **CO_EXISTENCE** is the metric for attributes co-existence and the remaining part of the model is identical to Equation 2 as defined earlier in the text; **Mills_Ratio_X** are vectors from the selection equation all included as additional control variable to address selection bias. See Appendices B and C for detailed variable description. All continuous variables are winsorized at the 1% level. The z statistics are reported in parentheses next to the coefficient estimates. The reported *p* values are based on two-tailed significance levels.

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

$$EM = \alpha_0 + \beta_1 IND\_Form + \beta_2 IND\_ALL + \beta_3 IND\_All\_but\_One + Controls\gamma + Firm\_FE + Year\_FE + \varepsilon \qquad (6)$$

where *IND_ALL* is the proportion of independent directors holding all the seven additional attributes at the same time, while *IND_ALL_but_One* measures the same proportion but with one missing characteristic at the time. Results are reported in Table 6.

Results on Table 6[10] confirm that the inclusion one by one of the three characteristics identified in Table 4 (busyness, accounting expertise, and appointment by a non-controlling shareholder) is very relevant at the margin to foster independent directors' EM monitoring. This test should alleviate concerns that results are driven by poor identification issues or confounding effects.

Second, my main analysis in Equation 2 uses firm fixed effects to alleviate the reverse causality issue. Nonetheless, I cannot completely rule out the possibility that the choice to appoint directors with specific attributes is endogenous to the firm. Therefore, as endogeneity is a widespread empirical issue in management research (Larcker & Rusticus, 2010; Nikolaev & van Lent, 2005; Peel, 2014), it is common for researchers using observational data to lag explanatory variables to purge their estimates of endogeneity (i.e., to eliminate the correlation between the explanatory variables and the error term). This problem prevents teasing out causal relationships from mere correlations (Leszczensky & Wolbring, 2019). A lagged first-difference (LFD) model has been suggested to tackle reverse causality (Allison, 2009; England et al., 2007; Martin et al., 2012).

With this approach, if EM levels are sensitive (i.e., statistically significant) to changes in board composition, the endogeneity assumption weakens the sensitivity's potential severity. To that end, I test the following OLS (and Probit) regressions, across all our models:

$$Y_{it} - Y_{it-1} = \sum (X_{it-1} - X_{it-2}) + (\varepsilon_{it} - \varepsilon_{it-1}) + \gamma (Controls_{it-2} - Controls_{it-1}) \qquad (7)$$

where Y are alternatively the two continuous EM measures (*SPOS is measured at time t* − 1) and X are all explanatory variables as per Equation 2. In this analysis, our left-side variable is the change in EM levels for the two accruals proxies, while the variable *SPOS* is used as in the standard model. All other controls are identical to those in the main models.

TABLE 6 Independent directors' additional attributes marginal effect on EM levels

