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The complex role of family involvement in earnings management

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ABSTRACT

Building on socioemotional wealth and upper echelons theory, this paper investigates family firms' behaviors in terms of their earnings management strategies. Our results indicate an inverted U-shaped relationship between discretionary accruals and family involvement in firm management and control (i.e., family members in C-suite positions). Furthermore, there are significant associations between the expertise and experience of C-suite managers and earnings management when the relationship is moderated by family involvement in firm management and control. As such, this study provides a unique contribution informing the accounting, family business, and corporate governance literatures. The study results indicate the types of firms that are more or less prone to earnings management behaviors, finding that accounting choices differ according to diverse characteristics, namely, the expertise and experience of C-suite managers and the level of family involvement in C-suite positions. These characteristics together affect firms' preferences for discretionary accruals and income-smoothing activities. The findings introduce several practical implications for regulators, family businesses, investors, lenders, and external auditors.

1. Introduction

This study combines three strands of research (family business, accounting, and corporate governance) by investigating whether family involvement and the characteristics of boards of directors and committees in terms of members' expertise and experience affect accounting choices. Our research is motivated by the expansion of the family business field, by the importance of earnings management studies in the financial accounting field, and by the growing number of corporate governance studies addressing the outcomes that certain board and committee characteristics generate regarding firm performance, firm value, and financial reporting quality, among other factors.

Family ownership is likely to be concentrated in the hands of families (La Porta, Lopez-de-Silanes, & Shleifer, 1999), reducing the traditional agency problem (type I agency conflicts) of ownership and control (Fama & Jensen, 1983; Jensen & Meckling, 1976). However, traditional principal-agent problems in family firms lead to principal–principal conflicts (type II agency conflicts) (Singla, Veliyath, & George, 2014), in which the dominant family owner can extract the firm's wealth to the detriment of minority shareholders (Miller & Le Breton-Miller, 2006; Morck & Yeung, 2003), manipulate earnings out of self-interest (Fan & Wong, 2002), or reap private benefits (Villalonga & Amit, 2006). Family firms' governance practices might face additional complications or barriers regarding the selection of adequate professionals, while ensuring the preferential treatment of next-generation family members (Pérez-González, 2006). In this scenario, family members, long-tenured family accountants, and even close friends often constitute a majority on the board. Recruiting family-proximate professionals can lead to several distortions in the management and control of firms, giving rise to bargained skepticism because of excessively emotional bonds (Gomez-Mejia, Cruz, Berrone, & De Castro, 2011; Gomez-Mejia, Cruz, & Imperatore, 2014) with the firm and strong dependence on the firm's financial results. In contrast, outsiders bring the sets of skills and knowledge required to enforce financial reporting quality. Prior studies have shown that financial expertise and experience can foster monitoring activities (Kim, Mauldin, & Patro, 2014), resulting in lower earnings management (Krishnan & Visvanathan, 2008).

To date, only a niche area within the literature has explored earnings management in family business settings, and the results have been inconclusive since family firms have been associated with both reduced (Ali, Chen, & Radhakrishnan, 2007; Wang, 2006) and with greater (Chi, Hung, Cheng, & Tien Lieu, 2015; Razzaque, Ali, & Mather, 2016) earnings management. Furthermore, the association between family firms and earnings management has been extensively explored with regard to public firms, while private firms have received relatively little attention (Kvaal, Langli, & Abdolmohammadi, 2012). Additionally, prior research into the intersection between the family business and earnings management fields has not considered the roles played by the characteristics of C-suite members. Finally, prior studies have primarily

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focused on objective management characteristics, such as the board's or committee's size, independence, and meeting frequency. For these reasons, the recent literature has argued that there remains much to explore about financial reporting in family firms (Songini, Gnan, & Malmi, 2013; Prencipe & Bar-Yosef, 2011).

Considering the aforementioned gaps, our empirical research is performed using a sample of both private and public Italian firms in the period ranging from 2007 to 2015. Adopting an upper echelons perspective, we direct our attention toward the relationships of C-suite members' expertise and experience with earnings management in family firms. To the best of our knowledge, this study represents one of the first attempts to examine the associations between C-suite members' characteristics and earnings management through the effects of family members' involvement. Additionally, we add to the prior literature regarding the effects of executives beyond a pure focus on the CEO (Finkelstein, Hambrick, & Cannella, 2009). Finally, we respond to the call for research on the roles that individual managers play in financial reporting choices (Bamber, Jiang, & Wang, 2010).

The combination of socioemotional wealth considerations (Berrone, Cruz, & Gomez-Mejia, 2012; Gomez-Mejia et al., 2011) and upper echelons theory (Hambrick, 2007; Hambrick & Mason, 1984) makes it possible to better explain how leveraging the diversities of family businesses in terms of their members' involvement, expertise and experience can lead to more accurate decisions overall for all stakeholders who demand suitable corporate governance devices to constrain earnings management. Based on these frameworks, we find that family control exercised through a diverse level of involvement, as well as the experience and expertise of the board of directors and committee members, plays a key role in identifying the antecedents of accounting choices in family firms.

The remainder of this paper is structured as follows. Section 2 introduces the theoretical background of our study and develops hypotheses related to the relationships between family involvement and earnings management (2.1) and among the characteristics of C-suite members, family involvement, and earnings management (2.2). Section 3 outlines the research design with the sample selection process (3.1), variable definitions (3.2), and methodology used (3.3). Section 4 presents the descriptive statistics (4.1) and empirical results from the multivariate analysis (4.2). Section 5 briefly reviews the robustness analysis and additional tests. Section 6 concludes the paper with a discussion of the main findings and the contributions to theory (6.1), practical implications (6.2), and limitations and suggestions for future research (6.3).

2. Theoretical background and hypotheses development

A considerable body of literature has suggested that earnings management primarily derives from reporting incentives, e.g., big baths, income smoothing, CEO changes, leverage, and CEO bonuses (Burgstahler, Hail, & Leuz, 2006; Dechow, Ge, & Schrand, 2010; Feng, Ge, Luo, & Shevlin, 2011; Healy & Wahlen, 1999; Holthausen, Larcker, & Sloan, 1995). However, accounting choices in family firms can also be guided by reputational and socioemotional wealth preservation objectives (Gomez-Mejia et al., 2011: 657). Additionally, family influence can lead to less independent financial reporting because family members might have self-interested behaviors, expropriate wealth, and intensify the entrenchment effect (Anderson & Reeb, 2004; Morck & Yeung, 2003). These tensions in the literature have been reflected in varied empirical results (e.g., Hutton, 2007; Salvato & Moores, 2010).

However, arising from the neoclassical assumptions of behavioral agency theory, socioemotional considerations suggest that any manager, when confronting determined events, responds by following the same "rational pattern"; in other words, managers are conceived as perfect substitutes for one another (Bertrand & Schoar, 2003). In this context, contractual incentives lead managers to make similar decisions (McVay, Nagar, & Tang, 2006; Bamber et al., 2010). In contrast, upper echelons theory considers the characteristics specific to top management, which can have impacts on accounting choices (Ge, Matsumoto, & Zhang, 2011). Hence, a great deal of the literature has explored the roles of CEOs', CFOs', committees', senior management's and board members' characteristics in shaping accounting decisions (e.g., Bédard, Chtourou, & Courteau, 2004; Aier, Comprix, Gunlock, & Lee, 2005; Krishnan, Raman, Yang, & Yu, 2011). In their touchstone work, Hambrick and Mason (1984: 193) argued that the characteristics of the "upper echelon" of an organization affect its decision-making processes because the top management decisions are likely to be influenced by the top managers' cognitive bases. The common upper echelons characteristics include powerful actors' educations, ages, and experiences (Hiebl, 2014), and in family firms, these characteristics can complement the motives underlying socioemotional wealth considerations for earnings management.

