MEASURING THE EFFICACY OF BOARD GOVERNANCE: EMPIRICAL EVIDENCE FROM ITALIAN PUBLICLY LISTED COMPANIES

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Abstract

Recent progress in the literature shows that board efficacy might be signaled by lower firm performance variability in a firm’s income, since the board has a fiduciary duty to protect shareholder investments that may be affected when performance is variable. Our analysis is an attempt to contribute to this debate by extending it to include family firms. In particular, we detect appointments of directors to family firm boards within a sample of 483 observations (year/firm) regarding Italian publicly listed companies. Sampled family firms have one of the family members as CEO and/or chairman (in cases of non-CEO duality) of the firm’s board. The aim is to test predictions which suggest that the presence of independent (Agency Theory), on the one hand, and interlocking directors (Resource Dependence theory), on the other, have a significant impact on performance stability. Unlike agency theory, which affirms that independents are efficient, our findings suggest that the number of independents on the board of a family firm has no impact on performance stability. Instead, we find that interlocking directors can provide a significant contribution to the achieving of lower performance variability.

Keywords: Performance Variability, Board of Directors, Family Firm

1. INTRODUCTION

The main aim of this paper is to make a contribution to the verifying of whether, and if so, how, family firms might use board governance to lower significant deviations from the performance trajectory that ensures the company’s long term survival. In this way, the paper covers the gap in family firm literature which is due to the lack of empirical contributions in this field. The theme of performance stability might be of great importance for a family firm’s survival over time. Owner-managers of family firms have a fiduciary duty to protect the family’s long term investment, which may be affected when performance is variable. Variability yields greater income stream uncertainty, making it more difficult for the firm to satisfy the needs of diverse stakeholders (e.g., Bowman, 1980; Fiegenbaum & Thomas, 1988; Miller & Chen, 2004). On the other hand, the actions of an owner-manager of a family firm are driven by the desire to create and maintain long-term associations with bankers, customers, and suppliers who provide valuable resources and lend stability to the enterprise. Those long-term associations sustain a business in times of trouble, and make it easier for a new generation to take over and keep things on track (Das & Teng, 1998, 2001; Saxton, 1997). Board governance activities are a constellation of actions aimed at managing agency costs and ensuring the viability of a company over time. We reason that family firm owner-managers are likely to choose as board members those outsiders who are able to help the firm overcome problems of performance stability over time. Firms in general use the board to resolve their strategic problems. In this sense, for example, in their work relating to American listed firms, Hill and Snell suggest that board members are selected by top management in response to firms specific strategic requirements (1988, p. 588). Therefore, in Section 2, we make predictions about forms of board composition which might help the family firm to reduce performance stability. On one hand, these predictions are based on agency theory while, on the other, they are based on resource dependence theory. The paper’s multi-theoretical basis is justified by the fact that there is no one single,
widely accepted theory regarding the important functions that the board of a modern corporation should perform. Since the turn of the millennium, agency theory has no longer dominated international literature on corporate governance. Indeed, with regards the functions of the board, 58% of the international articles published since 2000 have been based on theories other than that of the agency (Pugliese et al., 2009). Moreover, interaction between different characteristics of corporate governance have a significant impact on top management decisions, thus suggesting that a multi-theory foundation for governance research might be warranted (Lajili & Zéghal, 2010). In Section 3, the empirical research is presented, together with a description of the data, variables and methodology. The results of the empirical analysis are discussed in detail in Section 4, together with conclusions drawn from them. In particular, the research uses a sample of 483 firm-year observations relative to family-controlled firms which are listed on the Italian stock exchange in Milan. Italy is the ideal setting for addressing the issues looked at in this paper because of the large number of family-controlled firms. For historical reasons, Italy has poor financial infrastructures (Pagano, Panetta and Zingales, 1998) and, in particular, a high level of ownership concentration is a characteristic of all firms, even those quoted on the stock market (Milan stock Exchange). The largest class of blockholders is that of families who are active in the family firm while the second class is the state or other public bodies (Casagrande et al., 2010; Corbetta & Minichilli, 2005; Montemerlo, 2000; Soana & Crisci 2017; Scafarto et al., 2017).

We classify Italian listed companies as family firms when a dominant family has the power to appoint the board of directors and where this family exploits the fractional equity holding of its members, both directly and through financial holdings, to appoint one of its members as CEO and/or chairman (in cases of non-CEO duality) of the firm’s board. In other words, we refer to the family firm as intended by Casson (1999), Grassby (2001) and Lansberg (1999), who noted how the incentive for long-term investment is expected to be particularly prevalent when a family CEO or active chairman runs the business. The aim of our empirical work will be to test predictions which suggest that the presence, on the one hand, of independent directors (Agency Theory) and, on the other hand, of interlocking directors (Resource Dependence theory) have a significant effect on performance stability. Unlike agency theory, which arms that independents are efficient, our findings suggest that the number of independents on the board of a family firm has no impact on performance stability. The family CEO (or active chairman) runs the business having a strong tendency to build and maintain a reputation for integrity and trust with regard stakeholders. Since variability creates uncertainty for stakeholders and this might damage the family firm’s reputation for integrity and trust, we conclude that the family CEO (or active chairman) takes the right decisions to increase board independence, because the company’s performance stability is a priority for the family CEO (or active chairman), while the group of independents on the board of a family firm might be guided by a more articulated and varied set of priorities. Instead, we find that interlocking directors (interlocks) might make a significant contribution to the reduction of performance variability. Interlocking directorates are classified in the literature as inter-firm networks. The appointment of an interlock gives rise to a network which both the family firm’s behaviour, strategies, structures, and performance. An interlock performs support tasks given that he eases the transmission and sharing of information which might, in turn, help the family firm learn more efficient behaviour (to stabilise its performance). Finally, an interlock on a family firm board performs important monitoring tasks each time he is concerned that the behaviour of a family firm is not consistent with the expectations of the other interlocked firms and he attempts to remove the relative discrepancies. The focus of monitoring activity or of an interlock should be the lower variability of firm performance since the survival of the network over time could be put at risk by the performance variability of just one firm.