Panel A: Regression results—EM = ABS_DISACCR								
	Exp sign	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Variables of interest								
IND_Form	(−)	−0.022*	−0.022	−0.023	−0.023*	−0.023	−0.023	−0.022
		(0.099)	(0.101)	(0.102)	(0.098)	(0.103)	(0.102)	(0.103)
IND_ALL	(−)	**−0.037***	**−0.037***	**−0.037***	**−0.069***	**−0.071***	**−0.037***	**−0.066***
		(0.002)	**(0.003)**	**(0.002)**	**(0.002)**	**(0.003)**	**(0.002)**	**(0.002)**
IND_ALL_NO_Visibility	(−)	−0.036***						
		(0.004)						
IND_ALL_NO_Detached	(−)		−0.036***					
			(0.006)					
IND_ALL_NO_Tenure	(−)			−0.037***				
				(0.004)				
IND_ALL_NO_Busyness	(−)				**−0.010****			
					(0.046)			
IND_ALL_NO_AccExp	(−)					**−0.011****		
						(0.041)		
IND_ALL_NO_Aud_Exp	(−)						−0.034***	
							(0.008)	
IND_ALL_NO_Shareh	(−)							**−0.013****
								(0.076)
Controls								
AC	(+)	−0.023	−0.022	−0.022	−0.023	−0.026	−0.025	−0.026
		(0.114)	(0.112)	(0.124)	(0.131)	(0.132)	(0.129)	(0.131)
DUAL	(−)	0.023*	0.023*	0.025*	0.023*	0.024*	0.023*	0.025*
		(0.051)	(0.050)	(0.051)	(0.051)	(0.050)	(0.050)	(0.051)
BDSZ	(?)	−0.023**	−0.024**	−0.023**	−0.024**	−0.024**	−0.023**	−0.023**
		(0.043)	(0.044)	(0.045)	(0.045)	(0.044)	(0.046)	(0.046)
AUD	(+)	−0.024	−0.022	−0.023	−0.023	−0.022	−0.023	−0.023
		(0.123)	(0.122)	(0.123)	(0.121)	(0.123)	(0.122)	(0.121)
FAMILY	(−)	−0.015*	−0.015*	−0.016*	−0.016*	−0.015*	−0.015*	−0.016*
		(0.073)	(0.073)	(0.076)	(0.074)	(0.076)	(0.074)	(0.075)
COMPENS	(?)	−0.007	−0.007	−0.006	−0.006	−0.006	−0.007	−0.008
		(0.107)	(0.105)	(0.107)	(0.106)	(0.108)	(0.107)	(0.108)
ROI	(−)	−0.044***	−0.045***	−0.045***	−0.044***	−0.045***	−0.043***	−0.045***
		(0.004)	(0.004)	(0.003)	(0.005)	(0.004)	(0.004)	(0.003)
SIZE	(−)	−0.025**	−0.024**	−0.024**	−0.025**	−0.024**	−0.024**	−0.024**
		(0.034)	(0.035)	(0.034)	(0.034)	(0.033)	(0.033)	(0.034)
CFO	(−)	−0.129***	−0.127***	−0.128***	−0.128***	−0.129***	−0.129***	−0.128***
		(0.007)	(0.009)	(0.008)	(0.008)	(0.007)	(0.009)	(0.009)
LEV	(+)	0.088***	0.088***	0.089***	0.089***	0.087***	0.089***	0.088***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Board_Age	(?)	−0.031	−0.032	−0.033	−0.032	−0.032	−0.031	−0.033
		(0.106)	(0.108)	(0.106)	(0.106)	(0.107)	(0.107)	(0.106)
CEO_Tenure	(?)	0.024**	0.024**	0.024**	0.024**	0.024**	0.024**	0.024**
		(0.054)	(0.055)	(0.054)	(0.055)	(0.056)	(0.054)	(0.055)
Directors_Equity	(+)	−0.012	−0.012*	−0.012	−0.012	−0.012*	−0.012	−0.012
		(0.100)	(0.099)	(0.101)	(0.100)	(0.099)	(0.100)	(0.100)
Diversity	(?)	−0.023	−0.023	−0.024	−0.024	−0.023	−0.023	−0.024
		(0.208)	(0.205)	(0.207)	(0.207)	(0.206)	(0.205)	(0.209)
Constant		0.074***	0.073***	0.073***	0.074***	0.073***	0.072***	0.074***
		(0.003)	(0.002)	(0.003)	(0.004)	(0.004)	(0.002)	(0.002)

(Continues)

TABLE 6 (Continued)

Panel A: Regression results—EM = ABS_DISACCR

	Exp sign	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Firm fixed effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster st. errors (firm)		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2		0.244	0.245	0.244	0.244	0.244	0.245	0.245
Observations		2,249	2,249	2,249	2,249	2,249	2,249	2,249

Panel B: Chi-square test on differences in coefficients

H_0	Chi-square	Prob. chi-square
Model 1 IND_ALL = IND_ALL_NO_Visibility	0.590	0.442
Model 2 IND_ALL = IND_ALL_NO_Detached	1.540	0.216
Model 3 IND_ALL = IND_ALL_NO_Tenure	1.180	0.307
Model 4 IND_ALL = IND_ALL_NO_Busyness	33.270	0.000
Model 5 IND_ALL = IND_ALL_NO_AccExp	11.530	0.000
Model 6 IND_ALL = IND_ALL_NO_Aud_Exp	3.710	0.054
Model 7 IND_ALL = IND_ALL_NO_Shareh	44.480	0.000

