The impact of corporate social responsibility performance on earnings management: family versus non-family firms

ABSTRACT

The study analyses the impact of corporate social responsibility performance on earnings management in family firms as compared with non-family firms. We analysed 650 Spanish firms, listed and unlisted, in the period 2011-2016. The result shows a higher quality of financial information in family firms, a relationship which is reinforced by good governance factors, including the participation of women in management. The factors analysed are supported by agency and institutional theories. The study contributes to reducing the gap in the literature on the quality of financial information associated with family firms vs. non family firms.

Keywords: Corporate Social Responsibility; Family firms; Earnings management; Spain.

1. INTRODUCTION

The quality of financial information has been the subject of much discussion in recent years, either through the use of earnings manipulation by managers (García-Lara, García-Osma, Mora & Scapin, 2017) or by necessary outside disclosures (Gavana, Gottardo & Moisello, 2017; Gomez-Mejía, Cruz, & Imperator, 2014). The important role played by financial information in its users' decisions justifies the continued concern around this research topic, as this information is useful for the normal functioning of markets, for the development of countries and for society in general (Callao-Gáston, Casca-Galán & Jarne-Jarne, 2008; Liu, Valenti & Chen, 2016). However, the quality of financial information, taken to be reports on financial performance that are relevant and can be useful in assisting users in decision-making, may depend on the type of firm or the business context (Dechow, Ge & Schrand, 2010). Thus, research shows that family firms, defined as those firms where there is "significant family involvement or support" (Debicki, Matherne III, Kellermanns, & Chrisman, 2009, p. 152), differ from their non-family counterparts regarding the quality of accounting information, even if these differences are not conclusive.

On one hand, research shows that family firms have a greater propensity for quality accounting information (Cascino, Pugliese, Mussolino & Sansone, 2010; Khan, Chand & Patel, 2013; Landry, Deslandes & Fortin, 2013; Prencipe, Bar-Yosef, Mazzola & Pozza, 2011). A family role in the firm seems to mitigate conflicts of interest between shareholders and managers and, consequently, asymmetries that may undermine the process of financial reporting (Jiraporn & DaDalt, 2009; Prencipe et al., 2011; Wang, 2006). On the other hand, the fact that the family is in the majority and its dominance over the governance bodies may lead majority shareholders to increase their benefits to the detriment of minority interests, which may in turn lead to lower-quality accounting information (Chi, Hung, Cheng, & Lieu, 2015; Razzaque, Ali, & Mather, 2016; Torchia & Calabró, 2016).

However, research not only suggests that the status of a family firm can influence the quality of its financial information (Cascina et al., 2010; Khan et al., 2013; Landenci et al., 2013; Prencipe et al., 2011; Prencipe, Markarian & Pozza, 2008), but also that this can be influenced by corporate governance. This is understood as the system by which organisations are directed, monitored and incentivised, involving relationships between owners, the board of directors, management and supervisory bodies (Mazzioni, Pugol, Moura and Klann, 2016, p. 5). Research on the effects of good practices in governance of family firms is scarce (Ferramosca & Allegrini, 2018), but the concentrated position of families and their dominance over governance bodies may lead to more informal governance structures which may lead on one hand to a predominance of family interests or on the other hand, effective supervision of managers in relation to discretionary accounting (Aguilera, & Crespi-Cladera, 2012; Jaggi, Leung & Gul, 2009). In addition, the lower level of independence of management bodies in family-owned firms compared to the owners of the capital generates uncertainties as to the effectiveness of good governance practices in such discretionary accounting by managers. These arguments, however, do not consider that family-owned enterprises, as a result of their long-term perspective, are more sensitive to image problems and the need to convey an environment of trust and transparency in outside financial reporting. This concern for reputation may leverage family firms to follow good governance practices (Liu et al., 2016).

Given the inconsistencies of the results, the aim of this study is to improve knowledge about the influence of the family firm status on the quality of financial information, as well as to ascertain the effect that measures of corporate governance have on this. There are two important reasons for filling these two research gaps. First, because family firms are very significantly represented at the country level, ranging from 75% to 95% of firms in Western Europe (Lank, 1995; Prencipe, Bar-Yosef & Dekker, 2014), and especially in Spain, where they account for about 90% of capital market firms and 60% of gross value added (Instituto de la Empresa Familiar, 2015). The second reason is related to the fact that, since the crisis of 2008, corporate governance has been the subject of new concerns, as evidenced in codes of conduct, as a way to convey to markets a climate of trust and transparency in financial reporting (OECD, 2016). To fill these gaps, our study follows the assumptions of agency theory (Jensen & Meckling, 1976) and institutional theory (DiMaggio & Powell, 1983) to investigate both the quality of financial information in family versus non-family firms, and how governance mechanisms adopted by these firms influence the quality of the information. Our theoretical model is empirically tested with a sample of 650 Spanish firms. The results lead us to conclude that Spanish family firms are likely to present better quality financial information than non-family, and that family governance mechanisms in these firms are less demanding in general terms. However, the adoption of good governance practices seem to present effective mechanisms by which family firms restrict problems of discretionary accounting. These mechanisms are associated with the presence of the family and the greater representation of women in the administrative bodies.

This study thus contributes to two lines of research. The first, related to the quality of financial information, shows that, in the context of concentrated ownership, family firms are more likely than non-family to restrict earnings manipulation. The second, concerning corporate governance, documents that good practices in the mechanisms applied by family firms has an beneficial effect on the quality of financial reporting, and the lower independence of governance bodies in these firms does not appear to hamper this quality. Our findings can also contribute to increased confidence for users of financial information when considering how governance bodies affect accounting policies in both family and non-family firms, as well as for firms which are considering the effectiveness of resources applied in the field of governance, namely in the separation of CEO roles, managerial size and gender diversity.

The article is structured as follows: after this introduction, we address the theoretical foundations for the quality of accounting information and for corporate governance and define the research hypotheses. The third section presents the research methods and describes the sample, the variables and the model. The fourth section presents the results and a robustness analysis. Finally, we discuss the results, present our conclusions, and make suggestions for future work.

2. THEORETICAL GROUNDING AND DEFINITION OF HYPOTHESES

2.1. Quality of financial information and family firms

Jensen and Meckling (1976) laid the foundations of agency theory, which is strictly focused on problems rooted in the separation of ownership and control. This may lead to conflicts of interest between owners and managers, via the possibility that the latter may act in their own interest to the detriment of shareholders (type I agency problem) and between majority and minority owners, since the former can derive benefits at the expense of other interested parties (type II agency problem). Regarding the type I agency problem, there is a number of characteristics of family firms that increase the likelihood that managers will act in the best interests of shareholders, as families tend to hold a

concentrated position in their firms and thus have a strong incentive to control their managers (Demsetz & Lehn, 1985). This reduces information asymmetries between owners and managers and therefore also reduces the manipulation of financial reports (Tong, 2007). However, majority family ownership and its domination over the composition of the board of directors can bring private benefits to the family to the detriment of the interests of minority owners, generating the type II agency problem (Paiva, Lourenço & Branco, 2016; Salvato & Moores, 2010).

The literature based on listed firms suggests that type I agency problems are less acute in family firms and result in better quality financial reporting practices in samples from firms in countries such as the United States, Canada, England, and Italy (Ali, Chen & Radhakrishnan, 2007; Cascino et al., 2010, Jiraporn & DaDalt, 2009; Landry et al., 2013; Prencipe et al., 2011; Wang, 2006); however, some studies conducted in emerging economies such as Thailand and China have observed contrasting results, suggesting that family firms face more serious type II agency problems than non-family firms. Majority family control combined with potentially fragile corporate governance structures place founding families in an extraordinarily powerful position for extracting private gains at the expense of other minority owners (Ding, Qu & Zhuang, 2011; Ding, Zhang & Zhang, 2007). These differences in the research seem to indicate that the interpretation of the quality of financial information in family firms may depend on the country and other characteristics of family firms, according to more recent studies (Jara & López, 2014; Ferramosca & Allegrini, 2018; Gavana et al., 2017).