2. LITERATURE REVIEW

Variability can have a significant impact on future firm performance as it can lead to uncertainty for stakeholders. We exploit concepts developed by Pearce and Patel (2017) according to which mean firm performance may not be a reliable proxy for board effectiveness. Instead of assessing the efficacy of boards on the basis of mean firm performance, Pearce and Patel suggest that board efficacy is signalled by lower firm performance variability in a firm’s income. Variability refers to the dynamic nature of a firm’s performance or income stream across time periods and is a measure of the stability of the firm’s performance.

We suggest that board oversight is essential to managing variability because the board has a fiduciary duty to protect shareholder investments that may be affected when performance is variable, whereas boards do not have a mandate to improve performance. Boards govern this relationship by monitoring executives so as to prevent opportunistic behaviour since, if left to their preferences, executives may choose to increase variability in performance to achieve a higher mean performance. Such an approach of gambling in the hope of getting a big payoff could increase agency costs. Allowing high-risk behaviour might also reflect a failure of the board to perform its critical role in opposing executive decisions that increase the risk to the firm. We examine the role that boards play in monitoring and influencing the firm’s performance variability (i.e., income stream variability), which may be superior to profit maximisation as an indicator of effective agency (Miller & Brealey, 1998). Performance variability is an indicator of board performance. According to agency theory, effective boards should aim to lower significant deviations from the performance trajectory. Performance variability is a critical consideration in evaluating organisational performance for a number of reasons. First of all, variability in performance creates changes in a firm’s cash flows over time. These swings in cash inflows create default risk and businesses become more likely to default on explicit
commitments, such as existing contractual arrangements and implicit commitments, for example, promises to buyers or employees (Miller & Bromiley, 1990; Shapiro & Titman, 1986). Problems with implicit contracts may harm firms even when bankruptcy is unlikely since firms who face financial pressures may act to limit the effects of such commitments. Due to the greater default risk associated with higher variability in the firm’s performance and resulting perceptions of business instability and uncertainty, third parties must be given an incentive to engage in commitments (Miller & Bromiley, 1990). For example, employees and suppliers are likely to demand premiums to compensate for problems relating to variations in employment or levels of required purchasing. In the absence of such inducements, employees in high demand may choose to leave the firm rather than risk losing future employment. Finally, performance variability has an impact on the ability of management to engender support from other critical stakeholder groups. The accuracy of reports about a firm’s performance is imperative to investment decisions by individuals and institutions (Beyer et al., 2010). Industry and business analysts call for frequent company reports and forecasts centering on financial indicators, with detailed explanations for variations from earnings guidance and accounting projections of expected performance (Gallagher, 2014; Pruitt et al., 2014).

The ability of management to engender support from other critical stakeholder groups is a critical consideration in evaluating the organisational performance of a family firm. Although there is no single theoretical framework to refer to, there are various contributions in the literature, presented together in Table 1, which indicate that family firms have a strong tendency to build and maintain a reputation for integrity and trust with regard to stakeholders, as well as to create social capital in the form of enduring associations with bankers, suppliers, and major customers. Variability can have a significant negative impact on the relationships a family firm has with its key stakeholders, since variability creates uncertainty for stakeholders and can, therefore, reduce trust in the family firm and harm its reputation for integrity.

Table 1. Literature on family firms which invest in long-lasting assets, like reputation and social capital