To develop our hypotheses, we mainly draw on these theoretical backgrounds and on the literature related to top management teams, CEOs, CFOs, and other high-level members. This literature is extendable to C-suite members, essentially consisting of CEOs, CFOs, and, more generally, all of the highest-level managers. In this sense, Menz (2012: 3) suggested that, even if the functional top management team members are diverse, "they all share characteristics, which allows scholars to integrate related studies' findings and to define them collectively as senior executives" or C-suite members in our case. Furthermore, all C-suite managers in typical organizational structures report directly to the CEO (Guadalupe, Li, & Wulf, 2014); hence, it is predictable that the CEO can influence their behaviors. Nonetheless, the CEO cannot disregard suggestions, analyses, and recommendations from other top-level members (Groysberg, Kelly, & MacDonald, 2011). Altogether, these considerations lead to interpretation of all of these apex positions as functionally interdependent, sharing the CEOs' and other top-level managers' decision power (Finkelstein, 1992).

2.1. Family involvement and earnings management

Consistent with family firms' long-term investment horizons, several studies have found that family firms produce better financial reporting by resorting to lower abnormal accruals (Cascino, Pugliese, Mussolino, & Sansone, 2010), higher earnings informativeness and the ability to anticipate future cash flows, as well as higher earnings response coefficients (Ali et al., 2007), less persistence of lost transitory components (Wang, 2006), fewer restatements (Tong, 2008), a greater likelihood of disclosing earnings warnings (Chen, Chen, & Cheng, 2008), and lower discretionary accruals (Jiraporn & DaDalt, 2009). In agreement with the alignment hypothesis, Greco, Ferramosca and Allegrini (2015) provided evidence that family firms are less likely to use long-lived asset write-offs for earnings management purposes. In this regard, Siregar and Utama (2008) suggested that family firms are more likely to adopt efficient earnings management practices to convey private information, rather than opportunistic earnings management practices for managerial reporting incentives. However, another trend in the literature has argued that family firms are negatively associated with financial reporting quality, measured in terms of lower earnings informativeness (Ding, Qu, & Zhuang, 2011), higher use of discretionary accruals (Chi et al., 2015; Jara-Bertin, López-Iturriaga, & López-de-Foronda, 2008) and real earnings management activities (Razzaque et al., 2016). Finally, a few recent studies have not provided evidence that public family firms differ significantly from their non-family counterparts (Sáenz González & García-Meca, 2013; Vieira, 2016).

A sizable body of the literature on family businesses has found a curvilinear relationship between family ownership or involvement and particular firm characteristics, such as the cost of debt (Anderson, Mansi, & Reeb, 2003; Mazzola, Sciascia, & Kellermanns, 2013), firm performance (Minichilli, Corbetta, & MacMillan, 2010; Sciascia & Mazzola, 2008), firm value (Lins, 2003; McConnell & Servaes, 1990; Stulz, 1988), export intensity (Sciascia, Mazzola, Astrachan, & Pieper,

2012), the acquiring of shareholder M&A acquisitions (Feito-Ruiz & Menéndez-Requejo, 2010), abnormal accruals (Wang, 2006), real earnings management (Razzaque et al., 2016), stewardship/agency index (Le Breton-Miller, Miller, & Lester, 2011), top management teams (Minichilli et al., 2010), intellectual capital (Greco, Ferramosca, & Allegrini, 2014), entrepreneurial orientation (Boling, Pieper, & Covin, 2016), and tax aggressiveness (Mafrolla & D'Amico, 2016). Thus, the patchwork of results discussed above regarding the relationship between family firms and financial reporting quality could derive from a curvilinear relationship between family involvement and earnings management such that diverse levels of involvement have different effects on earnings management activities (Sánchez-Ballesta & García-Meca, 2007).

According to Miller and Le Breton-Miller (2006), because of agency and stewardship advantages, family involvement in top management teams has the potential to have greater effects on financial performance than ownership does. Similarly, Chu (2011) suggested that family-ownership influences are more likely to have effects when there are active family management and control. Hence, we test the effect of family involvement on earnings management. Specifically, we argue that a non-linear relationship is created when family involvement yields to the alignment of interests, which causes managers to behave more like stewards, and when, in contrast, family involvement yields to the entrenchment effect, which causes managers to behave like despotic, controlling owners (Le Breton-Miller et al., 2011). Family firms might support higher pressures to maintain a good reputation and to reduce the risk of litigation when there is greater family involvement in C-suite positions, contributing to the mitigating of opportunistic behavior and producing stricter monitoring by the manager. In this sense, Martínez-Ferrero, Rodriguez-Ariza, and Bermejo-Sánchez (2016) recently showed that family firms are less affected by negative effects on firm reputation because they limit the use of earnings management. In contrast, when relatively few members are involved in C-suite positions, they can more easily behave opportunistically, obfuscating their self-interested objectives via earnings management.

Considered together, family involvement can exhibit both positive and negative effects on earnings management. Specifically, we propose an inverted U-shaped relationship such that at relatively low levels of family involvement, family members do not have sufficient power to act opportunistically and engage in earnings management behaviors. As family involvement in C-suite positions gradually increases, family members gain more power to pursue self-interested objectives, which could be reflected at relatively higher levels of earnings management, up to a certain point. Beyond this threshold level, the entrenchment effect becomes an alignment effect when further increasing levels of family involvement lead to greater mutual monitoring and heightened concerns about reputational risks, which can reduce earnings management behaviors. Taken together, we propose the following hypothesis.

Hypothesis 1. *Ceteris paribus,* there is an inverted U-shaped relationship between family involvement in C-suite positions and earnings management. Lower and higher levels of family involvement are associated with reduced earnings management, whereas medium levels of family involvement are associated with increased earnings management.

2.2. C-suite positions and earnings management: an upper echelons theory perspective

The accounting environment is frequently characterized by complex and often ambiguously defined principles that allow managers to make choices that best match their values and backgrounds (Crossland & Hambrick, 2007; Peterson, 2012; Hambrick & Mason, 1984). Drawing on upper echelons theory, prior research has found that the functional background and educational level of management teams are associated with entrepreneurial orientation (Boling, 2012) and that educational levels, shorter organizational tenures, younger executives, and greater international experience are associated with firms' international diversification (Herrmann & Datta, 2005). Other findings include the positive relationships of educational level with career experience, on the one hand, and corporate social performance, on the other hand (Manner, 2010), as well as the association of managers' finance and accounting careers with more precise disclosure styles (Bamber et al., 2010).

Overall, the theoretical and empirical evidence suggests that managers influence many of a firm's strategic choices, and accounting decisions are among the tools employed to shape a firm's strategic rationales (Skærbæk & Tryggestad, 2010). In this manner, the prior literature has emphasized the relevance of accounting choices for firms' strategic planning (Bushman, Chen, Engel, & Smith, 2004), and the leveraging of multiple motivations for earnings management in family firms seems to be even more complex. In fact, emotions and social and family bonds intertwine with informal corporate governance structures, family members' unique experiences, and values to affect accounting choices (Chapman, Cooper, & Miller, 2009).

We direct our attention toward three observable demographic characteristics of C-suite members' backgrounds, namely: 1) their education as a proxy for their accounting/management/financial expertise; 2) their ages; and 3) the number of current appointments as proxies for their experience. In the following sections, we develop the specific hypotheses for each characteristic in more detail.

2.2.1. Expertise and earnings management

Board and committee members with financial and accounting knowledge can produce superior financial reporting owing to their expert judgment and decisions. In this sense, there is evidence that board and audit committee members' financial sophistication is associated with less use of discretionary accruals (Xie, Davidson, & Dadalt, 2003) and that the financial and governance expertise of audit committee members is negatively associated with aggressive earnings management (Bédard et al., 2004). Additionally, audit committees with both financial expertise and high relative status are associated with lower levels of earnings management in terms of accounting irregularities and abnormal accruals (Badolato, Donelson, & Ege, 2014). Lo, Wong, and Firth (2010) suggested that firms that have audit committees with financial experts are less likely to use transfer pricing manipulations to manage earnings. Similarly, Zhang, Zhou, and Zhou (2007) found evidence that internal control weaknesses are more likely in firms with less accounting financial expertise among their audit committees. Audit committees' financial expertise is also positively associated with conservatism, and audit committees can better promote conservatism on boards with strong corporate governance characteristics (Krishnan & Visvanathan, 2008).