Institutional theory (DiMaggio & Powell, 1983) offers a complementary view of agency theory by establishing an understanding of the functioning of the organisation placed in its external environment. The main idea is that organisations adapt to institutional norms and rules to gain stability and increase their prospects for survival. Based on the list of institutional mechanisms described by DiMaggio and Powell (1983), namely, coercive (coercion), mimetic (imitation) and normative (regulatory), it interprets decision-making as being influenced by institutions through adoption processes, whereby institutional norms and rules impact the positions, policies, programmes and procedures of organisations. In institutional theory, managers are agents with authority delegated by the organisations' owners, but their intentions are influenced by legitimacy, routines, scripts, and other cognitive phenomena. As the family generally owns a significant part of the family firm, it has a significant influence in defining restrictions on the firm's behaviour, as well as in seeking new opportunities, thus protecting the interests of the family (Gavana et al., 2017; Sirmon & Hitt, 2003).

Recent studies based on Italian firms with concentrated ownership have shown that quality financial information occurs at the highest levels of family participation, as at lower levels the family has no power to act opportunistically. This quality is reinforced by the moderating role of the family when senior management has experience and knowledge such that interests and benefits are aligned and lead to manager performance benefitting the organisation (Ferramosca & Allegrini, 2018). However, Gavana et al. (2017) found that higher levels of earnings manipulation in Italian family-owned firms generate greater disclosure of information in financial statements. This acts as a way of conveying ethical behaviour to the market in order to maintain stakeholder confidence but diverts attention from lower-quality financial results, showing family firms' concern over image and reputation.

Similarly to other studies carried out on firms in Continental Europe (Cascino et al., 2010; Prencipe et al., 2011; Torchia & Calabrò, 2016), Spanish firms, both family and non-family, have a concentrated ownership structure (Claessens & Tzioumis, 2006) and therefore, the type I agency problem may appear to be attenuated in family firms given the lower agency costs between shareholders and managers. On the other hand, this

ownership concentration allows the family to have power that leads to the alignment of interests in the long run, in which different parties involved have greater confidence due to the family image and reputation, which may contribute to mitigating type II agency problems (Ferramosca & Allegrini, 2018; Torchia & Calabrò, 2016) and thus enabling a higher quality of accounting information. Considering all the above arguments, we believe that family firm status boosts the quality of financial information, and hence, we formally propose the following hypothesis:

> **H1:** Family firm status is positively associated with the quality of financial information compared to non-family firms.

2.2. Quality of financial information and company governance

Studies on listed firms report that dispersed ownership structure and other government measures positively influence the quality of financial information (Alves, 2011, 2014; Callao-Gastón et al., 2008). In the context of family firms, the closer proximity of the family to the firm can improve this quality, namely by including family members on the board of directors (Ferramosca & Allegrini, 2018; Prencipe et al., 2011) and by the closer association of the firm with the family name as in the case of incorporated or inherited firms compared to acquired firms (Gómez-Mejía et al., 2014, Pazzaglia, Mengoli & Sapienza, 2013; Stockmans, Lybaert & Voordeckers, 2013). However, the quality of financial information in family firms can be affected by the presence of potentially fragile governance mechanisms at the level of independence of the board, when agency conflicts arise between majority and minority shareholders (Stockmans et al., 2013).

Based on the premises of agency theory, the literature has posited that the concentration of family ownership may lead to lower governance requirements because conflicts of interests between owners and administrators are attenuated (Callao-Gastón et al., 2007), leading to less formal structures and lesser compliance with codes of conduct (Aguilera et al., 2012). Maintaining family control may mean that governance structures assist the family identity and the ability to exert family influence, which may be reflected in the quality of financial information (Gomez-Mejía et al., 2007).

Family firms, however, are more sensitive to problems of image and business reputation, such that, according to the assumptions of institutional theory, they will be pressured to follow certain rules in firms with better governance practices in the context of capital dispersion (DiMaggio et al., 1983). Once the family has control over the governing bodies, the image and reputation of the firm can be damaged by procedures that may not be considered the most transparent (González & García-Meca, 2014), and so the following research hypothesis is formulated:

> **H2**: Good practices in corporate governance positively influence the quality of financial information in family firms.

In corporate governance, the board of directors is the ultimate decision-making body and is the liaison for guiding and supervising management's relationship with stakeholders, including the financial reporting process (CNMV, 2015; Cohen, Krishnamoorthy & Wright, 2002; Torchia & Calabrò, 2016). Several studies have focused on the characteristics of the board of directors as it is the key mechanism for aligning interests between shareholders and managers and contributes to reducing information asymmetries and improving the quality of financial information (Callao-Gáston et al., 2007; Mayoral & Sánchez-Segura, 2008; Torchia & Calabrò, 2016). To complement these studies, remembering that family governance is different from non-family governance (Aguilera et al., 2012; Jaggi et al., 2009; Liu et al., 2016), our purpose is to

analyse to what extent accounting information is influenced by factors associated with company governance, such as the non-duality of the CEO, the size of the board of directors and the representation of women.

CEO non-duality consists of separating the CEO's responsibility for strategic functions from those of the board of directors, which is considered good practice in governance (Callao-Gáston et al., 2008). The fact that the same person is able to exercise the functions of CEO and president leads to a concentration of power and thus the level of supervision of the administration is liable to be reduced, due to the accumulation of duties and significant influence on the administrative bodies, which impedes the effectiveness of control mechanisms in alignment of interests (Torchia & Calabrò, 2016). In this scenario, effective supervision by the board may be compromised in view of the CEO's ability to dominate and restrict information from the board, and single leadership may create constraints on the remaining board members' ability to raise difficult or critical issues or make correct judgments (Liu et al., 2016). Some studies have argued that duality may contribute to lower quality of financial information (Dunn, 2004; Monterrey-Mayoral & Sánchez-Segura, 2008), whether related to earnings management (Davidson, Goodwin-Stewart & Kent, 2004) or in information dissemination indexes (Liu et al., 2016; Torchia & Calabrò, 2016). Hence, we propose:

> **H2a:** The existence of non-duality between the president and CEO of the firm is positively associated with the quality of financial information in family firms.

Also, the size of the board can cause constraints on financial reporting (Monterrey-Mayoral & Sánchez-Segura, 2008), since a smaller size will not allow adequate management supervision and a larger size may create inhibitions regarding strategic decisions (Caravaca-Sánchez, Sánchez-Ballesta & García-Meca, 2012). The literature has considered that the smaller size may lead to better quality financial information, given the smaller dispersion of responsibilities regarding management control (Torchia & Calabrò, 2016). However, contrary arguments consider that the size of the board will be directly related to the size of the firm, since a larger size may generate greater complexity, leading to the requirement of a larger board, with its members having some specialisation with a view to facilitating supervisory mechanisms.

Based on these arguments, Monterrey-Mayoral and Sánchez-Segura (2008) found it necessary to consider board size and firm size, obtaining a positive relation with the quality of the financial information, and thus in this research we also work from this understanding. In accordance with Monterrey-Mayoral and Sánchez-Segura's (2008) findings, we state a new hypothesis as follows:

> **H2b:** The size of the board of directors is positively associated with the quality of financial information in family firms.

Gender complementarity is one of the most recent concerns of the Code of Conduct in Spain after the change in 2015, which is mandatory for listed firms. Previous studies on the link between the quality of financial information and gender influence on the board are still controversial in the different dimensions analysed such as gender complementarity (Arun, Almahrog & Aribi, 2015; Damak, 2018) and professional (Chen & Gavious, 2016) and sociological competences (Kyaw, Olgbode & Petracci, 2015). Thus, previous literature found that women are more professionally ethical and are less likely to act immorally, but are more sensitive to the risk of losing reputation and of lawsuits (Gull, Nekhili, Nagati, & Chtioui, 2018). On the basis of these arguments, gender complementarity would lead to better quality financial reporting in firms which have

greater representation of women on the board of directors (Arun et al., 2015; Damak, 2018; Gull et al., 2018).