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
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<tbody>
<tr>
<td>Anderson, Mansi and Reeb, 2003</td>
<td>An important feature of family firms is that the controlling shareholders normally aim to maintain their investment in the long term. The combination of undiversified family holdings, the desire to pass the firm onto subsequent generations, and concerns for family and firm reputation suggest that family shareholders are more likely than other shareholders to value firm survival over strict adherence to “wealth maximisation”</td>
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<tr>
<td>Miller &amp; Le Breton-Miller, 2006</td>
<td>From a stewardship perspective, orientation toward the family firm’s long-term survival is seen as a motivation to manage capital carefully and invest in long-lasting assets, like reputation and social capital, for the benefit of all stakeholders.</td>
</tr>
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<td>Adler &amp; Kwon, 2002; Gomez-Mejia et al., 2001</td>
<td>Family CEOs are more apt to be financially cautious, invest more in building long term reputations, and create social capital in the form of enduring associations with external parties which may supply critical resources to successors.</td>
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<td>Palmer &amp; Barber, 2001</td>
<td>Family firms set up associations which might take the form of long-term alliances with partners, bankers, suppliers, and major customers.</td>
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<td>Das &amp; Teng, 1998, 2001; Saxton, 1997</td>
<td>Long-term associations with bankers, customers, and suppliers provide valuable resources and lend stability to an enterprise. They sustain a business in times of trouble, and make it easier for a new generation to take over and keep things on track. Long-term relationships give companies access to rare and valuable resources.</td>
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<tr>
<td>Carney, 2005; Gomez-Mejia et al., 2001; Morck &amp; Yeung, 2003; Uzzi, 1997; Ward, 2004</td>
<td>Long-term associations with bankers, customers, and suppliers are also much more easily formed within a family business whose CEOs are influential and have long tenures. Indeed, in these contexts, partners know that the management team is stable, that the family name is at stake and that the family has both the discretion and incentive to fulfill commitments.</td>
</tr>
<tr>
<td>Anderson, Mansi and Reeb, 2003</td>
<td>The family’s reputation with lenders becomes an important asset to defend, and it is even able to reduce the cost of debt.</td>
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<tr>
<td>Godfrey, 2005</td>
<td>Intangible resources of legitimacy and reputation are very precious to family firms. Family firms have a strong tendency to build and maintain a reputation for integrity and trust as such assets can supply families with a form of “social insurance” that can be “cashed in” in times of crisis.</td>
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We believe that more effective boards of family firms aim to limit performance variability in order to meet the expectations of key stakeholders, such as lenders, suppliers, and other key stakeholders. For example, lenders represent a very important stakeholder for a family firm given that, in order to carry out investments, a controlling family relies more on external funds from lenders (debt) and less on external funds from other shareholders (equity) since the latter could threaten the family’s continued control of the firm (Steijvers & Voordeckers, 2009). Performance variability creates several problematic issues for lenders. Indeed, in the theories of the firm as a ‘set of contracts’Baker et al. (2002), the contractual generation of creditors’ expectations is profoundly different from that of shareholders. The returns on investment are already fixed for the firm’s lenders. Therefore, in situations of positive cash-flow peaks, a lender does not gain any extra advantage with respect to what was originally established in the financing agreement, while situations of negative cash-flow peaks may reduce the probability that the lender will be repaid. However, once managers have obtained debt financing, they could switch to higher risk investment opportunities than those discussed with lenders, reducing the value of lenders’ claims. Therefore, it is logical for lenders to think that performance variability is a consequence of a firm’s decisions to shift its asset mix toward higher risk investment opportunities than those discussed with the lenders, so reducing the value of the claims of these lenders (Smith, C. & Watts, R., 1992).

However, almost no studies have examined the composition of the boards of family firms that enables them to influence performance variability best. We focus on two compositional characteristics: the board’s level of independence from management and the board’s resource provision role.
2.1. The agency perspective

From the perspective of the Theory of the Firm, performance variability can decrease share price due to an increase in the stock risk premium (Barth et al., 1995; Kanagaretnam et al., 2004). Variability yields greater income stream uncertainty (e.g., Bowman, 1980; Fiegenbaum & Thomas, 1988; Miller & Chen, 2008), which makes it more difficult for the firm to satisfy the needs of the different stakeholders. Sustained variability in performance over time increases the likelihood that the firm will default on commitments and face increased costs caused by output inefficiencies (Miller & Bromiley, 1990; Cornell & Shapiro, 1987). The primary means by which agents are monitored is through the actions of the firm's board of directors, which has responsibility, for selecting, compensating and replacing agents. Board independence is likely to influence how effectively it monitors executives in order to achieve the goal of reducing variability in the firm's performance (Fiegenbaum & Thomas, 1988; Zahra & Pearce, 1989; Sanders & Hambrick, 2007). From an agency perspective, the board of a family firm is an internal control mechanism which, when supplemented with the externals in the form of independent directors, can mitigate for moral hazard problems (Kouki & Dabboussi, 2016; Capodaglio et al., 2017). Those board members who only tie the firm to their directorship are known as independents. Independent directors monitor and control insiders and/or owner-managers of family firms to overcome agency problems that arise between owners and managers, owners and lenders, and majority and minority owners (Eisenhardt, 1989; Fama & Jensen 1983). Schulze et al. (2001) added intra-family agency problems to this list. Agency theory scholars emphasise (nuclear) family interests and consider both economic and non-economic motives for the behaviour of family owner-managers. In particular, four main sources of moral hazard can be identified:

1. The owning family's pursuit of its own economic interests. Owning families have great potential for expropriating economic wealth from the firm through special dividends, excessive compensation, tunnelling activities and the like (Anderson & Reeb, 2004; Ben-Amar & André, 2006; Faccio et al., 2001; Silva & Majul 2008). Scholars emphasise the need for supervision by an independent board with the formal authority to scrutinise and challenge the family's decisions and behaviour in order to limit the family's discretion over firm resources and protect the interests of non-family minority shareholders and lenders (Anderson & Reeb, 2004; Chen & Hsu, 2009; Jaggi et al., 2009; Setia-Atmaja et al., 2009).