On a related note, there is evidence that CEOs experienced in finance are less engaged with real earnings management activities (Jiang, Zhu, & Huang, 2013) and that CEOs with prior experience in CFO positions make more conservative accounting choices and have less dispersed and volatile analysts' forecasts (Matsunaga & Yeung, 2008). Prior research has also found evidence that restatements are negatively associated with CFOs' financial expertise, measured as work experience as CFOs, MBAs, and/or CPAs with certifications (Aier et al., 2005), and that the financial sophistication of external directors who are officers of financial intermediaries is an efficient tool for constraining the use of abnormal accruals (Park & Shin, 2004). Overall, considering these studies of the financial and accounting expertise of top management and committee members, we expect the following.

Hypothesis 2a. *Ceteris paribus,* the presence of C-suite members with expertise in business-related fields is associated with reduced earnings management.

2.2.2. Experience and earnings management

We gauge C-suite members' experience by examining their ages and the number of committees and boards on which they serve, providing an indication of their "busy-ness". In the literature, there are two competing perspectives on the impacts on earnings management of both the directors'/managers' ages and their busy-ness.

By definition, older directors have developed professional experience in their positions, in the industry, and/or in the firm that they serve. There is evidence that older CEOs are more conservative (Bertrand & Schoar, 2003), and they are more likely to undertake risks and more confident than their younger counterparts, who instead are concerned with avoiding mistakes (McClelland & O'Brien, 2011). Older CEOs thus have higher organizational commitment and more conservative financial reporting behaviors, ensuring higher-quality internal controls (Lin, Wang, Chiou, & Huang, 2014). However, older CEOs have shorter time horizons, and their close retirement could render them more interested in maximizing their bonuses (Shen, 2003). While younger managers are interested in future earnings-related bonuses, older managers prefer cutting investment expenditures to maximize their retirement remuneration (Gibbons & Murphy, 1992). Reflecting this stream of research, CEOs close to retirement age are positively associated with discretionary accruals in the year preceding a change in CEO (Davidson, Xie, Xu, & Ning, 2007), and SEC violations were found to be associated with managerial age (Shoepfer, 2007). In contrast, younger directors/managers might be less conservative and more inclined to embark on daring projects and be new idea carriers (Thomas, Litschert, & Ramaswamy, 1991). As they grow older, managers become change and risk averse (Yang, Zimmerman, & Jiang, 2011). Additionally, younger directors are more independent because they have had less time to forge strong relationships and to undertake interlocking; they can be resourceful, efficient, self-motivated, and dynamic because they are eager to show off their skills. Finally, being more concerned with their career paths, younger managers perform better than older ones, exerting greater effort on their work and being better educated (Chevalier & Ellison, 1999).

With regard to the number of positions held by the same person, one perspective suggests that having many directorships results in overcommitted directors who cannot adequately perform their monitoring activities (Shivdasani & Yermack, 1999). Indeed, directors with several board positions can have difficulty participating in every meeting and sharing their work time among multiple firms, industries and even countries (Lipton & Lorsch, 1992). In this sense, Jiraporn, Davidson, DaDalt, and Ning (2009) provided evidence that directors sitting on multiple boards display a significantly higher tendency to miss board meetings, overall decreasing the quality of the corporate governance system (Fich & Shivdasani, 2006). The limit on the time that busy directors can devote to their monitoring activities also threatens their ability to detect earnings management practices (Sarkar, Sarkar, & Sen, 2008). Another perspective suggests that having multiple boards and committees can provide advantages for firms because such managers acquire broader knowledge of methods, tools, and strategies (Carpenter & Westphal, 2001). Overcommitted directors organize their time and are able to make more effective decisions and solve problems more rapidly as a result of their accrued experience (Harris & Shimizu, 2004). Furthermore, they are in a better position to create networks and solid relationships that strengthen firms' economic, reputational, and social positions (Di Pietra, Grambovas, Raonic, & Riccaboni, 2008). Directors who sit on multiple boards are well connected and convey the strong impression that they are good at their jobs and more expert at providing advice and conducting monitoring activities (Coles, Daniel, & Naveen, 2012). Consistently "overboarded" directors are perceived to be professionally more experienced and to have excellent reputations (Shivdasani, 1993). Therefore, experience in terms of age and busy-ness predicts the predominance of the alignment effect, and we expect the following.

Hypothesis 3a. *Ceteris paribus,* C-suite members' experience (i.e., age and busy-ness) is associated with reduced earnings management.

2.2.3. The moderating role of family involvement

Previous research has already explored the moderating influence of family involvement on the relationships between entrepreneurship and growth (Casillas & Moreno, 2010), between knowledge sharing and technological capabilities (Zahra, Neubaum, & Larrañeta, 2007), and between ownership characteristics and the level of international sales (Calabrò, Torchia, Pukall, & Mussolino, 2013). In agreement with these studies, we argue that the peculiarities of C-suite family members play significant moderating roles in the relationships of expertise and experience with earnings management.

Specifically, family involvement can have two competing effects. On the negative side, family members might be less willing to oversee the activity of other family members for reasons that mainly reflect socio-emotional ties, such as family bonds, trust, confidence, obedience, group thinking, and reverence (Gomez-Mejia et al., 2011; Pieper, 2010). The concept of family altruism can have a damaging effect on the controlling role that accounting-related information should play, for example (Lubatkin, Durand, & Ling, 2007). In this sense, family members involved in the accounting process could be in charge because of their blood ties, rather than their experience or their financial expertise (Block, Jaskiewicz, & Miller, 2011). Recruitment based on bloodlines results in adverse selection processes, which produce biased evaluations of managers' participation in maximizing firm value (Chua, Chrisman, & Bergiel, 2009). In contrast, external directors can alleviate family altruism and family managerial opportunism by protecting stakeholders' interests (Ng & Roberts, 2007). In this regard, some scholars have recommended the creation of alternative governance devices to constrain the "dark side" of trust, benevolence, and the emotional behaviors of family involvement (Cruz, Gomez-Mejia, & Becerra, 2010; Goel, Mazzola, Phan, Pieper, & Zachary, 2012).

On the positive side, prior studies have argued that family managers are not interested in short-term benefits because they maintain their roles for long durations, and they are more interested in upholding the family's name and reputation (Prencipe et al., 2011). This greater interest renders family members more sensitive to the negative effects of earnings management. Furthermore, family members are uninterested in their economic value and reputations on the market (Block & Wagner, 2014) because they are determined to run their businesses for extended periods of time; they are thus less likely to manage earnings to signal that they are "good" at their jobs. In addition, during periods of poor performance, they have no motivation to boost earnings because they are not scared of losing their jobs since the family has profound trust in its management. Additionally, the family plays a key role in developing its members' human capital, investing in education, transmitting values, and developing the necessary skills to control opportunistic earnings management behaviors (Bubolz, 2001). Apprenticeship in family firms places no restrictions on secrets or knowledge sharing, and family members can learn from early ages on the job, working closely with the top management (Miller & Le Breton-Miller, 2005; Zahra et al., 2007). This learning by doing allows family members to accrue experience and develop expertise, complementing the expertise of non-family C-suite members. Ultimately, the involvement of multiple family members places them in better positions to monitor non-family managers, generating an amplifier effect of expertise and thus reducing the likelihood of earnings management (Miller & Le Breton-Miller, 2006). Consistently, Yang (2010) showed that non-family CEOs are more likely to manage earnings than family CEOs. In this respect, family involvement can positively affect the relationships of expertise with experience, on the one hand, and with earnings management, on the other hand, because C-suite family members are more concerned about possible corporate accounting scandals.