However, another approach has considered that complementarity loses its meaning when women's professional skills are taken into account and that this relationship is activated when women have more business experience and better financial skills (Chen et al., 2006; Gull et al., 2018). In addition, the sociological aspects related to the theme of gender diversity may go towards explaining the divergent results obtained, as lower levels of earnings manipulation were found in firms in countries where concern with this is highest (Kyaw et al., 2015). Thus, representation of women on the board of directors may be associated with firms which have better non-discrimination procedures and better governance practices, aspects which seem to have a potential influence on internal control systems and consequently on the quality of financial information (Adams & Ferreira, 2009; Caravaca-Sánchez et al., 2012; García-Lara et al., 2017; Pucheta-Martínez, Bel-Oms & Olcina-Sempere, 2018). Thus, the following hypothesis can be stated:

> **H2c:** The proportion of women on the board of directors is positively associated with quality of financial information in family firms.

In the field of external monitoring, previous research has found that larger auditors (Big 4 – KPMG, EY, Pwc, and Deloitte) are more likely to restrict earnings manipulation in listed firms as a way of maintaining their independence (Jara & López, 2007; Kim, Chung & Firt, 2003). However, for unlisted firms, it is considered that larger auditors lower the risk of litigation and loss of reputation, and are not associated with the higher audit quality in these firms. Although the results of previous research are not yet conclusive, empirical evidence seems to show that earnings manipulation in unlisted firms happens in clients of both Big 4 companies and non-Big 4 clients (Cano, 2007) and that the higher audit quality carried out by the Big 4 will be more likely to occur when litigation risk increases, which is associated with publicly traded companies and with dispersed shareholder ownership (Tendeloo and Vanstraelen, 2008). Thus it is expected that the risk of litigation will be lower in family firms, given the concentration of ownership, and therefore, in line with the results of previous studies, we do not associate higher quality financial information with larger audit firms (Aguilera et al., 2012), leading to the formulation of the following research sub-hypothesis:

> **H2d:** The size of the audit firm is negatively associated with the quality of financial information in family firms.

The commitment of families with their wealth invested in the firm leads to relationships based on trust being established, bonds of loyalty being created among employees and a collective culture based on family values which allows them to obtain competitive advantages in identifying and satisfying the needs of their clients (Samara & Arenas, 2017; Zahara et al., 2004). Family firms are more sensitive to aspects of corporate reputation, which is considered a critical factor for obtaining competitive advantages, and constitutes an intangible asset associated with value creation which is expected to yield better returns (Gómez-Mejía et al., 2014; Villalonga & Amit, 2010). Corporate reputation is influenced by the information provided by firms to the outside, the effect of which may harm the firm's image if the information is considered unethical, driving away the interest of investors and backers and increasing the vigilance of authorities (Brammer & Pavelin, 2004; Yang, 2010). However, if the information is considered to be of higher quality, this reduces asymmetries with stakeholders, increasing interested parties' confidence levels and bringing potential beneficial effects for the firm and markets (García-Sánchez & Martínez-Ferrero, 2016). Therefore, considering the long-term perspective of family firms and the need for reputation as a way of transmitting wealth to future generations (Chen,

Chen & Cheng, 2008), and bearing in mind that family and non-family firms have different governance practices (Aguilera et al., 2012) with family taking a role in decision-making bodies, we propose the following research hypothesis:

> **H3:** The relationship between characteristics of corporate governance and the quality of financial information is stronger in family firms than in non-family firms.

3. METHODS

3.1 Population and sample

The population for our study was selected from the SABI (Sistema de Análise de Balanços Ibéricos) database, which has been used by previous studies (e.g., Cruz-Gomez-Mejía & Becerra, 2010), limited to firms with a volume of business of more than €100,000,000 in 2015. Of the firms selected, we eliminated those related to the financial and insurance sector, as is common in this type of studies (Cascino et al., 2010; González et al., 2014; Pazzaglia et al., 2013), as well as firms that do not have values for all indicators in the model. A total of 3,887 observations were obtained (9% of them corresponding to listed firms), in the 6-year period of analysis, from 2011 to 2016.

Table 1 shows the main characteristics of the sample, which is made up of large firms, similar to previous studies on listed and unlisted firms (Arnedo, Lizarraga & Sánchez, 2007). The weight of family-owned firms in the sample is 37%, which is lower than the most recent data published by the Instituto de la Empresa Familiar (2015), and which may be associated with the larger size of the firms in the sample, consistent with previous studies (39.15% reported by Claessens & Tzioumis, 2006).

Table 1 – Observations by activity sector

Observations by activity sector	Total sample				Listed	Unlisted	Family	Non-family
	No.	%	Average volume of business (10^6 €)	Average age (in years)	No.	No.	No.	No.
Agriculture and food (SIC 1)	487	13%	1.248	32.5	48	439	221	266
Industry (SIC 2 and 3)	938	24%	1.232	32.7	102	836	272	666
Construction and commerce (SIC 4 and 5)	1367	35%	910	30.2	102	1265	517	850
Services (SIC 6,7 and 8)	1095	28%	820	24.9	96	999	417	678
Total	**3887**	**100%**	**1.005**	**29.6**	**348**	**3539**	**1427**	**2460**
%					**9%**	**91%**	**37%**	**63%**

4.2 Variables

Dependent variable

We used the discretionary accruals metric, laid out in the models of Jones (1991) and Kothari (2005) as a measure of earnings management, a notion introduced by Schipper (1989) and later developed by García-Osma, Albornoz-Noguer and Gisbert-Clemente (2005). This is a question of any deliberate practice by managers with opportunistic and/or informative purposes in presenting the level of desired results; thus, by an inverse process we obtain an approximation of the quality of accounting information, as in other

studies (Stockmans et al., 2013). We chose the discretionary accruals method as it is more consistent with the accruals method, on which managers can exercise discretionary accounting (Pereira & Alves, 2017). The aim of the models used is to separate the expected component of accounting results that have not yet resulted in cash flow, from the unexpected component, which is interpreted as earnings manipulation (Dechow et al., 1995; Jara et al., 2007).

Independent variables

Family firm (FAMILY). Given the absence of prior classification of family firms in Spain, we classified family firms based on the information available in the SABI database. We adopted the procedure defined by Rojo-Ramírez, Diéguez-Soto & López-Delgado (2011), which was later corroborated as effective by several studies (Diéguez-Soto & López-Delgado, 2018; López-Delgado & Diéguez-Soto, 2015). This procedure establishes two requirements: (1) a concentration capital of more than 50% belonging to a family, natural person or legal entity and (2) the same surname among members of the board of directors or majority shareholders. Thus, the variable FAMILY is a binary variable that assumes values of 1 or 0, according to whether the firm is classified as family or not (Ali et al., 2007, Prencipe et al., 2011; Sue et al., 2013; Vieira, 2016).

Non-duality of the CEO (N-DUAL). This variable identifies whether the CEO's functions are separate from those of the chairman of the board of directors. Thus, if these functions are performed by different people, the N-DUAL variable assumes a value of 1, and 0 otherwise (Monterrey-Mayoral & Sánchez-Segura, 2008).

Size of the board (SIZE-B). This variable is calculated by dividing the number of managers by the logarithm of the total assets (Andersen & Reeb, 2003). This procedure is similar to previous studies (Monterrey-Mayoral & Sánchez-Segura, 2008) and allows the size of the firm to be considered along with the number of board members.

Gender. This corresponds to the representation of women on the board of directors, the variable being measured by dividing the number of women by the total number of members of this body (Gull et al., 2018; Kyaw et al., 2018).

Audit quality (AUD). This quality is analysed via the size of the audit firm (Big 4), with the variable being assigned a value of 1 if the firm is audited that year by a Big 4 company rather than other auditors, in which case the variable as a value of 0 (Jara & López, 2007).