2. The owning family's pursuit of its own non-economic interests. Family businesses are less likely than their non-family counterparts to pursue economic performance as their sole or even primary objective (Chrisman et al., 2003; Gomez-Mejia et al., 2007; Sharma et al., 1997). Examples of non-economic or so-called socioemotional objectives include preservation of the family character of the firm, family employment and maintenance of family traditions and harmony (Gomez-Mejia et al., 2007; Jones et al., 2008; Voordeckers et al., 2007). Although the pursuit of such objectives does not necessarily create economic inefficiencies (Chrisman et al., 2003; Sirmon & Hitt, 2003), when it does, it represents an agency cost for non-family stakeholders (e.g. investors or banks) who are only interested in the economic performance of the family business (Chrisman et al., 2004; Steijvers et al., 2010; Voordeckers & Steijvers, 2006). Non-family stakeholders may therefore demand the appointment of independent board members to protect their financial interests (Chrisman et al., 2004; Fiegener et al., 2000).

3. The parental tendency to act upon altruistic motives. Examples of decisions based on parental altruism include the setting up of a separate department/plant for each child, rewarding employed children equally, regardless of effort and performance, and lavishing them with excessive perquisites and privileges (Lubatkin et al., 2005; Schulze et al., 2001). Such decisions, although well intentioned, may engender inefficiencies, strategic inertia, feelings of distributive injustice and, most commonly, incite employed children to misbehave by engaging in shrinking and free-riding (Schulze et al., 2001, 2002, 2003a). Parental altruism has thus been recognised as an important potential source of agency problems within family businesses (Chrisman et al., 2004). It is argued that boards play a valuable role in restricting the discretion of parent owner-managers so as to prevent their self-control problems from undermining the viability of the family business (Chrisman et al., 2004; Jaffe, 2005; Schulze et al., 2001). Board members with ‘independence of mind’ should question and challenge the owner-managers' decisions and set limits to their altruistic tendencies to safeguard the interests of not only lenders and investors, but also of the owning family itself (Chrisman et al., 2004, p. 348).

4. The different nuclear family units' pursuit of their own interests. The nature of moral hazard tends to alter as the family business's ownership structure changes over generations (Bammens et al., 2008; Lubatkin et al. 2005). In sibling partnerships where ownership has been transferred to several siblings, each sibling has an incentive to maximise the welfare of their own nuclear family unit rather than that of the extended owning-family, with each family unit typically having its own idiosyncratic set of economic and non-economic preferences (Schulze et al., 2003b). This disregard for the overall well-being of the extended owning family becomes even more pronounced in cousin consortia, where ownership has been passed on to members of the third and later generations, with these relatives generally having weaker ties and diluted emotional attachments (Bammens et al., 2008; Lubatkin et al., 2005). Therefore, over the generations, intrafamily convergence of interests weakens and agency problems increasingly resemble those found in a non-family business context (Carney, 2005; Jaskiewicz & Klein, 2007).

Given that economic and non-economic reasons exist for moral-risk behaviour by owner-managers in family firms, non-family stakeholders (e.g. investors, banks, suppliers) may therefore demand the appointment of independent board members to protect their interests (Chrisman et al., 2004; Fiegener et al., 2000; Abdullah et al., 2016). For example, financiers have a greater incentive to invest
in a firm if that firm’s board increases its number of independent members since these independents give investors greater guarantees. Therefore, independent outsiders are primarily invited onto the boards of family business as a response to pressures from non-family stakeholders, such as investors and banks, who are attempting to safeguard their financial interests, and as a way to attract their capital to the firm. From the perspective of agency theory, an independent board reduces managerial discretion (Walsh & Seward, 1990). Outsiders can better monitor and critically evaluate CEO proposals, allowing them to prevent CEOs from taking excessive risks or engaging in opportunistic behavior. Agency theory supports the notion that an independent board helps to ensure that the CEO makes decisions that are in the interest of the firm’s key stakeholders, even if they are concurrently self-serving. Independent boards bring knowledge, relationships, and perspective from their experiences outside the company that can serve as resources to enhance the effectiveness of CEO decision-making (Westphal, 1999). When CEOs receive better advice, the probability of improved strategic decision making and project success increases. Thus, even when CEOs pursue risky projects (e.g., managerial risk taking), risk is reduced through interaction with the more effective board (e.g., organisational risk). Overall, we suggest that independent monitoring by the board allows it to oversee managerial behaviour effectively and that the following hypothesis predicts a beneficial impact of board composition:

**H1:** The independence of a family firm’s board will be negatively related to family firm performance variability.

### 2.2. The dependence resource prospective

While the board’s monitoring role is the principal domain of agency theory, the main propositions about the board’s role in securing external resources for the company are based on resource dependence theory (Pfeffer & Salancik, 1978; Zahra & Pearce, 1989; Daily et al., 2003). The fundamental understanding of resource dependence theory is that members of every board differ from one another and from company executives in terms of the professional networks that each has developed. Board members are important boundary spanners who acquire essential resources for the company that contribute to the company’s managerial capabilities (Pfeffer & Salancik, 1978; Baysinger & Hoskisson, 1990; Daily et al., 2003; Stevenson & Radin, 2009). According to Hillman and Dalziel (2003), the ability of directors to link the company to potential resource providers is based on the directors’ human and social capital. When these two sources of capital are combined, they are labeled as board capital (Coleman, 1988; Mizruchi, 1983; Nahapiet & Ghoshal, 1998). Empirical research has found that board capital contributes to strategic performance and revenue growth (Hill & Rothermel, 2003; Kor & Sundaramurthy, 2009). An interlocking director is a member of the board of directors who, in turn, serves as a member of the board of directors of another firm. Shared directors create strategic connections between the firms they work for. Interlocking directorates (interlocks) are classified in the literature as inter-firm networks, as well as joint-ventures, franchising, consortia, commercial agreements, sub-contracting and personal networks (Grandori, 1996). Interlocks on the board are seen as indicators of network embeddedness. Granovetter (1985) argued that economic behaviour, as with human behaviour in general, is socially embedded; that is, economic actors are affected by their relations with other actors. This suggests that a range of firm behaviour - strategies, structures, and performance - could be affected by the firm's relations with other firms. Much of the research that attempts to identify the behavioural consequences of interlocks has treated interlocks as a communication mechanism. In particular, in the literature there is little consistent evidence that interlocks have any dampening effect on competition (Mizruchi, 1996) and, indeed, there is much research that suggests that interlocking directorates facilitate the flow of information (Mills, 1958; Stanworth & Giddens, 1975). Most scholars seem to believe that interlocks are created to serve organisational interests or the interests of the executives who hold the board seats in related corporations. For example, resource dependence theorists believe that interlocks are a means for the firm to reduce the uncertainty in its environment (Burt, 1980; Pfeffer & Salancik, 1978) and lower the transaction costs associated with environmental interdependency (Williamson, 1984). From this point of view, interlocks are assumed to serve the interests of the owner-manager (who runs the interlocked family firm) by managing the firm’s performance variability and improving board effectiveness.

We focus on contributions by the literature according to which interlocks contribute to an improvement in board effectiveness. Social network theory suggests that the network of connections which a firm maintains can provide informational advantages and facilitate information diffusion. One such network is the interfirm network created through board interlocks. As firms form and maintain board interlocks, they create a network of direct and indirect ties with each other. The structure of this interfirm network, in turn, can influence the dynamics of information diffusion among firms and affect various aspects of the firm. Since knowledge and information are critical inputs to the board’s advisory function, the presence of directors that sit on more than one board may be important as they can help transmit tacit knowledge and information and expose firms to relevant information. The implications of board connections and interlocks have been the focus of considerable academic research. One strand of this literature shows that director networks affect the flow of information and the level of communication between connected firms (Cai & Sevill, 2012). In line with this latter view, some research finds that networks diffuse information and propagate certain corporate practices such as corporate finance policies (Fracassi, 2015), dividend policy (Bouwman & Xuan, 2010), private equity deal exposure (Stuart & Yim, 2010), and earnings management (Chiu et al., 2013; Bouwman, 2011). Dasgupta et al. (2015) studied the effect of prior social connections among managers or board members and supplier and customer firms on innovation of upstream firms.
also focus on directors from related industries and examine their impact on firm performance. A well-developed line of research demonstrates that networks and their characteristics affect economic outcomes in various settings (e.g., Kali & Reyes, 2010, Van Doorn et al., 2017). In financial research, interest in social networks has only recently emerged. For instance, Cohen et al. (2008) focus on connections between fund managers and corporate board members via shared education networks. Hochberg et al. (2007, 2010) examine networks in the venture capital industry, and other studies focus on the impact of informal networks on borrower outcomes in various settings (e.g., Kali & Reyes, 2010, Van Doorn et al., 2017). In order to identify firms listed on the Italian stock exchange that might be useful in testing the formulated hypotheses, we used the database which provides a great quantity of information about the Italian stock exchange and the individual firms which are quoted on it. We adopted a method to identify sampled firms excluding financial and insurance companies. In line with the definition of the family firm understood by Casson (1999), Grassby (2001) and Lansberg (1999), we identified as family firms only those listed companies where the family had exploited the fractional equity holding of its members to appoint a family member to the position of CEO or chairman of the board (in cases of no-CEO duality). Therefore, we identified the firm’s family nature through analysis of the control shareholding and the CEO and chairman’s responsibilities on 31/12/2010 and 31/12/2016. In particular, we collected data on - ownership structure, through Consob (Italian Commission for the Stock Exchange); - the names of the CEO and/or chairman, through the annual end-of-year ‘Relazione sulla corporate governance’ (Report on Corporate Governance).

At this point, we excluded from the sample of listed family firms, those companies that did not appoint any interlock director to their boards between 01/01/2010 and 31/12/2016. Data on interlock directors were gathered following a procedure which is explained below. At the end of these phases, only 69 firms could be considered useful for the following investigation. We gathered each firm’s year-end data for each of the seven years covered by the period 2010-2016. Therefore, our sample comprised a panel of 483 observations (69 firms over 7 years). These firms were classified according to the Ateco 2007 classification of economic activities sector to which they belonged. The Ateco classification separates "Industrial Activities" into 24 sectors (see: http://www3.istat.it/strumenti/definizioni/ateco/ateco.html?versione=2007.3&codice=c), although, the sampled firms represented just 13 of the 24 Ateco 2007 defined sectors.