Note: Panel A reports estimation results of the following OLS regressions:

$EM = \alpha_0 + \beta_1 IND\_Form + \beta_2 IND\_ALL + \beta_3 IND\_ALL\_but\_ONE + \gamma Controls + Firm\_FE + Year\_FE + \varepsilon.$

Panel B reports the chi-square tests on difference in coefficients the two main variables for each regression output. Chi-square test the null hypothesis that difference in coefficients is not different from zero (i.e., coefficients are not statistically different one to the other). See Appendices B and C for detailed variable description. All continuous variables are winsorized at the 1% level. The z statistics are reported in parentheses below the coefficient estimates. The reported p values are based on two-tailed significance levels.

*Significance at the 10% level.

**Significance at the 5% level.

***Significance at the 1% level.

Results are reported in Table 7. Across all different EM metrics, the results are aligned with the main analyses reported in Table 4, reinforcing our claim of results not being purely endogenous to the company.

Third, Equations 3 and 4 use Heckman procedure in our main analysis, though we further corroborate our evidence by using a PSM procedure, to alleviate endogeneity concerns (Armstrong et al., 2010; Heckman et al., 1997; Rosenbaum, 2002). I design a PSM procedure by creating a treatment group for companies where there is a co-alignment of my identified attributes. This procedure concerns forming matched pairs similar in many respects but different on the variable of interest. To properly identify a matched sample, I need to identify the determinants independent directors' demand. Past research has shown that board changes often follow some fundamental change in the business conditions of the company (Denis & Sarin, 1999); that poorly performing firms may place additional independent directors on the board for additional monitoring (Hermalin & Weisbach, 1988); firms' financial distress might foster changes in board structure (Gilson, 1990). Moreover, Denis and Sarin (1999) find that board changes are more pronounced in younger firms and Peasnell et al. (2003) identify some additional determinants for the demand of outside directors. Therefore, to identify matched firms, my determinants' model includes all controls of my main regression as per

Equation 2 and two more specific variables not included in the primary analysis, namely, the age of the firm and the largest shareholder percentage. I follow Shipman et al. (2017) approach to develop the PSM tests. I use a one-to-one nearest-neighbor matching without replacement (Heckman et al., 1997), restricting the attention to a falling propensity score in the common support area for both groups (Smith & Todd, 2005). To avoid matched pairs with significant differences in the propensity score, I use a caliper of 0.5%. Results (untabulated for parsimony) show a balancing with covariates similar across the treated and the control group and, in the second stage, results confirm the inferences already discussed for Table 5 panel B.

Fourth, I perform several additional sensitivity tests: (i) I test the robustness of the results using an additional performance-matched EM metric (Ball & Shivakumar, 2008); (ii) consider different specifications for visibility by using the "Status" variable measured as per Masulis and Mobbs (2013) where instead of press visibility their rank is based on the relative importance of focal firm where a given director seats; (iii) variables of interest, *Visibility, Detachment, Busyness*, and *Tenure* are also modelled as ranked continuous variables; (iv) *Return on Investment* (*ROI*) and *Leverage* (*LEV*) are also tested with different ratio specifications. The results remain qualitatively unchanged for all the tests (*untabulated here for brevity*) and consistent among these additional specifications.

TABLE 7 Lagged first-difference (LFD) model: *Accounting Quality and Independent directors additional attributes*