In light of both of these perspectives, we conclude that family

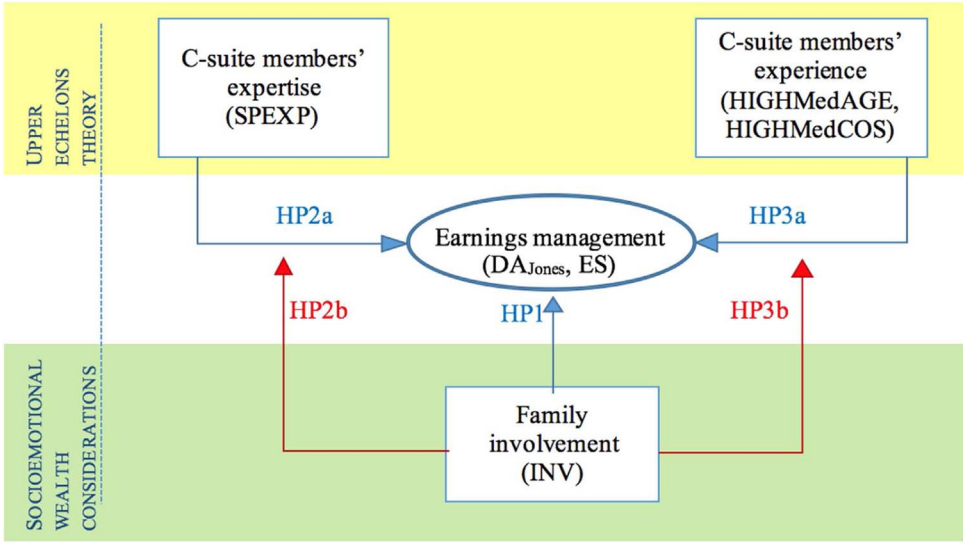


Fig. 1. Research model.

involvement has a moderating effect on the relationships of C-suite members' expertise with experience, on the one hand, and with earnings management, on the other hand. However, due to a lack of definite theoretical and empirical evidence, we do not specify whether family involvement has a positive or negative moderating effect on these relationships. Hence, we expect the following.

Hypothesis 2b. *Ceteris paribus,* family involvement moderates the association between the presence of C-suite positions filled by experts in business-related fields and earnings management.

Hypothesis 3b. *Ceteris paribus,* family involvement moderates the association between C-suite members' experience (i.e., age and busyness) and earnings management.

Fig. 1 depicts the research model and the anticipated associations between earnings management and the explanatory variables. We developed Hypothesis 1 on the basis of socioemotional wealth considerations and Hypothesis 2a and Hypothesis 3a based on upper echelons theory. We derived Hypothesis 2b and Hypothesis 3b by considering both theories together.

3. Research design

3.1. Sample description

We selected the firms included in our sample from the Orbis Bureau van Dijk database. The selection considered only Italian firms. (4,038,025) adopting the IAS/IFRS International Accounting Standards (2830). We required that all of the companies have accounts available for 9 years, namely the 2007–2015 period (851) and simultaneously that they have 10 years of data for the construction of some lagged variables. These filters led to a sample comprising 793 firms and a total dataset of 7137 firm-year observations (Table 1).

We then included information about directors and managers. Hence, from a dataset of more than 21,450 directors' and managers' contact information, we compared the data with shareholder information and found that 752 contacts were both C-suite members (and/or the chair of one of the boards) and shareholders of the companies included in our dataset Our dataset consists of both family and non-family firms.

3.2. Variable definitions

3.2.1. Dependent variable

Prior studies of earnings management have elaborated on several proxies to determine earnings quality (Dechow et al., 2010). In this study, to verify the impact of family involvement, expertise, and experience on earnings management (EM), we adopted the magnitude of accruals and earnings smoothness models. In the main analysis, we used two alternative dependent variables: 1) the discretionary accruals (DA_{Jones}), measured according to the Jones (1991) model; and 2) the earnings smoothness ratio (ES) (see Table 2 for details). Two other measurements of accruals were used to corroborate the results. One of these measurements was derived from the modified Jones model (Dechow, Sloan, & Sweeney, 1995), and a third proxy of abnormal accruals from Dechow and Dichev's (2002) model was included in the robustness analysis (see Table 2 for details).

Table 1
Sample selection process.

		Step result	Search result
1.	All active companies and companies with unknown situations	163,549,286	163,549,286
2.	World region/country/region in country: Italy	4,995,972	4,038,025
3.	Accounting practice: IFRS (International Financial Reporting Standards)	2,099,346	2830
4.	Years with available accounts: 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2008, and 2007	5,068,127	851
5.	Number of years with accounts: 10 years	8,192,490	793
	Boolean search: 1 And 2 And 3 And 4 And 5		
	TOTAL	793	

3.2.2. Independent variables

The academic literature has operationalized an endless number of measures to carve out the family firm concept. Following a relevant stream of research, this work contains a variable reflecting the number of family members with a C-suite position in the firm (INV) as a proxy for the family's level of involvement in the firm's management and control (Le Breton-Miller et al., 2011). To test the curvilinear relationship with earnings management, we included the square term of the family involvement (INVSquared). To verify the effects (and/or moderating effects) of the family members' characteristics on the quality of earnings, this study introduced three variables reflecting the degree of expertise and experience of managers and directors involved in C-suite positions. The percentage of C-suite members of the firm's total number of C-suite members who have degrees in fields related to accounting, business and management gauges the level of expertise (SPEXP) (Ahrens, Landmann, & Woywode, 2015). The concept of experience was rounded out by two dichotomous variables with a value of

Table 2
Variable definition.

Variable Label	Definition	Function
DA_{Jones}	$ACCRUALS/TA_{i,t-1} = \beta_0 + \beta_1 \Delta REV_t/TA_{i,t-1} + \beta_2 PPE_t/TA_{i,t-1} + \varepsilon$ (1) where: ACCRUALS = difference between earnings before extraordinary items (E) and cash flow from operations (OCF); REV = total revenues; TA = total assets; PPE = net book value of property, plant and equipment; and ε = the residual value. The residuals from Equation (1) capture the magnitude of discretionary accruals (DAJones).	Dependent variable (main analysis)
ES	σ(Earnings)/σ(Cash flows) (2) where: σ(Earnings): standard deviation of earnings at time t; and σ(Cash flows): standard deviation of cash flows at time t.	Dependent variable (main analysis)
$DA_{Modified}$	$ACCRUALS\ (t) = \beta_0 + \beta_1\ (\Delta REV_t - \Delta REC_t)/TA_{i,t-1} + \beta_2 PPE_t/TA_{i,t-1} + \varepsilon$; (3) where: ACCRUALS = difference between earnings before extraordinary items (E) and cash flow from operations (OCF); REV = total revenues; REC = accounts receivables; TA = total assets; PPE = net book value of property, plant and equipment; and ε = the residual value. The residuals from Equation (3) capture the magnitude of discretionary accruals (DAModified).	Dependent variable (robustness analysis)
$SD_{Dechow\&Dichev}$	$ACCRUALS_{i,t} = \beta_0 + \beta_1 OCF_{i,t-1} + \beta_2 OCF_{i,t} + \beta_3 OCF_{i,t+1} + \varepsilon$ (4) where: ACCRUALS = difference between earnings before extraordinary items (E) and cash flow from operations (OCF); OCF = the cash flow from operations in different periods (t); and ε = the residual value.	Dependent variable (robustness analysis)
INV	Number of family members involved in C-suite roles.	Test HP1 and moderating variable Test HP2b and HP3b
SPEXP	Percentage of C-suite roles with degrees in business-related majors.	Test HP2a and HP2b
HIGHMedAGE	Dummy, 1 if the mean age of C-suite roles is higher than the median age of the industry and year	Test HP3a and HP3b
HIGHMedCOS	Dummy, 1 if the mean number of the committees and board on which C-suite roles are involved is higher than the median number of the committees and board of the industry and year.	Test HP3a and HP3b
GROWTH	Change in revenues from year t to year t-1 scaled by total assets in year t-1.	Control variable
OCF	Operating cash flow in year t.	Control variable
E	Earnings in year t.	Control variable
ROA	(Profit before tax/total assets) × 100.	Control variable
TOBINSQ	Market capitalization/total assets.	Control variable
GEARING	(Non-current liabilities + loans)/shareholders' funds × 100.	Control variable
FIRMAGE	Firm age in years since the foundation of the firm.	Control variable
FAM	Percentage of shares held by family members.	Control variable
SIZE	Natural logarithm of total assets in year t.	Control variable
BLOCK	Dummy, 1 if there is at least a stakeholder different from the family holding more than 5 percent of ownership.	Control variable

1 when the mean age of the members involved in C-suite positions was higher than the median age of the people in the same positions in the industry and year (HIGHMedAGE), and the mean number of committees and boards on which C-suite members were involved was higher than the median number of committees and boards of the same industry and year (HIGHMedCOS) (Ahrens et al., 2015).