3.1. Collection of data, variables and measures
We gathered the accounting and financial statement data needed for our statistical tests by making use of information from the Bureau van Dick’s AIDA database (https://aida.bvdep.com), all non-ratio variables being in Euros. Data on board composition were collected from the annual, end-of-year ‘Relazione sulla corporate governance’ (Report on Corporate Governance), which can be consulted on line via the Italian Stock Exchange. This was sufficient to identify the independent directors while, in order to identify interlocking directors, it was necessary to integrate with data available from

H2: the presence of Interlocks in the board of a family firm will be negatively related to firm performance variability of that family firm.
The “Calepino dell’azionista” of Centro Studi Mediobanca. Information disclosed by corporations in the “investor relations” section of their websites was also utilised.

### 3.1.1. Dependent variables

To measure performance variability, we used ROA VARIABILITY, which reflects annual variability in firm accounting returns on assets and is measured as the three-year standard deviation of return on assets (multiplied by 100 to be expressed as a percentage) from the observation year t-1 to year t+1. Thus, ROA VARIABILITY reflects a firm’s dynamic performance changes over a 3-year period.

### 3.1.2. Control variables

For each year and firm, we measured the following variables, as they could have an impact on the sampled companies’ performance variability:
- PRIOR YEAR ROA. We controlled for prior year ROA, measured as the firm’s return on assets in year t-1;
- SIZE. We controlled for firm-level factors of the firm’s dimensions, which are measured as the natural logarithm of the firm’s total assets at fiscal year-end;
- LEV. Another firm-level factor is the firm’s leverage, calculated by comparing long-term debt with the total assets;
- M/B. We additionally controlled for the firm-level factor of future growth opportunities by calculating the market to book ratio, which is the market value of equity divided by its book value;
- INDUSTRY CATEGORIES. We constructed 13 industry categories with dummy variables to control for effects deriving from the fact that the sampled firms belong to different industrial sectors (Ateco 2007 classification). These dummy variables are: “FOOD”, “DRINKS”, “TEXTILES”, “CLOTHING”, “CHEMICAL PRODUCTS”, “PHARMACEUTICAL PREPARATIONS”, “PLASTIC MATERIALS”, “METALLURGY”, “METAL PRODUCTS”, “ELECTRONIC PRODUCTS”, “DOMESTIC APPLIANCES”, “MACHINERY”, and “FURNITURE PRODUCTION”.

### 3.1.3. Independent variables

On the basis of the predictions made by the framework, the independent variables referred to board composition in the sampled family firms. In particular, we chose to measure, for each firm in the sample on January 1 of year t-1, the variables:
- INDEPENDENCE, which was used to measure the quota of independents on the board. The quota of independents was calculated as the proportion of independent directors sitting on a company’s board (board independents divided by board members);
- INTERLOCKS, which was used to measure the entry/exit of interlocking directors onto/from the board. It was a dummy variable, which took a value of “1” in the year when the number of interlocks increased. The value of “1” was maintained over successive years as long as the number of these outsiders was growing or stable. The variable took the value of “0” in a year when the number of interlocks diminished. The value of “0” was only maintained if the number of these directors continued to diminish or remained stable in the following years.

### 3.1.4. Descriptive and univariate statistics

At the end of the data gathering, we formed a panel of 483 different combinations of variable values (ROA VARIABILITY, PRIOR YEAR ROA, SIZE, LEV, M/B, INDEPENDENCE, INTERLOCKS), one for each firm-year observation within our sample.

The descriptive statistics for the variables are presented in Table 2. The correlation statistics for the variables are presented in Table 3. The firms are, in general, profitable, with ROA at about 10%. The firms are leveraged at about 39%, indicating that long-term debt financing is an important source of funds. With regard to their size, the firms are relatively large firms with about 934 million euros in assets.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
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<tbody>
<tr>
<td>ROA VARIABILITY</td>
<td>6.65</td>
<td>6.11</td>
<td>4.3</td>
</tr>
<tr>
<td>PRIOR YEAR ROA</td>
<td>0.10</td>
<td>0.09</td>
<td>0.09</td>
</tr>
<tr>
<td>SIZE</td>
<td>20.05</td>
<td>20.83</td>
<td>1.68</td>
</tr>
<tr>
<td>LEV</td>
<td>0.39</td>
<td>0.88</td>
<td>0.11</td>
</tr>
<tr>
<td>M/B</td>
<td>2.83</td>
<td>3.04</td>
<td>1.98</td>
</tr>
<tr>
<td>INDEPENDENCE</td>
<td>0.69</td>
<td>0.72</td>
<td>0.23</td>
</tr>
<tr>
<td>INTERLOCKS</td>
<td>0.87</td>
<td>1.01</td>
<td>0.34</td>
</tr>
</tbody>
</table>

Table 3 shows certain significant correlations. RATING with LEV, M/B with RATING, ROA VARIABILITY with PRIOR YEAR ROA, ROA VARIABILITY with SIZE, ROA VARIABILITY with M/B, PRIOR YEAR ROA with LEV, PRIOR YEAR ROA with M/B, SIZE with INDEPENDENCE, SIZE with INTERLOCKS, LEV with M/B, LEV with INTERLOCKS are significantly correlated (p < .05). The ROA VARIABILITY with LEV, ROA VARIABILITY with INTERLOCKS are strongly correlated (p < .01), ROA VARIABILITY with INDEPENDENCE are weakly correlated (p < .1).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA VARIABILITY</td>
<td>1</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>PRIOR YEAR ROA</td>
<td>-0.071</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.088</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td>-0.095</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td>M/B</td>
<td>-0.059</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td>INDEPENDENCE</td>
<td>-0.054</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td>INTERLOCKS</td>
<td>-0.087</td>
<td>0.11</td>
<td></td>
</tr>
</tbody>
</table>

Table 4, the first thing we did was simply to place the control variables in Model 1, which we called the ‘base model’. The results are reported in
the first column of Table 4. This model explains about 7% of the variance. The model is fit since $R^2$ is 2.1213, significant at the 0.01 level. When the regression coefficients within Model I were examined, the findings suggested that variability is lower among the firms in the food and drinks sectors. Firms with higher ROA in the prior year also have lower variability in ROA. Higher leverage is positively related to ROA variability. Big firms have a lower variability in ROA.