Dependent variable	Exp. sign	ABS_DISACCR	ABS_AWCA	SPOS
Variables of interest				
IND_Form	(−)	−0.037 (0.155)	−0.055 (0.156)	−0.067 (0.165)
IND_Visibility	(−)	−0.053* (0.069)	−0.046 (0.133)	−0.017 (0.163)
IND_Detached	(−)	−0.076 (0.132)	−0.036 (0.106)	−0.063 (0.163)
IND_Tenure	(−)	−0.029 (0.125)	−0.037* (0.092)	−0.034 (0.136)
IND_Busyness	(−)	**−0.075*** (0.003)**	**−0.055*** (0.009)**	**−0.077** (0.010)**
IND_AccExp	(−)	**−0.050*** (0.003)**	**−0.060** (0.001)**	**−0.085*** (0.000)**
IND_Aud_Exp	(−)	−0.013* (0.092)	−0.043 (0.114)	−0.023 (0.102)
IND_NC_Shareh	(−)	**−0.057*** (0.006)**	**−0.054*** (0.004)**	**−0.075*** (0.000)**
Controls				
AC	(−)	−0.048 (0.146)	−0.050 (0.133)	−0.025 (0.224)
DUAL	(+)	0.034* (0.094)	0.034* (0.053)	0.025** (0.036)
BDSZ	(?)	−0.035** (0.045)	−0.012* (0.052)	−0.017** (0.047)
AUD	(+)	−0.020 (0.171)	−0.044 (0.222)	−0.037 (0.174)
FAMILY	(?)	−0.036* (0.094)	−0.032* (0.072)	−0.024* (0.065)
COMPENS	(?)	−0.007* (0.099)	−0.003 (0.123)	−0.045 (0.158)
ROI	(−)	−0.011*** (0.004)	−0.047** (0.031)	−0.047** (0.010)
SIZE	(?)	−0.003* (0.095)	−0.030* (0.052)	−0.025* (0.057)
CFO	(−)	−0.127** (0.017)	−0.099** (0.033)	−0.133** (0.033)
LEV	(+)	0.066** (0.013)	0.097** (0.033)	0.096** (0.014)
Board_Age	(?)	−0.055 (0.159)	−0.053 (0.124)	−0.021 (0.135)
CEO_Tenure	(−)	0.025* (0.059)	0.023** (0.044)	0.028** (0.027)
Directors_Equity	(?)	−0.039 (0.130)	−0.017 (0.126)	−0.034 (0.204)
Diversity	(?)	−0.045 (0.335)	−0.036 (0.379)	−0.039 (0.199)
Constant		0.090*** (0.003)	0.091*** (0.006)	0.091*** (0.008)
Industry and year fixed effects—st. err clusters (firm)		Yes	Yes	Yes
Adjusted R^2		0.344	0.348	0.373
Observations		2,249	2,249	2,249

Note: This table reports the estimation results of the following lagged first-difference (LFD) model:

$$Y_{it} - Y_{it-1} = \sum \beta (X_{it-1} - X_{it-2}) + (\varepsilon_{it} - \varepsilon_{it-1})$$

The model includes all explanatory variables and controls as per Equation 2. Firm fixed effects are removed and Industry and Year controls are included. Errors are clustered at firm level. Variables are calculated as per Appendix A and included as per Equation (5). SPOS, in column 3 is measured at time $t − 1$. For exposition clarity, the variables are reported as per Table 3 (e.g., "*ABS_DISACCR*" while its calculation is $ABS\_DISACCR_t − ABS\_DISACCR_{t-1}$ and "*IND_Visibility*" while its calculation is $IND\_Visibility_{t-2} − IND\_Visibility_{t-1}$). See Appendices B and C for detailed variable description. All continuous variables are winsorized at the 1% level. The *z* statistics are reported in parentheses next to the coefficient estimates. The reported *p* values are based on two-tailed significance levels.
*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

7 | CONCLUSIONS

The presence of independent board members capable of challenging the decisions of management and acting as effective monitors is widely viewed as a way to protect the interests of shareholders and, where appropriate, those of other stakeholders. However, there is still little consensus about what a board should look like (Johnson et al., 2013), and large literature on board composition is still discordant (Leblanc, 2004, p. 438). Further, prior literature focused on board formal independence (i.e., independence label), with only a limited number of studies looking at additional directors' attributes with the potential to shape directors' behavior (Sharpe, 2013).