3.2.3. Control variables

The analyses also included controls for several firm characteristics that could affect a firm's specific behavior toward earnings management. The change in revenues from year *t-1* to year *t*, scaled by total assets at year *t-1*, served as a proxy for the firm's growth (GROWTH) (Achleitner, Günther, Kaserer, & Siciliano, 2014). Firm performance was controlled through the return-on-assets ratio, measured as profits before taxes scaled by total assets (ROA), the firm's year earnings (E), and operating cash flow (OCF) (Dyer, 2006; Minichilli et al., 2010). The firm's financial position was measured by the sum of non-current liabilities and loans scaled by equity (GEARING) (Carpenter, Fazzari, & Petersen, 1998). As a market measure, this study included Tobin's Q ratio, defined as market capitalization scaled by total assets (TOBINSQ) (Anderson, Duru, & Reeb, 2012). The prior literature has also suggested that earnings management might depend on firm age, measured as the number of years since its founding (FIRMAGE), and on firm size, measured as the natural logarithm of total assets (SIZE) (Le Breton-Miller et al., 2011). Finally, we controlled for the percentage of ownership held by the family (FAM) and for the presence of other relevant stakeholders, with a dummy equal to 1 when there was a stakeholder who held more than 5 percent of the ownership (BLOCK) (Anderson et al., 2012).

3.3. Methodology

Our dataset contained balanced longitudinal data from 2007 to 2015. We performed several specification checks and concluded that the random effects model with time- and industry-fixed effects was preferable (Greene, 2003). The basic model contained the following control variables: $EM = ß_0 + ß_1 Controls + ß_2 INDUSTRYdummies + ß_3 YEARdummies + \varepsilon$ (Model 1). In the second model, we entered the explanatory variables as direct relations (INV, INVSquared, SPEXP, HIGHMedAGE, and HIGHMedCOS) (Model 2). Subsequently, we verified whether the involvement of family members in C-suite positions played a moderating role between expertise and experience, on the one hand, and earnings management, on the other hand (Hypothesis 2b and Hypothesis 3b), adding the interacting terms (SPEXP × INV, HIGHMedAGE × INV, and HIGHMedCOS × INV) (Model 3).

We performed the Lagram-Multiplier test to check for serial correlations. The results suggested that the data had first-order autocorrelation. Finally, we tested for heteroscedasticity, and the results indicated that heteroscedasticity-robust standard errors should be used. Hence, we ran linear panel models with standard error estimates robust

Table 3
Summary statistics and tests of differences in means between non-family and family firms.

Variable	All Firms					Non-Family Firms					Family Firms					Diff in Means
	Obs.	Mean	Std. Dev.	Min.	Max.	Obs.	Mean	Std. Dev.	Min.	Max.	Obs.	Mean	Std. Dev.	Min.	Max.	*t-stat*
DA_{Jones}	1203	0.00	307.57	−778.68	858.44	952	10.00	308.86	−753.57	858.44	251	−37.92	300.23	−778.68	749.66	47.92**
ES	1341	5.42	7.19	0.50	68.84	1062	5.39	7.39	0.50	68.84	279	5.52	6.40	0.90	34.34	−0.13
INV	7137	0.27	1.04	0.00	17.00	5915	0.02	0.21	0.00	6.00	1222	1.50	2.07	0.00	17.00	−1.49***
SPEXP	7137	0.00	0.02	0.00	1.00	5915	0.00	0.02	0.00	1.00	1222	0.00	0.01	0.00	0.23	0.00
HIGHMedAGE	7137	0.52	0.50	0.00	1.00	5915	0.52	0.50	0.00	1.00	1222	0.51	0.50	0.00	1.00	0.02
HIGHMedCOS	7137	0.52	0.50	0.00	1.00	5915	0.51	0.50	0.00	1.00	1222	0.55	0.50	0.00	1.00	−0.04***
OCF	455	228.00	131.49	1.00	455.00	326	231.86	129.00	1.00	454.00	129	218.26	137.61	7.00	455.00	13.60
GROWTH	1240	620.50	358.10	1.00	1,240.00	979	624.99	360.53	2.00	1,240.00	261	603.64	348.99	1.00	1,237.00	21.35
GEARING	6637	146.58	165.85	0.00	998.82	5503	144.66	163.82	0.00	998.82	1134	155.88	175.15	0.00	976.22	−11.22**
ROA	7121	1.99	11.12	−89.78	88.89	5902	2.11	11.35	−86.06	88.89	1219	1.41	9.91	−89.78	50.41	0.70**
E	1395	694.12	400.48	1.00	1,386.00	1108	711.99	397.83	1.00	1,386.00	287	625.13	403.84	6.00	1,373.00	86.86***
TOBINSQ	1320	0.55	0.63	0.00	6.57	1039	0.56	0.66	0.00	6.57	281	0.52	0.53	0.00	3.36	0.04
FIRMAGE	7137	29.13	26.78	0.00	166.00	5915	29.06	27.67	0.00	166.00	1222	29.47	22.03	0.00	153.00	−0.41
FAM	7137	0.04	0.16	0.00	1.00	5915	0.00	0.00	0.00	0.04	1222	0.26	0.30	0.00	1.00	−0.26***
SIZE	1395	6.24	0.99	0.00	7.24	1108	6.25	0.99	0.00	7.24	287	6.21	0.99	0.69	7.24	0.04
BLOCK	7137	0.63	0.48	0.00	1.00	5915	0.70	0.46	0.00	1.00	1222	0.32	0.47	0.00	1.00	0.38***

*, **, and *** represent statistical significance at the 0.1, 0.05, and 0.01 levels, respectively.
Family firms are defined as those firms in which at least one family member has a C-suite role or in which a member of the family or the family holds at least 5 percent of the ownership.

to heteroscedastic and auto-correlated disturbances.

4. Empirical findings

4.1. Descriptive statistics

Table 3 reports the descriptive statistics for the full sample and for the non-family firm and family firm subsamples. The last column of Table 3 shows the significant differences in means between the subsamples of family and non-family firms. We observe that family firms are, on average, significantly more indebted (GEARING). Additionally, on average, non-family firms perform significantly better than family firms, having a mean ROA higher than 33 percent of family firms' ROA. Hence, it should be expected that the earnings (E) are also significantly higher in non-family firms. The SIZE of the non-family firms is, on average, larger than that of family firms; however, this difference is not significant. Finally, as predicted, the presence of other blockholders (BLOCK) in non-family firms is more likely than it is in family firms.