Therefore, we placed the independent variables in the second passage and formulated Model II, which we called the 'main effects model'. The results are reported in column two of Table 4. The main effects model makes a more significant contribution than the base model ($AR^2 = 0.3337$, $p < 0.001$). The addition of independent variables gives an explanatory contribution over and above the main effects only model. Explained variance increases by 3.37% and this increase is statistically significant ($F_{change} = 5.6981$, $p < 0.001$). The main effects model is entirely fit, since $R^2$ is equal to 2.8791, significant at the 0.001 level. However, with regard to the two new variables added, only the presence of the family firm’s performance variability. Instead, in looking at the regression coefficient of the independent model INDEPENDENCE, we noted that the quota of independent directors on the board of a family firm does not produce statistically significant effects on performance variability. Therefore, Hypothesis 1 is not supported by this analysis, suggesting that greater board independence may not reduce firm performance variability.

The results found in these two steps (base model and main effects) are significant and robust. As is evident from the Table 4, both models are significant (at $p < 0.01$ and $p < 0.001$ respectively) with $R^2$ ranging from 0.072 for the base model to 0.1057 for the main effects model. In addition, we examined the variance inflation factor (VIF) of each independent variable in the regression model in order to detect potential problems with multicollinearity. VIF values are particularly low in models I and II (range 1.2-1.7) so multicollinearity is generally not a problem in our study. Finally, we tested the results of the multiple OLS regression analysis by using the Breusch-Pagan test (Breusch & Pagan, 1979). The Breusch-Pagan test was used to test for heteroscedasticity in the linear regression models. We carried out this test for each of the two models in Table 4. For each regression model in Table 4, the residuals were estimated. After this, an auxiliary regression analysis of the squared residuals was carried out on the independent variables. The results of those auxiliary regression analyses are reported in Table 5. These results show that the null hypothesis of heteroscedasticity can be accepted in models I and II of Table 5, both on the basis of the F-Statistic and on the basis of the test statistic $N^2 R^2$-squared.

4. DISCUSSION AND CONCLUSION

We started this work by examining a specific aspect of family firm value, that of performance variability. Variability refers to the dynamic nature of a firm's performance or income stream across time periods and is a measure of the stability of the firm's performance. Performance variability influences the value of a firm, since it can also bring about a decrease in share price due to an increase in the stock's risk premium (Barth et al., 1995). The notion of variability is largely absent from previous research on corporate governance (Hermalin & Weisbach, 1998); however, variability can have serious consequences for firms (Amit & Wernerfelt, 1990). Significant variability in firm performance yields uncertainty over a company's ability to meet future commitments and renders the firm potentially univiable in the future. This has the potential of creating inefficiencies in the company's operations and reducing the commitments of third-party stakeholders, so increasing the cost of conducting business (Miller & Bromiley, 1990; Palmer & Wiseman, 1999). In this paper, we firstly summarised these works. We drew upon a point raised by Palmer and Wiseman (1999), who suggested that income stream variability gives rise to greater organisational risk and, in particular, that sustained variability in performance over time

| Table 4. Results of hierarchical regression analysis of performance variability (ROA VARIABILITY) |
|---------------------------------|------------------|------------------|
|                                | Model I          | Model II         |
| Independent variables          |                  |                  |
| INDEPENDENCE                   | -.5112           | -.3324**         |
| INTERLOCKS                     | -.3324**         |                  |
| $F_{change}$                   | 2.1213***        | 2.8791***        |
| $R^2$                          | .0906            | .0882            |
| $N^2 R^2$-squared              | 25.1839          | 26.0870          |
| Prob. Chi-Square               | .0006            | .1277            |
| Note: Standardised regression coefficients are displayed in the table. $N = 483$; 1-tailed: $^{*} p < .10; ^{**} p < .05; ^{***} p < .001$. |

| Table 5. Heteroskedasticity test: Breusch-pagan |
|---------------------------------|------------------|
| Model I                         | Model II         |
| F-statistic                     | 1.3046           | 1.3912           |
| Prob. F                         | .0882            | .1253            |
| $N^2 R^2$-squared               | 25.1839          | 26.0870          |
| Prob. Chi-Square                | .0006            | .1277            |
| Note: $N = 483$ |