This paper aims at enhancing "understanding mechanisms that may affect the degree to which characteristics associated with 'potential' to influence outcomes result in the 'actual' influence being realized" (Johnson et al., 2013, p. 254). It does so, by investigating

whether and to what extent additional independent directors' characteristics influence EM practices, above and beyond, formal independence. EM is a specific monitoring task of the board of directors, as it obscures real performance and reduces the ability to make informed decisions, therefore generating an agency problem (Xie et al., 2003).

Taking advantage of the Italian setting with a hand-collected comprehensive dataset ranging from 2005 to 2017, I find that being *non-busy*, having *accounting expertise*, and being appointed by *non-controlling shareholders* are most relevant attributes for independent directors in their EM monitoring task, among the directors' features I have tested. In a separate set of tests, results show that independent directors embedding the three attributes identified above outrun independent directors holding other types of attributes, with formal independence becoming irrelevant.

This study makes the following contributions. I add to the literature on independent directors being better able to monitor (e.g., Anderson et al., 2004; Beasley, 1996; Beasley & Salterio, 2001; Beatty & Zajac, 1994; Byrd & Hickman, 1992; Dechow et al., 1996; Klein, 2002; Peasnell et al., 2005; Vafeas, 2003, 2005; Weisbach, 1988) and show independent directors are not better "per se" concerning EM monitoring. I respond to calls for dismantling common wisdom, investigating factors leading to better monitoring carried out by directors (Dalton & Cannella, 2003; DeZoort et al., 2002; Johnson et al., 2013) working on co-alignment of attributes. I also investigate two directors' attributes not explored before, with interesting inferences coming from non-controlling shareholders' appointment. Finally, the current study focuses its attention on the monitoring role of independent directors' characteristics beyond formal independence, while investigating the role played by directors' characteristics beyond formal independence on the board advising role would be an interesting avenue for future research.

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NOTES

[1] By "black box" I mean a system whose internal mechanisms are hidden or not readily understood.

[2] Please be aware that in my setting "independence" is defined as per Section "3. The uniqueness of the Italian setting," while in different contexts the equivalent might be labeled as "outside."

[3] A more detailed reference on those studies will be provided on each variable, later in this section.

[4] It is of great interest to report here that non-executive directors in answering to Hooghiemstra and Van Manen (2004) surveys, declare, contrary to common belief, "busyness" is not an issue while their perceived inefficiency is attributed to information asymmetry.

[5] This is an interesting control mechanism totally absent in Britain and America, while largely present in France, Germany, and Italy (La Porta et al., 1999). The presence of pyramids exacerbates agency problems through the so-called tunneling: a transfer of value from firms where a small portion of shares is owned to the ones where a larger ownership is present.

[6] In particular, board size, independent directors, CEO duality, and compensation, were collected by financial statements, while all other characteristics were found on the corporate governance reports and other company web site sources.

[7] The CEO profiles are not included in the regression analyses and were collected only to identify detachment.

[8] This model was selected because the Italian stock market is relatively young and small. Therefore, the model is particularly appropriate for this kind of setting, as suggested by Wysocki (2004).

[9] I identify whether directors hold any share. I do not control for the value (amount) of the shares, since the information is not available across all companies, especially for the earlier years of the sample.

[10] Please, notice that for conciseness I only report results for one EM metric. Results are qualitatively identical for the other EM proxies.

[11] I use major Italian financial newspapers such: *Il Sole 24 Ore*, *Milano Finanza*, *Italia Oggi*, and *Finanza e Mercati*. I did not include international newspapers since I believe (and this is confirmed by the minimal presence of non-Italian native directors on Italian boards) that this is a local market.

[12] I checked the following associations and clubs: professional ones (CPA, Lawyer, and similar), personal ones (Rotary, Political parties' association).

[13] Ansari et al. (2014) measure independence in quite a sophisticated way in order to capture several nuances of the independence definition (e.g., the existence of a blood or marriage relationship between the director and a member of the family is of a particular interest) that are expected to explain the effectiveness of such directors' activities. I do not replicate their proxies directly because I do not work in the family setting only and my sample is quite big to gather this additional info manually. Nonetheless, I construct a variable that embeds some of their measures and a battery of proxies used by previous studies.