Control variables

First, we control the size (SIZE), given the existence of a clear relation between this variable and earnings manipulation (Cascino et al., 2010; Sánchez-Ballesta & García-Meca, 2007). Larger firms are expected to be subject to greater regulation and control by the scrutiny of financial analysts and to have more advanced internal control systems which reduce the possibility of earnings manipulation practices (Paiva et al., 2018; Sánchez-Ballesta et al. 2007). We used the asset logarithm to measure this variable (Cascino et al., 2010; Paiva et al., 2018). Secondly, we control indebtedness (LEV), because the most indebted firms will be subject to rigorous analysis by creditors, and will therefore have, on one hand, a greater propensity to report higher quality financial information (Pazzaglia et al., 2013) and on the other hand are more likely to manipulate unexpected accounting results in order to avoid disclosure to backers (González et al., 2014; Paiva et al., 2018). Specifically, indebtedness is measured as the ratio of total liabilities to total assets. Thirdly, we control return on assets (ROA), measured as the quotient between operating result and total assets, because low levels of profitability

seem to be associated with higher levels of earnings manipulation (Ali et al., 2007; Kothari et al. 2005). This, however, may not be the case, either because the desired level of performance has already been achieved or because managers wish to convey improvements in performance (Leuz, Nanda & Wysocki, 2003). Fourth, we control cash flow from operations (CFO), establishing the relationship between this variable and total assets, because firms with higher levels of cash flow and greater variability in accounting results are more likely to carry out earnings manipulation (Paiva et al., 2018). The fifth control is on the age of firm (Age), by counting the number of years from its inception to the year of observation (Afzalur 2018; Hernández-Linares, Kellermanns & López-Fernández, 2018; Michelon et al., 2012). Older firms are associated with better performance and better governance practices (Ariff, Ibrahim & Othman, 2007). The sixth control is on the intensity of intangible assets (INTANG),via the relation between the value of intangible assets and total assets (Cascino et al., 2010; Moura et al., 2014). According to these authors, the fact that firms seek greater competitiveness leads to assets associated with greater information requirements being intensified, given the greater risk associated with this undertaking. In addition, we control the effect of whether the firm is listed or not (Listed), through a binary variable that has a value of 1 if the firm is listed and 0 otherwise. The greater demand on listed firms in their financial information leads to the belief that they present higher quality financial information (Arnedo et al., 2007). Finally, we control the effect of the 2008 crisis period in Europe on earnings manipulation, introducing a dummy variable (Crisis) for the period of 2011 and 2012 (Miralles-Quirós et al., 2017). Given the acute economic and financial crisis experienced in this period in the Iberian Peninsula, a positive relationship with discretionary accruals can be expected. In addition, and in line with previous research (Cascino et al., 2010; Paiva et al., 2018), we control the activity sector effect via binary variables (Industry) which have a value of 1 if the observation belongs to a given sector and 0 otherwise.

4.2.1 Measurement of the quality of financial information

We used discretionary accruals as an approximate measure of the quality of financial information (Cascino et al., 2010; Gavana et al., 2017; Mazzioni et al., 2015; Moura et. al., 2014; Silva & Costa, 2017) measured by Jones' modified model (Dechow et al., 1995) in its cross-section version, which is estimated by activity sector and year, and which continues to be used in recent studies (Arun et al., 2015; Ferramosca & Allegrini, 2018; García-Lara et al., 2017). The application of the model, presented in equation (1), consists of calculating total accruals via the difference between the result of the period before outstanding items and cash flow from operations for each firm year. Thus, in the absence of earnings manipulation the increases/decreases in net current assets will correspond to the part of the period result which has not yet originated cash flow:

$$TA = \alpha/AST_{t-1} + \beta(\Delta SALES_{i,t} / AST_{t-1} - \Delta CLIENTS_{i,t})/ AST_{t-1} + \mu INVEST_{i,t} / AST_{t-1} + \varepsilon_{i,t} \quad \textbf{(1)}$$

Where i = number of firms (1 to 650); t = year (2011 to 2016); TA = Total Accruals (Period results – cash flow from operations); ΔSALES - ΔCLIENTS = change in turnover (turnover t - turnover t-1), deducted from the change in clients (clients t - clients t-1); INVEST = tangible and intangible fixed assets; AST = assets from the previous year, and finally $\varepsilon_{i,t}$ = residues of firm i, in period t, which represent discretionary accruals.

In order to corroborate the results obtained, we also applied Jones' modified model adjusted for ROA (returns on assets) (Kothari et al., 2005), which is estimated by equation (2), by year and activity sector. This model corresponds to a modification put

forward by Kothari et al. (2005) to Jones' modified model (Dechow et al., 1995), based on the assumption that discretionary accruals are correlated with the firm's current and past performance. Reguera-Alvarado, Laffarga-Briones & Fuentes-Ruiz (2015) analysed the model and observed that it is effective in the context of Spanish firms, reducing the potential specification problems of Jones' modified model (Dechow et al. 1995) for firms with extreme financial performance.

$$TA = \alpha/AST_{t-1} + \beta\,(\Delta SALES_{i,t} / AST_{t-1} - \Delta CLIENTS_{i,t})/ AST_{t-1} + \mu\, INVEST_{i,t} / AST_{t-1} + wROA/AST_{t-1}\, \varepsilon\, i,t \quad \textbf{(2)}$$

To control variable heteroscedasticity problems, we proceeded to the determination of discretionary accruals, dividing all the values of the variables of equations (1) and (2) by the corresponding value of the previous year's assets.

4.3 Research model

In line with previous research (Cascino et al., 2010; Paiva et al., 2018; Prencipe et al., 2011), we tested the hypotheses defined by multiple linear regression (ordinary least squares – OLS), where the dependent variable is the discretionary accruals module as an inverse measure of the quality of financial information, and the independent variables are family, non-duality (N-DUAL), size of board of directors (SIZE-B), gender and size of the auditing firm (AUD). The variables of firm size (SIZE), indebtedness (LEV), profitability (ROA), cash flow (CFO), age, asset intangibility (INTANG), being listed, crisis years (Crisis) and sector (Industry) are control variables, as shown in the following model:

$$DA = \alpha + \beta 1\ FAMILY + \beta 2\ N\text{-}DUAL + \beta 3\ SIZE\text{-}B + \beta 4\ Gender + \beta 5\ AUD + \beta 6\ SIZE + \beta 7\ LEV + \beta 8\ ROA + \beta 9\ CFO + \beta 10\ Age + \beta 11\ INTANG + \beta 12\ Listed + \beta 13\ Crisis + \beta 14\ Industry + \varepsilon \quad \textbf{(4)}$$

The relationship between the dependent variable and the type of firm allows us to see if family firms present higher quality information compared to non-family firms (Hypothesis 1), while the association between the same dependent variable and the variables related to corporate governance aim to ascertain if good practices applied by firms lead to reinforcing that quality, in the first phase in family firms (Hypothesis 2) and in the second phase comparing family and non-family firms (Hypothesis 3).

5. RESULTS

5.1 Descriptive statistics

The quantitative variables used in the research are presented in Table 2, which shows that the measurements of dependent variable values, discretionary accruals determined by Jones' modified model (Dechow et al., 1995) – DA (J) and Jones' modified model for ROA (Kothari et al., 2015) – DA (K) are lower for family firms than non-family, and was statistically significant difference in the means. In the remaining variables, there are also

differences, and it should be noted that family firms are smaller, have higher average seniority and have lower levels of cash flow from operations.