Table 4 presents the correlations of all of the used variables. Our dependent variables DA_{Jones} and ES are strongly correlated with many of the control variables (OCF, GEARING, SIZE and BLOCK), and DA_{Jones} is also strongly correlated with ROA, E and TOBINSQ. Regarding the correlations of the explanatory variables, the number of family members involved (INV) is positively correlated with FAM, while it is negatively correlated with the dummy related to the age of the C-suite members involved in the firm (HIGHMedAGE). Finally, INV is negatively correlated with the firm change in revenues (GROWTH) and leverage (GEARING). The explanatory variable related to expertise (SPEXP) does not manifest any significant correlations, and predictably, the age of the members appointed to C-suite positions (HIGHMedAGE) is positively correlated with the number of appointments (HIGHMedCOS). In addition, this last explanatory variable is negatively correlated with the FIRMAGE and the presence of other blockholders (BLOCK), suggesting that the more appointments that there are, the younger that the firms are and the less likely that it is for there to be other relevant blockholders. Finally, the control for family firms' ownership (FAM) is positively correlated with the dummy related to the numbers of committees and boards in which C-suite positions are involved (HIGHMedCOS). FAM is also strongly and positively correlated with the firm GEARING and is negatively correlated with the presence of other blockholders in the firm equity (BLOCK).

We assessed collinearity problems by determining the variance inflation factors (VIFs). All of the VIFs are far less than the level of 10 (Acock, 2014), the mean VIF is 1.98, and the highest VIFs are on the INV (VIF = 6.66) and INVSquared (VIF = 6.64) variables. However, by definition, one is not the linear transformation of the other; hence, we did not remove any of the variables in question from the subsequent analyses.

4.2. Multivariate analysis

Table 5 reports the results of the regression models. The dependent variable used to estimate the use of earnings management was alternatively the measure of discretionary accruals with the Jones model (DA_{Jones}) and the ratio of earnings smoothness (ES). The higher that the ES ratio is, the lower that the income smoothing activities that the firms use are, while a lower value of the ES ratio indicates that the firms are more inclined toward smooth earnings (Dechow et al., 2010).

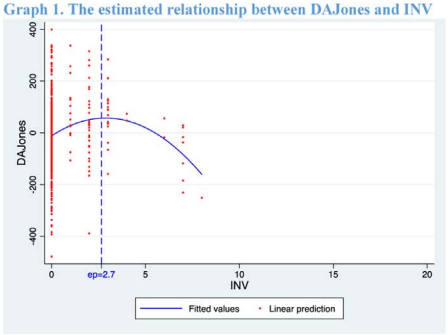
Hypothesis 1 was verified in Model 2 using DA_{Jones} as a dependent variable, while when using ES, the associations were not significant. Specifically, we found a significant, non-linear relationship between family involvement and discretionary accruals (DA_{Jones}). The INV term was significantly positive ($p < 0.10$), while the squared INV term was significantly negative ($p < 0.05$), denoting an inverse U-shaped relationship between family involvement and discretionary accruals. Graph 1 shows the estimated relationship between INV and

Table 4
Pearson's correlation matrix.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	DA_{Jones}	ES	INV	INVSquared	SPEXP	HIGHMedAGE	HIGHMedCOS	OCF	GROWTH	GEARING	ROA	E	TOBINSQ	FIRMAGE	FAM	SIZE	BLOCK
1	1																
2	−0.01	1															
3	0.01	−0.00	1														
4	0.02	−0.01	0.88***	1													
5	−0.01	0.00	−0.01	−0.01	1												
6	0.01	0.01	−0.02*	−0.02	0.01	1											
7	−0.00	−0.09***	0.01	0.01	−0.01	0.16***	1										
8	−0.22***	−0.18***	0.06	0.09*	−0.05	−0.07	−0.08*	1									
9	0.00	−0.02	−0.08***	−0.08***	−0.03	0.02	−0.04	0.06	1								
10	−0.09***	−0.11***	−0.02*	−0.01	0.01	0.02	−0.02	−0.14***	−0.032	1							
11	0.35***	0.01	0.00	0.01	0.01	−0.00	0.00	0.43***	0.15***	−0.23***	1						
12	0.47***	0.00	−0.01	−0.01	0.03	0.01	−0.07***	0.52***	0.10***	−0.15***	0.52***	1					
13	0.20***	0.03	0.02	0.03	0.02	−0.02	0.04	0.12***	0.14***	−0.28***	0.27***	0.12***	1				
14	0.02	0.06**	0.01	0.00	0.01	−0.00	−0.04***	−0.03	−0.07**	−0.01	−0.04***	0.02	−0.12***	1			
15	−0.05	0.01	0.11***	0.10***	−0.00	0.00	0.04***	−0.10**	0.02	0.05***	−0.01	−0.06**	−0.00	−0.01	1		
16	−0.07**	−0.07***	−0.06**	−0.07***	0.02	−0.01	−0.03	−0.06	−0.04	0.05*	−0.05*	−0.08***	−0.04	0.04	0.00	1	
17	0.13***	−0.08***	−0.01	−0.01	0.00	−0.01	−0.03**	0.13***	−0.04	−0.13***	0.07***	0.13***	0.02	0.00	−0.37***	0.04	1

*, **, and *** represent the correlation coefficient being statistically significant at the 0.1, 0.05, and 0.01 levels, respectively.

Graph 1. The estimated relationship between DAJones and INV



Graph 2. The estimated relationship between ES and INV

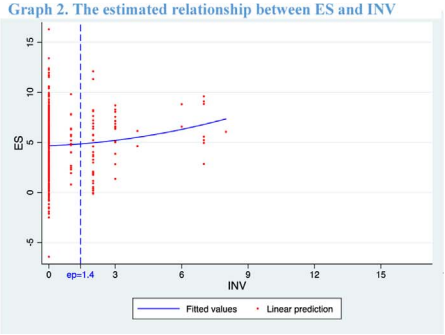


Table 5
Results of regression models.

	DAJones			ES		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
INV		51.44*	63.67**		−0.24	−0.23
		(27.24)	(26.95)		(0.66)	(0.66)
INVSquared		−9.70**	−14.54***		0.08	0.13
		(4.42)	(4.52)		(0.11)	(0.11)
SPEXP		−1,169.00	−908.43		−23.70	−15.07
		(809.91)	(805.37)		(21.75)	(21.87)
HIGHMedAGE		10.83	47.18		1.21	−0.01
		(29.14)	(33.39)		(0.74)	(0.85)
HIGHMedCOS		54.00*	−1.51		−1.12	0.51
		(31.32)	(34.31)		(0.81)	(0.89)
SPEXPxINV			−8,04***			−103.02
			(2,93)			(78.47)
HIGHMedAGExINV			−32.47*			1.44***
			(18.95)			(0.50)
HIGHMedCOSxINV			57.47***			−2.10***
			(20.20)			(0.54)
OCF	−0.64***	−0.63***	−0.62***	−0.01***	−0.01***	−0.01***
	(0.13)	(0.13)	(0.13)	(0.00)	(0.00)	(0.00)
GROWTH	−0.07	−0.09**	−0.10**	−0.00***	−0.00***	−0.00***
	(0.04)	(0.05)	(0.05)	(0.00)	(0.00)	(0.00)
GEARING	0.28**	0.30***	0.29***	−0.01***	−0.01***	−0.01***
	(0.11)	(0.11)	(0.11)	(0.00)	(0.00)	(0.00)
ROA	5.04**	6.55***	5.51**	−0.04	−0.05	−0.03
	(2.30)	(2.35)	(2.31)	(0.06)	(0.06)	(0.06)
E	0.09**	0.07	0.07	−0.00	−0.00	−0.01
	(0.04)	(0.04)	(0.04)	(0.00)	(0.00)	(0.01)
TOBINSQ	34.19	31.55	33.78	0.81	0.82	0.72
	(27.42)	(27.30)	(26.85)	(0.62)	(0.62)	(0.62)
FIRMAGE	0.19	0.18	0.15	0.01	0.01	0.01
	(0.43)	(0.44)	(0.43)	(0.01)	(0.01)	(0.01)
FAM	−189.10*	−190.26*	−120.92	−1.17	−1.35	−2.83
	(113.62)	(113.37)	(112.35)	(2.68)	(2.69)	(2.68)
SIZE	−6.64	−6.16	−18.24	0.12	0.20	0.29
	(15.11)	(15.26)	(15.08)	(0.38)	(0.38)	(0.38)
BLOCK	25.36	37.22	49.08	−1.16	−1.30	−1.68*
	(41.86)	(41.98)	(41.55)	(1.01)	(1.02)	(1.02)
Constant	−104.61	−85.78	29.14	9.76	9.87	8.95
	(483.57)	(485.34)	(494.86)	(13.34)	(13.53)	(14.47)
INDUSTRY FE	YES	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES	YES
Obs.	377	377	377	411	411	411
Wald Chi^2	93.99	106.80	137.40	72.03	77.91	100.80
Prob > Chi^2	0.00	0.00	0.00	0.00	0.00	0.00
R-sq: overall	0.17	0.19	0.18	0.04	0.05	0.05

Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

1C-suite is a widely used expression that refers to a firm's important senior executives; it is an alternative to "C-level executives." The expression "C-suite" derives from top senior executives' titles, which are often preceded by the letter C, for chief, such as chief executive officer (CEO), chief financial officer (CFO), chief operating officer (COO), or chief information officer (CIO). C-suite members are considered part of the most relevant and influential group of people in a firm. C-suite members are high-stakes decision makers, and they tend to have more demanding workloads and higher compensation. According to the Orbis Bureau van Dijk database's logic, each department in a firm (e.g., Sales, Finance, HR, R&D, etc.) has four hierarchical levels. The highest level is assumed to be the chief executive of that department; therefore, people working at this level are C-suite members. The other, lower levels consist of non-C-Suite members.

2Italy is the ideal setting to examine earnings management in family businesses owing to its relatively weak corporate governance practices, as well as its high ownership concentration and abundance of family firms (Prencipe, Bar-Yosef, Mazzola, & Pozza, 2011).

3The 752 C-Suite members composing the total sample are mainly advisory board members (352), members of boards of directors (189), senior management members (176), and other board or committee members (35).

4It is, however, important to note that "serial correlation tests apply to macro panels with long time series (over 20–30 years). It is not a problem in micro panels (with very few years)" (Torres-Reyna, 2007). However, to avoid autocorrelation and heteroscedasticity affecting our results, we ran the models using the Stata commands and options that generate robust standard error estimates for linear panel data. Specifically, we used the *xtregar* command, which detects both heteroscedasticity and first-order autocorrelation.

5The ES proxy is the ratio of the standard deviation of the earnings to the standard deviation of the cash flows. In case of earnings smoothness, the firms aim to provide stable earnings. In this case, the numerator of the ratio tends to be low, while the denominator is more volatile and higher. We derive that the lower that the ratio is, the higher that the earnings smoothness activities are. Instead, in the absence of earnings smoothness, the cash flows and earnings undergo similar movements.

6Stata automatically conducted the Durbin-Wu-Hausman test (augmented regression test) for endogeneity after performing the 2SLS regression model. Before performing the endogeneity test on the INV variable, we tested whether the instruments were valid using the overidentification test. We failed to reject the null hypothesis. As a result, we are somewhat confident in the set of instruments used (INVSquared OCF GROWTH GEARING ROA E TOBINSQ FIRMAGE FAM SIZE BLOCK).

discretionary accruals. The extreme point appeared when there were almost three family members involved in C-suite positions (ep = 2.7). However, when we proxied earnings management using the earnings smoothness ratio (ES), the relationship with family involvement did not appear curvilinear (Graph 2), and neither the linear nor the squared terms of INV were significantly associated with ES. Nonetheless, it is important to note that the signs of the coefficients were both in the opposite direction, and the extreme point was 1.4. Taken together, these results confirmed that, in terms of discretionary accruals (inverted U-shaped relationship) and of the direction of the earnings smoothing

ratio, there was a non-linear relationship between family involvement and earnings management. At mid-levels of family involvement, firms were more likely to resort to earnings management practices, whereas at both lower and higher levels of family involvement, firms were more likely to use earnings management. Hence, at mid-levels of family involvement, family members in C-suite roles are in the position to act more readily without having to explain their actions; in other words, it is easier for family members to acquiesce to earnings management that contemporaneously advantages them. Instead, higher levels of family involvement can lead to stronger conflicts among family members (Kellermanns & Eddleston, 2004). Therefore, the more family members that are involved, the higher that the reciprocal control of each member is, and consequently, the less room for earnings management that there is. The results confirmed the prior literature on family firms: at a relatively high level of family involvement, reputational concerns and socioemotional wealth preservation purposes prevail (Gomez-Mejia et al., 2011), leading to an alignment of interests. In contrast, lower levels of family involvement yield to the entrenchment effect, leading managers to behave like despotic owners, using earnings management as a device to pursue their personal interests (Le Breton-Miller et al., 2011).

To verify Hypothesis 2a and Hypothesis 3a in Model 2 (Table 5), we introduced corporate governance variables (i.e., SPEXP, HIGHMedAGE, and HIGHMedCOS). We rejected both of our predictions that the more expert and experienced that the C-suite members were, the lower that the earnings management was. Indeed, none of the three variables (SPEXP, HIGHMedAGE, and HIGHMedCOS) was significantly associated with earnings smoothing (ES). Instead, the discretionary accruals (DA_{Jones}) measure was only weakly significantly associated with HIGHMedCOS ($p < 0.10$). In contrast to our expectations, however, this association was positive. This result partially corroborates that part of the literature arguing that busier directors are less able to detect discretionary accruals.

Finally, in Model 3, we tested whether the involvement (INV) of family members in C-suite roles moderates the relationship between expertise (SPEXP) (Hypothesis 2b) and experience (HIGHMedAGE and HIGHMedCos) (Hypothesis 3b), on the one hand, and earnings management (DA_{Jones} and ES), on the other hand. We included the interaction terms (i.e., SPEXPxINV, HIGHMedAGExINV, and HIGHMedCOSxINV), and this insertion confirmed our first findings relating to Hypothesis 1, Hypothesis 2a, and Hypothesis 3a. With regard to Hypothesis 2b, the results suggest that the number of family members involved in C-suite roles (INV) initiates the constraining role that expertise exercises over the use of discretionary accruals ($p < 0.01$). The result is consistent with the socioemotional and upper echelons theories because family members and expert C-suite members are interested in firms' long-term performance and protecting their reputations as expert managers. Additionally, this result is consistent with the reduced type I agency conflict prediction because the interests of involved family members are aligned with the overall firm interests of value creation and quality financial reporting. However, with regard to income smoothing (ES), the hypothesis was not confirmed. The diverse results for discretionary accruals and earnings smoothness indicate that diverse earnings management devices could be strategically and distinctly employed by the dominant owner − the family, in our study. With regard to Hypothesis 3b, the involvement of family members (INV) contributed to the constriction of both discretionary accruals and earnings smoothness, strengthening the experience measured by the age of the C-suite members with significance at the 10 and 1 percent levels. One explanation for these findings could be that the older that the members involved in C-suite roles are, the lower that the interest is in discretionary accruals and in income smoothing policies. Finally, the family members' involvement term (INV) interacting with the numbers of committees and boards of C-suite positions (HIGHMedCOS) rendered the relationship with earnings management significant at the 1 percent level, considering the cases of both discretionary accruals (DA_{Jones}) and income smoothness (ES). The increased earnings management fully supports Hypothesis 3b and is in agreement with the stream of literature asserting that overcommitted members cannot soundly perform their monitoring activities. The involvement of family members could favor earnings management actions that are less prone to being controlled by other members because they are overconfident, over-trustful or reverential toward their activities.

Overall, the models explain approximately 19 percent of the variation in earnings management. While this level of explained variance might seem relatively low, it is not uncommon for research on earnings management; in several studies of the relationship between family firms and earnings management the R-squared values were bound to be less than 20 percent (e.g., Achleitner et al., 2014; Cheng & Warfield, 2005; Jiraporn & DaDadalt, 2009; Sánchez-Ballesta & García-Meca, 2007; Tong, 2008).