[14] Notice that Lang et al. (2003) also measure "large negative" losses set as one for firms reporting a ratio of annual net income scaled by total assets lower than −0.20, zero otherwise.

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APPENDIX A: DIRECTORS' ATTRIBUTES AND CHARACTERISTICS MEASUREMENT

A.1 | Visibility

It aims to capture directors' reputation and is measured by the algebraic sum of the number of times, yearly, that an independent director is cited in the press[11] through *Factiva* data source. First, any citation in the press where the director is named for "good news" are coded +1, and any time the independent director is cited for "bad news" it is coded −1. Next, the positive and negative scores are divided by the maximum frequency of each category. Finally, the scaled individual "good scores" and "bad scores" are added up. The independent directors' citations are then ranked at the director's level so that the final variable ranges from zero to one. Ranking the variable from zero to one has the advantage of creating a distribution of "visibility" for all Italian directors. High visibility directors belong to the upper quartile of the rank distribution, and the variable *IND_Visibility* is the proportion of independent directors with high visibility sitting on the board.

A.2 | Detachment

It aims at capturing directors' detachment from the CEO of the focal firm. Independence is weakened when: (1) the director and the CEO graduated from the same university within a 5-year window, meaning that they might have crossed paths. (2) They have the same academic background as same degree focus-concentration. (3) They were born in the same region of Italy. (4) They worked in the same industry, signaled by the same 2-digit SIC category. (5) CEO's tenure is longer than the director's one, implying the director might have been hired by the CEO. (6) The CEO and the director are interlocked because share the position of independent directors in another board. (7) They belong to the same clubs or associations.[12]

Each of these characteristics is measured at the independent director's level, ranging from zero to seven. The variable is reverted and standardized to go from zero to one, where zero is the director closest to the CEO and one the most detached. I identify as "highly detached" the directors lying in the upper quartile of the distribution, using the resulting measure to test the high-detachment hypothesis. The variable **IND_Detached**[13] is the proportion of higher-detachment independent directors sitting on the board.

A.3 | Tenure

It aims at capturing the time a director has been on the board of a focal firm. Tenure is the number of years a director has been on the board of a focal firm. It corresponds to any period the director has spent in the company, even if a cooling-off period took place since I claim friendship does not disappear. The direct proof of this is the fact that the same directors are reappointed by the same CEOs. I rank the variable to range from zero to one, and I assign a value of one to independent directors in the lowest quartile of tenure. The variable **IND_Tenure** is the proportion of shorter tenured, formally independent directors sitting on the board.

A.4 | Busyness

At individual level, it aims to capture how many seats a given director holds in a given year. The measure is as per Fich and Shivdasani (2006): a director is considered busy if sitting on three or more boards for the same year. At board level, I code one busy directors as defined above, and zero non-busy ones.

At firm level I compute the variable **IND_Busyness** as is the proportion of non-busy independent directors over the total number of formally independent directors sitting on the board.

A.5 | Accounting expert

Following Klein (2002) and Dhaliwal et al. (2010) and NYSE guidance, I define an independent director as an accounting expert if he/she is a certified public accountant, has worked in a Big 4 audit firm, or has a degree (or higher education) with an accounting track. The variable

IND_AccExp is the proportion of formally independent directors who are also accounting experts sitting on the board.

A.6 | Certified auditor

As per the VIII European Union Directive all statutory auditors and audit firms shall enter a public register in accordance with Articles 16 and 17. Article 16 disciplines the information that shall be provided by these statutory auditors. In the Italian system, the register is managed by the ministry of economy, which is also in charge for the examination of knowledge and the overall oversight of the register and its members. An examination is required, based on specific auditing and accounting knowledge. In Italy, about 100,000 statutory auditors are registered, and there is a considerable variation of profiles (lawyers, CPAs, other professionals). I coded with one any director which is registered as certified statutory auditor. **IND_Aud_Exp** is the proportion of independent directors being registered (and active) as certified auditors at the Ministry of Economy, sitting on the board.