Table 2 – Descriptive statistics for dependent and independent variables

	N	DA (J)	DA (K)	SIZE B	Gender	SIZE	IND	ROA	CFO	AGE	INTANG
Sample	**3887**										
Mean		0.069	0.065	6.648	0.137	5.413	29.024	5.350	6.788	29.591	0.082
Median		0.046	0.043	5	0.071	5.292	25.895	4.627	6.467	24	0.020
Standard deviation		0.073	0.068	4.842	0.182	0.649	22.898	8.859	19.907	20.932	0.146
Difference in means (t-stat.)											
- Family vs.	**1427**	-0.010***	-0.011***	-0.017	0.048***	-0.149***	-0.704	0.539*	-0.007	2.702***	-0.010**
- Non-family	**2460**										

***p < 0.01; **p < 0.05;* p < 0.1

The frequency of the qualitative variables is presented in Table 3, where, essentially, the distribution between family firms (36.7%) and non-family firms (63.3%) can be seen, as well as the greater expression of CEO duality at the level of family firms, which have a larger proportion of smaller auditors.

Table 3 – Frequency of qualitative variables

Variables	No (0)	%	Yes (1)	%	Total	Diff. in Means (t-stat.)
Family/ Non-family (FAMILY)	**2460**	**63.3**	**1427**	**36.7**	**3887**	
Dummy DA (K)	**2546**	**65.5**	**1341**	**34.5**	**3887**	
Non-Duality	**1759**	**45.3**	**2128**	**54.7**	**3887**	**-0.055*** **
Family	694	**48.6**	733	51.4	1427	
Non-family	1065	**43.3**	1395	56.7	2460	
Big 4 Auditors	**1056**	**27.2**	**2831**	**72.8**	**3887**	**-0.225*** **
Family	591	**41.4**	836	51.6	1427	
Non-family	465	**18.9**	1995	81.1	2460	
Crisis	**2591**	**66.7**	**1296**	**33.3**	**3887**	**-0.001**

***p < 0.01; **p < 0.05; * p < 0.1

Table 4 shows the correlation matrix which reveals that the degree of correlation between the independent variables is not high, since the coefficients obtained are lower than 0.6, under the recommended threshold of 0.65 (Tabachnick & Fidell, 2012).

Table 4 – Correlations

Var.	1 DA (J)	2 DA (K)	3 FAMILY	4 N-DUAL	5 SIZE-B	6 Gender	7 AUD	8 SIZE	9 LEV
1 DA (J)	1								
2 DA (K)	-	1							
3 FAMILY	-0.078***	-0.084***	1						
4 N-DUAL	-0.069***	-0.073***	-0.061***	1					
5 SIZE-B	-0.135***	-0.158***	0.019	0.291***	1				
6 Gender	-0.052***	-0.047***	0.124***	0.068***	0.069***	1			
7 AUD	0.007	0.002	-0.248***	0.069***	0.026	0.006	1		
8 SIZE	-0.212***	-0.189***	-0.118***	0.008	0.185***	-0.042**	0.286***	1	
9 LEV	0.027*	0.030*	-0.006	-0.005	0.042**	0.032**	0.071***	0.248***	1
10 ROA	0.012	0.048***	0.030*	0.046***	-0.043***	-0.021	-0.047***	-0.028*	-0.284***
11 CFO	0.021	0.052***	-0.060***	0.028*	-0.025	-0.020	0.046***	0.017	-0.202***
12 Age	-0.115***	-0.112***	0.062***	0.114***	0.220***	0.014	0.027*	0.193***	-0.023
13 INTANG	-0.076***	-0.087***	-0.031*	0.049***	0.151***	-0.033**	0.161***	0.216***	0.206***
14 Listed	-0.161***	-0.200***	-0.009	0.090***	0.355***	-0.008	0.168***	0.426***	0.100***
15 Crisis	0.031*	-0.005	-0.006	0.002	0.005	0.000	0.003	-0.010	0.052***

Var.	10 ROA	11 CFO	12 Age	13 INTANG	14 Listed	15 Crisis
10 ROA	1					
11 CFO	0.531***	1				
12 Age	-0.037**	-0.015	1			
13 INTANG	-0.021	0.039**	-0.072***	1		
14 Listed	-0.018	-0.013	0.286***	0.228***	1	
15 Crisis	-0.037**	-0.039**	-0.060***	0.013	0.013	1

***p < 0.01; **p < 0.05; *p < 0.1

5.2 Multivariate analysis

The results of linear regression are shown in Table 5. Initially we only analysed the control variables for the whole sample (column 1) and then the significance of the family variable also for the whole sample (column 2). Subsequently, we separated the sample into family (columns 3 and 4) and non-family firms (columns 5 and 6), with the respective results presented for control variables and for variables related to governance.

As can be seen, the model is significant for an acceptance level of 0.05, with a low degree of explanation when the total sample is analysed only with the control variables (6.7%). This is substantially increased in family firms with the control variables (14.4%) and when governance variables are introduced(16.9%). Other research that followed this model obtained close or lower levels of explanation (Cascino et al., 2010; Paiva et al., 2018).

As can be seen from the results in column 2, the family variable has a strong negative statistical association with the quality of financial information (β = -1.449; $p < 0.01$), leading to lower discretionary accruals in family firms. This result confirms the first research hypothesis, showing evidence of better quality financial information in family firms than non-family ones. Our results are in line with previous literature (Jara & López, 2014; Cascino, et al., 2010; Prencipe et al., 2011).

Regarding the second research hypothesis, the results obtained between the quality of financial information and variables of CEO non-duality (β = -0.970; $p < 0.01$) and gender (β = -0.028; $p < 0.01$) are shown to have negative significance, indicating that greater independence of the board of directors and greater representation of women in this body are positively associated with quality of financial information. For the variable of size of board of directors, there was no statistical significance for family firms, although the sign of the variable is consistent with our initial expectations. The variable of size of auditor

also has positive statistical significance, indicating that non-Big 4 audit firms are associated with higher quality of financial information, a result that is considered consistent with the size in the sample of unlisted firms.

Table 5 – Linear regression regarding quality of financial information

	Total Sample		**Family**		**Non-Family**	
	Dependent Variable: DA (J)					
	C1	**C2**	**C3**	**C4**	**C5**	**C6**
Independent Variables	**Coef./SE**	**Coef./SE.**	**Coef./SE**	**Coef./SE.**	**Coef./SE**	**Coef./SE**
Constant	18.349***	19.598***	18.946***	18.946***	19.725***	2.115***
	(1.085)	(1.100)	(1.752)	(1.752)	(1.373)	(1.409)
SIZE	-2.145***	-2.302***	-2.090***	-2.330***	-2.359***	-2.514***
	(0.209)	(0.210)	(0.336)	(0.346)	(0.264)	(0.272)
LEV	0.032***	0.033***	0.042***	0.043***	0.030***	0.030***
	(0.006)	(0.005)	(0.008)	(0.008)	(0.007)	(0.007)
ROA	0.009	0.016	0.222***	0.222***	-0.059***	-0.057***
	(0.016)	(0.021)	(0.026)	(0.026)	(0.019)	(0.020)
CFO	0.027**	0.021*	-0.177***	-0.181***	0.091***	0.089***
	(0.013)	(0.013)	(0.020)	(0.020)	(0.016)	(0.016)
Age	-0.022***	-0.019***	-0.024**	-0.023***	-0.019**	-0.012***
	(0.006)	(0.006)	(0.009)	(0.009)	(0.008)	(0.008)
INTANG	-0.024***	-0.024***	-0.007	-0.007	-0.032***	-0.030***
	(0.009)	(0.009)	(0.013)	(0.013)	(0.011)	(0.011)
Listed	-1.683***	-1.614***	-0.686	-0.664	-2.077***	-1.472**
	(0.495)	(0.493)	(0.710	(0.718)	(0.646)	(0.672)
Crisis	0.360	0.355	0.134	0.125	0.550	0.561*
	(0.244)	(0.243)	(0.335	(0.330)	(0.323)	(0.322)
Industry	s.s.	s.s.	s.s	s.s.	n.s.	n.s.
FAMILY		-1.449***				
		(0.242)				
N-DUAL				-0.970***		-0.769**
				(0.341)		(0.328)
SIZE-B				-0.200		-0.549**
				(0.217)		(0.216)
Gender				-0.028***		-0.013
				(0.008)		(0.010)
AUD				1.227***		0.508
				(0.346)		(0.415)
R^2	6.7%	7.6%	14.4%	16.9%	8.4%	9.2%
R^2 Adjusted	6.4%	7.3%	13.8%	15.9%	7.9%	8.6%
Sig. Change in R^2		0.9%		2.5%		0.8%
	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
Sig. Change		0.000***		0.000***		0.000***
N	3.887		1.427		2.460	