5. Robustness analysis

Table 5 shows the findings of the estimated regressions on the three models with the main dependent (DA_{Jones} and ES) and explanatory independent variables (INV, INVSquared, SPEXP, HIGHMedAGE and HIGHMedCOS). However, as anticipated in Section 3.2.1, we proxied for earnings management using alternative measures of discretionary accruals, measured by the means of the modified Jones model (Dechow et al., 1995) and the model proposed by Dechow and Dichev (2002). Overall, the results were generally consistent across models.

With respect to Hypothesis 1, we compared the within R-squared of Model 2, including both the linear variable and its square term (i.e., INV, and INVSquared), and the same in Model 2, excluding the square term of family involvement (INVSquared). When considered as dependent variable discretionary accruals (DA_{Jones}), the result suggested that Model 2's goodness of fit was better when the square term was included; that is, the non-linear model better explained the relationship between earnings management and involvement than the linear model did. However, when considered as dependent variable, the earnings smoothness (ES) results did not fully support the use of a curvilinear model; indeed, the within R-square, including the square term of involvement (INVSquared), was less than that of the same model when the square term was excluded, indicating that diverse earnings management purposes can shape family behavior in terms of accounting choices in a variety of ways.

As a robustness check, we also performed the analysis using the Newey-West standard errors for coefficients computed by OLS estimates with lag (0), producing results consistent with the Huber-White sandwich robust variance estimates. Notably, the findings were consistent across the models.

Reflecting on endogeneity issues that have emerged in the prior literature with both corporate governance and earnings management variables (Dhaliwal, Naiker, & Navissi, 2010; Villalonga & Amit, 2006), we assessed whether our results were affected by endogeneity. We found moderate evidence that INV was exogenous because the regression-based test accepted the null hypothesis at the 0.11 significance level; therefore, endogeneity did not bias our results.

6. Discussion and conclusions

6.1. Discussion of results and theoretical contributions

This study suggests that the effect of family involvement on earnings management is a complex issue that cannot easily be determined. Most importantly, this relationship cannot be studied in isolation without considering other fundamental corporate governance variables, such as C-suite members' expertise and experience. Overall, we uncover an inverted U-shaped relationship between family involvement and discretionary accruals. When roughly three members of the family are involved in C-suite roles, the absolute discretionary accruals are the

greatest. However, the involvement of family members does not result in a non-linear association with earnings smoothness. Family firms are less sensitive to earnings smoothness incentives, such as the risk of executives' turnover or covenant violations. Indeed, family firms tend to establish long-term and personal relationships with their executives and lenders (Prencipe, Markarian, & Pozza, 2008). Thus, Hypothesis 1 was partially accepted; it was supported when earnings management was measured by discretionary accruals, but it was rejected in the case of earnings smoothness. These findings agree with those of studies of the effects of diverse levels of family involvement on several strategic choices by firms (e.g., Sciascia et al., 2012; Mafrolla & D'Amico, 2016). In the present study, family involvement has a varying effect on earnings management (Sánchez-Ballesta & García-Meca, 2007; Razzaque et al., 2016). Additionally, the results are consistent with socioemotional wealth considerations because higher family involvement increases family members' concerns about possibly losing their reputations and thus increases their desire to protect their names from accounting scandals (Martínez-Ferrero et al., 2016). Furthermore, as aforesaid, the higher that the involvement of family members is, the greater that the likelihood is that family members mutually monitor aggressive discretionary accrual behaviors. In contrast, we failed to find significant relationships of the C-suite members' expertise and experience variables with earnings management (Hypothesis 2a and Hypothesis 2b). However, the findings related to both Hypothesis 2b and Hypothesis 3b support the notion that the involvement of family members in C-suite roles moderates the effects between earnings management and the expertise and experience variables. Family involvement sets in motion the constraining role that expertise plays in detecting discretionary accruals, but it does not seem to affect the firm's incentive to adopt earnings smoothing practices (Hypothesis 2b). Additionally, family firms' earnings management preferences might be curbed by the interactions between family members and older persons in C-suite roles. Instead, the busier that the C-suite persons are and the higher that the family involvement is, the more likely that the firms are to revert to earnings management practices in terms of both discretionary accruals and earnings smoothness (Hypothesis 3b).

Overall, by combining the predictions from socioemotional wealth and upper echelons theory, we find that the characteristics of the C-suite members and their motivations in family firms are of prominent relevance, generating a variety of family firms with accounting behaviors that change accordingly. The present work makes a threefold contribution. First, it adds to the family business literature by investigating accounting behaviors. We answer Basco's (2013) call for research on the likely existence of non-linear relationships between family demographic variables and firm behavior in terms of accounting choices. Second, our insights add to the corporate governance literature by exploring how expertise and experience contribute to the limiting of earnings management practices and how a family's involvement moderates its relationships. Third, the study answers Steijvers and Niskanen's (2014: 355) suggestion to use an upper echelons theoretical perspective in family business studies to explore the effects of several managerial characteristics, as well as the call for research into the roles that individual managers play in financial reporting choices (Bamber et al., 2010).

6.2. Practical implications

This study has several practical implications. The findings indicate that the type of dominant owner affects a firm's accounting choices: within the same class of dominant owner (the family), different earnings management devices might be strategically employed to convey the preferred financial reporting. Regulators could require disclosure or evidence when the financial reporting quality is reduced due to the owners' prevailing interests. A recommendation could be to introduce limitations (or at least require explanations) on the accumulation of appointments on boards and committees when there is also high family involvement to prevent the top management team's independence and its skeptical judgments about the firm's financial reporting processes from being undermined. Additionally, considering the relevance of family businesses, investors and lenders in general could pay greater attention to financial reporting when any type of conflict of interest arises. External creditors and lenders could grant more advantageous contractual conditions and a lower cost of debt to family firms having strong family involvement and a higher presence of expert or older C-suite members because of their higher-quality financial reporting. Furthermore, this study has implications for family firms, especially when they must shape their corporate governance systems. Indeed, we show – among other findings – that the more "expert" C-suite members that there are, the lower that the earnings management is. Although a "one-size-fits-all" system does not exist, we suggest that certain corporate governance characteristics mitigate opportunistic behaviors. Thus, the results could be beneficial for the characterization of family firms' succession plans, in which more expert and experienced C-suite members might be required. Ultimately, there are implications for external auditing practitioners recommending more skeptical and *ad hoc* audit activities, in which the financial reporting quality might, for instance, be hindered by "busy" directors' and managers' lack of independence.

6.3. Limitations and roadmap for future research

This research is not free from limitations; however, they might serve as a starting point for future studies. First, the sample included only Italian public and private firms adopting IAS/IFRS. Future research might include firms from other countries that use various accounting standards. Despite the global accounting harmonization process (Hail, Leuz, & Wysocki, 2010), accounting divergences have appeared to persist (Kvaal & Nobes, 2012), and different cultures can influence family firms' strategic accounting choices in a variety of manners (Chapman et al., 2009). Future studies in this direction could likely resolve the mixed results and could shed light on the differences in accounting choices within the variety of family firm groups (Gernon & Wallace, 1995). Second, we employed a limited number of gauges of C-suite members' expertise and experience. Although the level of education, age, and number of directorships are consolidated proxies for expertise and experience (e.g., Ahrens et al., 2015; Hambrick & Mason, 1984), one path forward is to introduce more fine-tuned measurements that consider the experience accrued in the industry or the expertise developed in the financial reporting process. Additionally, interpretations should be made with care considering the relatively small R-squared values. Finally, future research could determine the further moderating impacts of the relationships of expertise and experience with earnings management and could verify whether the legal environment, financial markets, investor protection, accounting culture, and institutional settings have impacts on these relationships (Gray, 1988; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000). Similar to recent research (Boling et al., 2016), future studies could investigate whether there are non-linear relationships of expertise, experience, or other management characteristics with earnings management in family firms.

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