A.7 | Non-controlling directors

Italian law requires that at least one director has to be appointed by non-controlling (i.e., minority shareholders). Therefore, I checked all the shareholders' meeting minutes and identified all non-controlling directors for the focal firm. Then I checked the director is declared as independent by the focal firm. **IND_NC_Shareh** is the proportion of independent directors appointed by non-controlling (i.e., minority) shareholders, sitting on the board. Please notice that, due to the appointment system, even more than one member might be appointed by non-controlling shareholders.

APPENDIX B: EARNINGS MANAGEMENT MEASURES

B.1 | Dechow et al. (1995)—modified Jones model

The first proxy for the level of earnings management is the absolute value of discretionary accruals estimated using the cross-sectional Jones model as described in Dechow et al. (1995):

$$\frac{\text{Tot. Accr}_{i,t}}{\text{Total Assets}_{i,t-1}} = \beta_1 \frac{1}{\text{Total Assets}_{i,t-1}} + \beta_2 \frac{\Delta \text{REV}_{i,t}}{\text{Total Assets}_{i,t-1}} + \beta_3 \frac{\text{PPE}_{i,t}}{\text{Total Assets}_{i,t-1}} + \varepsilon_{i,t} \quad \text{(B1)}$$

where for fiscal year t and firm i:

- Tot. Accr. represents total accruals, defined as: $\text{Tot. Accr}_{i,t} = \text{EBXI}_{i,t} - \text{CFO}_{i,t}$, where EBXI represents earnings before extraordinary items and discontinued operations and CFO is the operating cash flow taken from the statement of cash flows.
- Assets_{t-1} represents Total Assets in year $t-1$.

- $\Delta REV_{i,t}$ is the change in revenues from the preceding year.
- $PPE_{i,t}$ is the gross value of property, plant, and equipment in year t.

The coefficient estimates from Equation 2 are used to estimate the firm-specific normal accrual level ($Norm.Accr_{i,t}$) as follows:

$$Norm.Accr_{i,t} = \widehat{\beta_{i,t}} \frac{1}{Total\ Assets_{i,t-1}} + \widehat{\beta_2} \frac{(\Delta REV_{i,t} - \Delta AR_{i,t})}{Total\ Assets_{i,t-1}} + \widehat{\beta_3} \frac{PPE_{i,t}}{Total\ Assets_{i,t-1}} \qquad (B2)$$

where $\Delta AR_{i,t}$ is the change in accounts receivable from the preceding year. Following the methodology used in previous literature, we estimate the industry-specific regression using the change in reported revenues, implicitly assuming no discretionary choices with respect to revenue recognition. However, when computing the normal level of accruals, we adjust reported revenues of sample firms for the change in accounts receivable to capture any potential accounting discretion arising from credit sales.

Our measure of discretionary accruals (DA) is then the difference between total accruals and fitted (normal) accruals, defined as:

$$DA_{i,t} = \frac{Tot.Accr._{i,t}}{Total\ Assets_{i,t-1}} - \frac{Norm.Accr_{i,t}}{Total\ Assets_{i,t-1}} \qquad (B3)$$

B.2 | DeFond and Park (2001)—abnormal working capital accruals

The model uses AWCA as a proxy for earnings management, wherein the abnormal working capital accrual (AWCA) is estimated separately for each firm-year observation, as follows:

$$AWCA_{i,t} = WC_{i,t} - [(WC_{i,t-1}/S_{i,t-1}) \times S_{i,t}] \qquad (B4)$$

where

- $AWCA_t$ = Abnormal working capital accrual in year t;
- WC_t = non-cash working capital accruals in year t, computed as

  (Current assets − cash and short-term investment) − (current liabilities − short-term debt);

- WC_{t-1} = working capital at the end of year $t - 1$;
- S_t = sales in year t; and
- S_{t-1} = sales in year $t - 1$.

B.3 | Barth et al. (2008)—small positive net income (SPOS)

Similar in spirit to Lang, Raedy, and Yetman (2003),[14] Barth et al. (2008) classifies SPOS variable as an indicator set to 1 for observations for which annual net income for ordinary shares scaled by total assets are between 0 and 0.01 and set to zero otherwise.