***p < 0.01; **p < 0.05;* p < 0.1; s.s. – significant; n.s. – non-significant; SE – Standard error (in brackets).

The results obtained confirm research sub-hypotheses 2a, 2c and 2d. The evidence obtained is consistent with previous research, indicating that management independence and supervision lead to better quality financial information (Alves, 2011, 2014; García-Osma, 2008; Monterrey-Mayoral & Sánchez-Segura, 2008). Likewise, the

result obtained regarding the representation of women on the board of directors in family firms seems to corroborate that women are associated with best practices in corporate governance (García-Lara et al., 2017) and that the presence of women on the board of directors of Spanish firms favours correctness and good governance practices, with a positive effect on the quality of financial information (Caravaca-Sánchez et al., 2012). However, the results do not enable an answer to sub-hypothesis 2b, that the size of the board of directors contributes to better quality financial information in family firms. Despite this, the variable regarding the size of the board of directors revealed a positive statistical association with the quality of financial information in non-family firms, similar to previous research (Monterrey-Mayoral & Sánchez-Segura, 2008). Therefore, the specificities of family firms in terms of family representation on the board may affect its respective size, since they adopt less formal controls and base their relationship with employees on loyalty and trust (Liu et al., 2016; Zahra et al., 2004).

To examine hypothesis 3, and in line with other studies (e.g., Zahra et al., 2004), we used the Chow test (Chow, 1960) to determine the significance of the differences between sub-samples of family firms (column 4) and non-family (column 6). The result obtained from this test answers hypothesis 3, in that the relationship between the characteristics of corporate governance and the quality of financial information is stronger in family firms (change in R^2 of 2.5%) compared to non-family (change in R^2 of 0.8%). We also compared the coefficients of the governance variables for each pair of equations (columns 4 and 6) and found that the statistical significance of the non-duality variable was stronger in family firms ($p < 0.01$) than in non-family ($p < 0.05$), while the variables of gender and size of auditor are significant in family firms ($p < 0.01$), but not in non-family. The exception concerns the variable of size of the board, which is only significant in non-family firms ($p < 0.05$). In general, the results support hypothesis 3.

The control variables are generally significant, showing that size has a negative association with the quality of financial information ($\beta = -2.145$; $p < 0.01$), and a positive relation with indebtedness ($\beta = 0.032$; $p < 0.01$) and cash flow from operations ($\beta = 0.027$, $p < 0.05$). In terms of age ($\beta = -0.022$, $p < 0.01$) and intangibility of assets ($\beta = - 0.024$; $p < 0.01$), a negative relation could also be seen, with firms that are older and have larger intangible investments having higher quality financial reports. The same result was found for listed firms ($\beta = -1.683$; $p < 0.01$), which is consistent with these firms being subject to higher requirements in their accounting information. The variable of profitability showed a significant negative sign when the sample was separated into family firms ($\beta = 0.222$; $p < 0.01$) and non-family ($\beta = -0.059$; $p < 0.01$), the interpretation being due to lower pressure attributed to the former on their short-term financial performance.

5.2 Robustness analysis

With a view to assessing the validity and robustness of the evidence obtained, Table 6 shows the results obtained by the multiple logistic regression that associates the quality of the financial information, as an inverse measure of discretionary accruals determined by Kothari et al.'s (2005) model, with the independent and control variables presented in the previous model.

Table 6 – Logistic regression regarding quality of financial information

	Total sample		Family		Non-Family	
	Dependent variable: DA (K)					
	C7	C8	C9	C10	C11	C12
Independent variables	**Coef./SE**	**Coef./SE.**	**Coef./SE**	**Coef./SE.**	**Coef./SE**	**Coef./SE**
Constant	2.138***	2.497***	2.420***	2.778***	2.695***	3.201***
	(0.375)	(0.382)	(0.820)	(0.848)	(0.445)	(0.460)
SIZE	-0.536***	-0.579***	-0.735***	-0.761***	-0.593***	-0.645***
	(0.071)	(0.071)	(0.156)	(0.162)	(0.084)	(0.086)
LEV	0.010***	0.010***	0.023***	0.024***	0.007***	0.007***
	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)
ROA	0.005	0.007	0.062***	0.062***	-0.004	-0.004
	(0.005)	(0.005)	(0.011)	(0.011)	(0.005)	(0.005)
CFO	0.014***	0.012***	-0.028***	-0.029	0.020***	0.020***
	(0.004)	(0.004)	(0.008)	(0.011)	(0.004)	(0.004)
Age	-0.005***	-0.005**	-0.013***	-0.013***	-0.002	0.000
	0.002	0.002	(0.004)	(0.004)	(0.002)	(0.002)
INTANG	-0.009***	-0.009***	-0.003	-0.002	-0.012***	-0.011***
	0.003	(0.003)	(0.006)	(0.006)	(0.002)	(0.004)
Listed	-20.007	-20.001	-2.468***	-2.456***	-20.101	-19.833
	(2.299)	(2.289)	(0.737)	(0.741)	(2.835)	(2.822)
Crisis	-0.035	-0.034	-0137	-0.140	-0.006	0.002
	(0.076)	(0.076)	(0.137)	(0.139)	(0.094)	(0.095)
Industry	n.s.	n.s.	n.s.	n.s.	n.s.	s.s.
FAMILY		-0.416***				
		(0.077)				
N-DUAL				-0.039***		-0.109
				(0.146)		(0.097)
SIZE-B				-0.089		-0.278***
				0.096		(0.000)
Gender				-0.010***		-0.003
				(0.003)		(0.003)
AUD				0.325**		0.176
				(0.142)		(0.118)
Constant	2.138***	2.497***	2.420***	2.778***	2.695***	3.201***
	(0.375)	(0.382)	(0.820)	(0.848)	(0.445)	(0.460)
R^2	12.8%	13.8%	17.6%	20.1%	14.8%	16.2%
Sig.	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
N	3.887		1.427		2.460	

***p < 0.01; **p < 0.05;* p < 0.1; s.s. – significant; n.s. – non-significant; SE – Standard error (in brackets).

Following the procedure put forward by Prior, Surroca & Tribó (2008), we converted the discretionary accruals variable into a binary variable that has a value of 1 if the amount of that variable is greater than or equal to the average of the observations by sector and year, and 0 otherwise.

From the variables considered, this model allows an estimation of the probability of a firm presenting quality financial information or not, distinguishing variables with statistical significance (Wald test). We employed this model, which has been used by several authors (Callao-Gastón et al., 2008; García-Osma et al., 2008; Prior et al., 2008), as it

does not require strict compliance with multivariate normality assumptions (López-Iturriaga et al., 2010). The capacity of the model is evaluated by its explanatory power R^2, the interpretation of which is similar to the coefficient of determination of classic regression.

The model is shown to be significant for an acceptance level of 0.05, with higher explanation levels than the linear regression of 13.8% for the whole sample when the control variables and the variable family of 20.1% are taken into account in family firms, considering the variables applied to governance. Other research that followed this model obtained close or lower explanatory levels (11% reported by García-Osma et al., 2008; 8% reported by Prior et al., 2008; and 16.6% by Callao-Gastón et al., 2007).
As can be seen, there is no change in results in the statistical relation between the discretionary accruals and the family and non-family firms, which allows corroboration of the results obtained by the multiple linear regression. Regarding the variables of governance, CEO non-duality, representation of women, size of board of directors and size of auditor, all variables have significance close to that obtained in linear regression. The results obtained for the control variables in general are also confirmed.