increases the likelihood that the firm will default on commitments and face increased costs caused by output inefficiencies (Palmer and Wiseman, 1999). We also built upon those works that claimed that variability yields greater income stream uncertainty, so making it more difficult for the firm to satisfy the needs of diverse stakeholders (e.g., Bowman, 1980; Fiegenbaum & Thomas, 1998; Miller & Chen, 2004). Finally, we looked at lessons in the literature on family business according to which “An important feature of family firms is that the controlling shareholders normally aim to maintain their investment in the long term”. The combination of undiversified family holdings, the desire to pass the firm onto subsequent generations, and concerns over family and firm reputation suggest that family shareholders are more likely than other shareholders to value firm survival over strict adherence to “wealth maximisation” (Anderson, Mansi & Reeb, 2003). Since board governance activities are a constellation of actions aimed at managing agency costs and ensuring the viability of a company over time, we based our contribution on the fact that efficacy in actions would, therefore, be reflected specifically in a lower firm performance variability. In particular, we believe that owner-managers of family firms have a fiduciary duty to protect the family's long term investment, which may be affected when performance is variable, whereas they do not have a mandate for profit maximisation. Owner-managers protect the family's investment in the long term, cultivating good relationships with key stakeholders. Indeed, “Long-term associations with bankers, customers, and suppliers provide valuable resources and lend stability to an enterprise. They sustain a business in times of trouble and make it easier for a new generation to take over and keep things on track. Long-term relationships give companies access to rare and valuable resources (Das & Teng, 1998, 2001; Saxton, 1997). However, in the literature, there is a gap owing to the lack of empirical contributions aimed at verifying whether, and if so, how, family firms might use board governance in order to lower significant deviations from the performance trajectory which, over time, will ensure the firm's survival. This paper is an attempt to make an empirical contribution to this field.

Effective monitoring and control, along with resource provision, should help maintain performance with limited variability. We used Agency Theory for the board's role of monitoring and control and Resource Dependence Theory for the task of helping to secure valuable resources for the family firm. In particular, shareholders only assume risk efficiently to the degree that the board safeguards their interests (Baysinger & Hoskisson, 1990) and since, within Agency Theory, the composition of the firm's board is thought to play a key role in influencing its ability to complete this task of safeguard (e.g., Zahra & Pearce, 1989), we formulated the hypothesis that the independence of a family firm's board will be negatively related to family firm performance variability. The Resource Dependence Theory explains the organisation's strategy in terms of functions that are oriented towards ensuring the availability of strategic resources. Boards of directors perform a service task and are supposed to bring different types of resources to the firm. The role that directors play is that of providing or securing essential resources through connections with the external environment (Boyd, 1990; Daily & Dalton, 1994a, 1994b; Gales & Kesner, 1994; Johnson et al., 1996; Pearce & Zahra, 1992; Pfeffer, 1972; Pfeffer & Salancik, 1978; Zahra & Pearce, 1989). Carpenter and Westphal (2001) found that boards that make decisions with ties to strategically related organisations are able to provide better advice and counsel, which is positively related to firm performance. In particular, we included the figure of interlocking directors in our analysis since their resource provision roles may be geared towards maintaining performance stability. Therefore, we formulated the hypothesis that the presence of interlocks on the board of a family firm will be negatively related to firm performance variability in that family firm.

However, our analyses do not support predictions made on the basis of agency theory (Hypothesis 1). Higher numbers of independents on the board are not associated with improvements in the capacity to reduce performance variability. As noted earlier, low variability is desirable and, therefore, be reflected specifically in a lower firm performance variability. In particular, we believe that owner-managers of family firms have a fiduciary duty to protect the family's long term investment, which may be affected when performance is variable, whereas they do not have a mandate for profit maximisation. Owner-managers protect the family's investment in the long term, cultivating good relationships with key stakeholders. Indeed, “Long-term associations with bankers, customers, and suppliers provide valuable resources and lend stability to an enterprise. They sustain a business in times of trouble and make it easier for a new generation to take over and keep things on track. Long-term relationships give companies access to rare and valuable resources (Das & Teng, 1998, 2001; Saxton, 1997). However, in the literature, there is a gap owing to the lack of empirical contributions aimed at verifying whether, and if so, how, family firms might use board governance in order to lower significant deviations from the performance trajectory which, over time, will ensure the firm's survival. This paper is an attempt to make an empirical contribution to this field.

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Our analyses support Hypothesis 2, that is that the appointment of interlocks onto family firm boards leads to a reduction in performance variability. Appointments of interlocks might be made with the intention of building long-term reputation and creating social capital in the form of enduring associations with partners. This is consistent with Anderson and Reeb (2004), who outlined the phenomenon of family firms that seek well-networked board members who can help later generations with their contacts. Firms invest in social capital through norms of behaviour and access to resources such as mutuality, trust, and respect for one another. The benefits of this investment consist of knowledge sharing, lower transaction costs due to improved communication and a coherence of action (Lester & Cannella, 2006). An interlock who brings all of these benefits to the role of resource provision reinforces network coordination mechanisms and can also perform the role of resource provision. Therefore, in performing their control and monitoring tasks, interlocking directors have an incentive to control performance variability in line with the interests of the other firms in the network whose boards they sit on. Our work contributes to the board of director literature by showing how interlocks on a firm’s board play key roles in improving board effectiveness with respect to the need to reduce the firm’s performance variability.

Our study also has the important limitation of only examining large publicly listed family companies and, therefore, the discoveries are not directly applicable to small or medium sized firms, nor are they immediately transferable to large non-family or unlisted firms. Moreover, the data for this study were gathered in Italy and, therefore, special attention should be given when generalising about our discoveries with regards other national contexts.

REFERENCES