APPENDIX C: VARIABLE DEFINITIONS

Variable	Definition
Earnings management metrics	
ABS_DISACCR	Absolute discretionary accruals estimated using the modified Jones Model (Dechow et al., 1996).
ABS_AWCA	Absolute discretionary accruals estimated using the DeFond and Park (2001) model.
SPOS	Small positive earnings, as per Barth et al. (2008).
Variables of interest	
Visibility	Represents directors' visibility in a given year.
Detached	Measures director detachment from the CEO.
Tenure	A dummy variable taking the value of one if the director's tenure is shorter than the median tenure in the sample and zero otherwise.
Busyness	A dummy variable taking the value of one if directors serve on three or more boards relative to the focal firm and zero otherwise.
Acc_Exp	A dummy variable taking the value of one if director is an accounting expert, and zero otherwise.
Aud_Exp	A dummy variable taking the value of one if director is registered (and active) as certified auditors at the Ministry of Economy, and zero otherwise.
NC_Shareh	A dummy variable taking the value of one if director is appointed by non-controlling shareholders, and zero otherwise.
IND_Form	The proportion of formally independent directors sitting on the board, as declared in the company filings.
IND_Additional	I use this notation to identify each variable measuring additional characteristics relative to formal independence (i.e., *Visibility, Detached, Busyness, Tenure, and Accounting Expertise*), defined as indicated below, calculated as per Appendix A.
IND_Visibility	The proportion of independent directors with high visibility sitting on the board calculated as per Appendix A.
IND_Detached	The proportion of independent directors with high detachment sitting on the board, calculated as per Appendix A.

Variable	Definition
IND_Busyness	The proportion of *non*-busy, formally independent directors sitting on the board, calculated as per Appendix A.
IND_Tenure	The proportion of short-tenured independent directors sitting on the board, calculated as per Appendix A.
IND_AccExp	The proportion of independent directors who are also accounting experts sitting on the board, calculated as per Appendix A.
IND_Aud_Exp	The proportion of independent directors being registered (and active) as certified auditors at the Ministry of Economy, sitting on the board.
IND_NC_Shareh	The proportion of independent directors appointed by non-controlling (i.e., minority) shareholders, sitting on the board.
CO_EXISTENCE	A dummy variable taking the value of one if the majority of the independent directors has at the same time the following additional characteristics: not busy, accounting knowledge, and appointed by the minority shareholder, zero otherwise.
IND_ALL	The proportion of independent directors holding all the additional attributes (i.e., *Visibility, Detached, Busyness, Tenure, Accounting Expertise, Auditing Expertise or appointed by non-controlling shareholders*) at the same time.
IND_ALL_but_One	I use this notation to identify each variable measuring the proportion of independent directors holding all additional characteristics but one (i.e., *Visibility, Detached, Busyness, Tenure, Accounting Expertise, Auditing Expertise or appointed by non-controlling shareholders*).
FAMILY	A dummy variable taking the value of one if the company is family controlled and zero otherwise. I consider a firm is controlled by a family when the family holds more than 30% of the shares (Salvato et al., 2011).
Controls	
AC	A dummy variable equal to one if an audit committee is present, and zero otherwise.
DUAL	A dummy variable equal to one if an the CEO is also chairman of the board, and zero otherwise.
BDSZ	The board size.
AUD	A dummy variable equal to one if the firm is audited by a Big-4 audit firm, and zero otherwise.
COMPENS	The natural logarithm of the average cash compensation of independent directors sitting on the board.
ROI	Return on investment, based on operating profits divided by beginning total assets.
SIZE	Natural logarithm of lagged total assets.
CFO	Represents cash flow from operating activities scaled by lagged total assets.
MTB	The market value of equity divided by the book value of equity.
LEV	Total debt over total assets.
Board_Age	The natural logarithm of the average age of the board members.
CEO_Tenure	Measures CEO's tenure.
Directors_Equity	The percentage of independent directors holding shares in the company, scaled by board size.
Diversity	Controlling for gender diversity, a dummy variable taking the value of one if there is at least one woman among the independent directors and zero otherwise.