6. DISCUSSION AND CONCLUSIONS

This study investigates the quality of financial information via evidence of earnings manipulation in family versus non-family firms, and analyses whether this relationship depends on the effect of good corporate governance practices. The results show that family firms in Spain manipulate accounting information less. This result is in line with previous research mainly on listed firms in Continental Europe (Cascino et al., 2010; Prencipe et al., 2011) and with the premises of agency theory which indicate low asymmetry of information between owners and managers. The governance factors analysed, the non-duality of the CEO, the size of the board of directors, gender diversity and the auditor seem to have mechanisms in family firms that contribute to attenuating potential conflicts of interest in agency relationships with minority shareholders and other stakeholders (Paiva et al., 2016).

The aforementioned mechanisms of governance revealed a significant relationship with the quality of financial information in family-owned firms, corroborating the results obtained in other studies (Alves, 2011, 2014; Callao-Gastón et al., 2008; Caravaca-Sánchez et al., 2012). Thus many of these firms require better governance systems as a way to outwardly exhibit transparency and trust procedures in the eyes of stakeholders (Ariff et al., 2007), showing that family members are concerned with reputation, particularly in the case of unlisted firms where the recommendations of the Code of Conduct are not mandatory. This claim is evidenced by the separation of functions of the CEO and the chairman of the board of directors, which has a strong statistical relationship with the quality of financial information in family firms.

The less stringent requirements explained by agency theory regarding governance of corporations with concentrated ownership show significant changes compared to family firms, as these firms aim for good governance practices as a means of conveying confidence in the relationships they have with minority shareholders and other stakeholders (Aguilera et al., 2012; Liu et al., 2016). These firms are motivated to find mechanisms that are in accordance with accepted norms in the codes of conduct, which explains the institutional theory that they can imitate the actions of the public firms to increase their legitimacy and reputation; the more family firms adopt such behaviours, the more others will feel compelled to act in a similar way, as a form of recognition in adopting standards which are considered good practice (Berrone et al., 2010; Miller, Le Breton-Miller & Lester, 2013).

The greater participation of women in the management of family firms is also associated with higher quality financial information. This result seems to corroborate the idea that the participation of women has an effect close to that of independent representatives as they become involved less often in practices of manipulation or fraud and benefit the firm's performance, with characteristics of correctness and good practice (Caravaca-Sánchez et al., 2012) and also because they are associated with firms with better systems of governance (García-Lara et al., 2017). Previous studies indicate that gender complementarity fosters dialogue in firms, reducing information asymmetries with the outside and promoting transparency in financial reporting, the result obtained thus being consistent with previous studies on listed firms (Damak, 2018; Gull et al., 2018).

Also for the audit function, as an external and independent control of the firm, the results obtained showed an association with quality financial information in family firms, as opposed to non-family. As this result is not associated with larger audit firms, it is assumed that family firms may be more compliant with audit recommendations, a result that is consistent with studies carried out on unlisted firms (Cano, 2007).

Considering the stronger role of the family in decision-making processes in family firms, we analysed whether good governance practices have a stronger relationship with the quality of financial information in these firms compared to non-family firms. The results obtained were robust for three of the four variables analysed regarding corporate governance. While family firms are associated with less formal management and control procedures and are considered less compliant with codes of conduct (Aguilera et al., 2012; Liu et al., 2016), it can be seen that the adoption of good practices in governance mechanisms contributes to substantial improvements in reducing earnings manipulation. The evidence obtained contributes to the literature on the quality of financial information, showing that family firms have specific characteristics that favour the alignment of interests and accounting information. Thus, we support the continued debate on interaction between family and accounting (Miller and Le Breton-Miller, 2006), showing that the effects of good governance practices reinforce that quality. In addition, our study contributes to the literature by providing new evidence to support the increasingly accepted view that women in high-level positions help improve accounting information (Arun et al., 2015; Damak, 2018; Gull et al., 2018). The results obtained are relevant for information users and regulators, taking the effect of good corporate governance practices into account, as well as for auditors and firms, considering audit risk and the effectiveness of implementing appropriate monitoring and internal control systems.

7. LIMITATIONS AND FUTURE DIRECTIONS FOR RESEARCH

Our work is not free of limitations and some of them constitute directions for future lines of research, as explained below. By focusing the sample on listed and unlisted firms, we are faced with the limitations of the SABI database regarding the availability of information for a wide range of listed firms, so our results may not be wholly generalisable to these firms. We do believe it relevant to carry out this analysis on listed firms, given the functioning of the capital market and the lower concentration of capital and from the perspective of comparison of results with previous research, combined with Corporate Social Responsibility. We believe in the legitimacy of this analysis given that new concerns emerge due to external pressures that firms face in this area, and which have effects on the quality of financial information (Miralles-Quirós et al., 2017).

On the other hand, as SABI does not classify the firms as family and non-family, we undertook this classification following the procedure proposed by Rojo-Ramírez et al. (2005) and later validated by several studies (Diéguez-Soto et al., 2018; López-Delgado et al., 2015). However, given that there is a multitude of definitions of the concept of

family firm (Hernández-Linares, Sarkar & López-Fernández, 2018), it would be useful to verify the consistency of our results by adopting other methods of identification.

Our work was carried out in the context of listed and unlisted Spanish firms that apply, inter alia, international accounting standards or accounting standards adapted to these firms, so the results may be different in other contexts (Pereira & Alves, 2017). In addition, Spain has broad experience in applying codes of conduct in the field of corporate governance, and future research may determine relations with the quality of financial information in different legal and cultural environments, in family and non-family firms, as well as the effects of different generations of families (Jara & López, 2014). Another approach lies in verifying the effect of independent managers and the supervisory and monitoring activities of the board of directors in the context of these firms, in view of the possible effect of greater informality on governance structures in family firms (Liu et al., 2016).

References

Adams, R. & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, *94*(2), 291-309.

Afzalur, R. (2018). The influence of corporate governance practices on corporate social responsibility reporting. *Social Responsibility Journal*, *14*(1), 20-39, https://doi.org/10.1108/SRJ-05-2016-0080.

Aguilera, R., & Crespi-Cladera, R. (2012). Firm family firms: Current debates of corporate governance in family firms. *Journal of Family Business Strategy*, *3*(2), 66–69.

Ali, A., Chen T., & Radhakrishnan, S. (2007). Corporate disclosure by family firms. *Journal of Accounting and Economics*, *44*(1-2), 238-286.

Alves, S. (2011). The effect of the board structure on erarnings management: evidence from Portugal. *Journal of Financial Reporting & Accounting*, *9*(2), 141-160.

Alves, S. (2014). The effect of board independence on the earnings quality: Evidence from Portuguese listed companies. *Australasian Accounting, Business and Finance Journal*, *8*(3), 23-44.

Andersen, R., & Reeb, D. (2003). Founding-family ownership and firm performance. Evidence from the S&P 500. *The Journal of Finance*, *58*(3), 1301-1328.

Ariff, A., Ibrahim, M., & Othman, R. (2007). Determinants of firm level governance: Malaysian evidence. *Corporate Governance, 7*(5), 562-573.

Arnedo, L., Lizarraga, F., & Sánchez, S. (2007). Does public/private status affect the level of earnings management in code-law contexts outside the United States? A study based on the Spanish case. *The International Journal of Accounting*, *42*(3), 305-328.

Arun, T., Almahrog, Y., & Aribi, Z. (2015). Female directors and earnings management: Evidence from UK companies. *International Review of Financial Analysis*, *39* (C) 137–146.

Berrone, P., Cruz, C., Gómez-Mejía, L., & Larraza-Kintana, M. (2010). Socioemotional wealth and corporate responses to institutional pressures. *Administrative Science Quarterly, 55*(1), 82–113.

Brammer, S. & Pavelin, S. (2004). Building a Good Reputation. *European Management Journal*, *22* (6), 704-713.

Callao-Gastón, S., Gasca-Galán, M.,& Jarne-Jarne, J. (2008). Gobierno corporativo y deficiencias de la información contable. *Spanish Accounting Review*, *10*(1), 133-155.

Cano, M. (2007). Tamaño del auditor y calidad de auditoría en las empresas españolas no cotizadas. *Revista Española de Financiación y Contabilidad, 36(135)*, 481-507.

Caravaca-Sánchez, P., Sánchez-Ballesta, J., & García-Meca, E. (2012). Factores explicativos del buen gobierno en la empresa española. *Revista de Contabilidad*, *15*(2), 237-255.

Cascino, S., Pugliese, A., Mussolino, D., & Sansone, C. (2010). The influence of family ownership on the quality of accounting information. *Familiy Business Review, 23*(3), 246-265.

Chen, E., & Gavious, I. (2016). Complementary relationship between female directors and financial literacy in deterring earnings management: The case of high-technology firms. *Advances in Accounting, incorporating Advances in International Accounting*, *35*, 114–124.

Chen, S., Chen, X., & Cheng, Q. (2008). Do family firms provide more or less voluntary disclosure? *Journal of Accounting Research*, *46*(3), 499-536.

Cheng, Q. (2014). Family firm research: A review. *China Journal of Accounting Research*, *7*(3), 149-163.

Chi, C., Hung, K., Cheng, H., & Lieu, P. (2015). Family Firms and earnings management in Taiwan: influence of corporate governance. *International Review of Economics & Finance*, *36*(1), 88-98.

Claessens, S., & Tzioumis, K. (2006). Ownership and Financing Structures of Listed and Large Non-listed Corporations. *Corporate Governance: An International Review*, *14*(4), 266-276.

Chow, G. (1960). Econometrica, *28*(3), 591-605.

Cohen, J., Krishnamoorthy, G., & Wright, A. (2002). Corporate governance and the audit process. *Contemporary Accounting Research*, *19*(4), 573-94.

CNMV (2015). *Codigo de buen gobierno de las sociedades cotizadas*. Edison 4, Madrid.

Cruz, C., Gómez-Mejía, L., & Becerra, M. (2010). Perceptions of benevolence and the design of agency contracts: CEO-TMT relationships in family firms. *Academy of Management Journal, 53*(1), 69-89.

Davidson, R., Goodwin-Stewart, J., & Kent, P. (2004). Internal governance structures and earnings management. *Accounting and Finance, 45*(2), 241-267.

Damak, S. (2018). Gender diverse board and earnings management: evidence from French listed companies. *Sustainability Accounting, Management and Policy Journal*, https://doi.org/10.1108/ SAMPJ-08-2017-0088.

Debicki, B. J., Matherne, C. F., Kellermanns, F. W., & Chrisman, J. J. (2009). Family business research in the new millennium: An overview of the who, the where, the what, and the why. *Family Business Review, 22*(2), 151–166.

Dechow, M., Sloan, R., & Sweeney, A. (1995). Detecting earnings management. *The Accounting Review, 70*(2), 193-225.

Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics, 50*(2-3), 344-401.

Dechow, P., Hutton, A., Kin, J. H., & Sloam, R. (2012). Detecting earnings management: A new approach. *Journal of Accounting Research, 50*(2), 275-334.

Demsetz, H., & Lehn, K. (1985), The structure of corporate ownership: causes and consequences. *Journal of Political Economy*, *93*(6), 1155-1177.

Diéguez-Soto, & López-Delgado (2018). Does Family and Lone Founder Involvement Lead to Similar Indebtedness? *Journal of Small Business Management*, https://doi.org/10.1111/jsbm.12422.

Ding, Y., Qu, B., & Zhuang, A. (2011). Accounting properties of Chinese family firms. *Journal of Accounting, Auditing and Finance*, *26*(4), 623-640.

Ding, Y., Zhang, H., & Zhang, J. (2007), Private vs state ownership and earnings management: evidence from Chinese listed companies. *Corporate Governance: An International Review*, *15*(12), 223-238.

DiMaggio, P., & Powell, W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review, 48*(2), 147−160.

Dunn, P. (2004). The impact of insider power on fraudulent financial reporting. *Journal of Management*, *30*(3), 397-412.

Ferramosca, S., & Allegrini, M. (2018). The complex role of family involvement in earnings management. *Journal of Family Business Strategy*, Article in press, https://doi.org/10.1016/j.jfbs.2018.01.001.

García-Lara, J., García-Osma, B., & Mora-Enguidanos, A. (2009). Gender Diversity on the board and accounting quality. *Working Paper* Universidad Carlos III de Madrid, 1-40.

García-Lara, J., García-Osma, B., Mora, A., & Scapin, M. (2017). The monitoring role of female directors over accounting quality. *Journal of Corporate Finance*, *45* (August), 651-668.

García-Meca, E., & Sánchez-Ballesta, J. (2010). The Association of Board Independence and Ownership Concentration with Voluntary Disclosure: A Meta-analysis. *European Accounting Review*, *19*(3), 603–627.

García-Osma, B., Albornoz-Noguer, B., & Gisbert-Clemente, A. (2005). La investigación sobre earnings management. *Spanish Journal of Finance and Accountig, 34*(127), 1001-1034.

García-Osma, B. (2008). Board independence and real earnings management: The case of R&D expenditure. *Corporate Governance: An International Review*, *16*(2), 116-131.

García-Sánchez, I., & Martínez-Ferrero, J. (2016). Corporate reputation as a consequence of financial reporting quality. *International Management of Economics Frontiers, 1*(1), 45-63.

Gavana, G., Gottardo, P., & Moisello, A. (2017). Earnings management and CSR disclosure. Family vs. non-family firms. *Sustainability*, *9*, 2327; doi:10.3390/su9122327.

Gómez-Mejía, L., Cruz, C., Berrone, P., & De Castro, J. (2011). The bind that ties: Socioemotional preservation in family firms. *Academy of Management Annals*, *5*(1), 653-707.

Gómez-Mejía, L., Haynes, K., Núñez-Nickel, M. Jacobson, K., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative Science Quarterly*, *52*(1), 106-137.

González, J., & García-Meca, E. (2014). Does corporate governance influence earnings management in Latin American markets?. *Journal of Business Ethics*, *121*(3), 419–440.

Gull, A., Nekhili, M., Nagati, H., & Chtioui, T. (2018). Beyond gender diversity: How specific attributes of female directors affect earnings management. *The British Accounting Review*, *50*(3), 255-274.

Hernández-Linares, R.; Kellermanns, F. W., & López-Fernández, M. C. (2018). A note on the relationship between learning, market, and entrepreneurial orientations in family and nonfamily firms. *Journal of Family Business Strategy, 9*(3), 192-204.

Hernández-Linares, R., Sarkar, S., & Cobo, M. J. (2018). Inspecting the Achilles heel: a quantitative analysis of 50 years of family business definitions. *Scientometrics, 115*(2), 929–951.

Instituto de la Empresa Familiar (2015). *La Empresa Familiar en España (2015)*, Madrid.

Jara, M., & López, F. (2014). Earnings management and the contest to the control: an international analysis of family-owned firms. *Spanish Journal of Finance and Accounting*, *43*(4), 355-379.

Jara, M., & López, F. (2007). Auditoría y discrecionalidad contable en la gran empresa no financiera española. *Spanish Journal of Finance and Accountig, 36*(135), 569-594.

Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Jounal of Financial Economics, 3*(4), 305-360.

Jaggi, B., Leung, S., Gul, F (2009). Family control, board independence and earnings management: Evidence based on Hong Kong firms. *J. Account. Public Policy*, *28*(4), 281–300.

Jiraporn, P., & DaDalt, P. (2009). Does founding family control affect earnings management? *Applied Economics Letters*, *16*(2), 117-124.

Jones, J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research, 29*(2), 193-228.

Khan, I., Chand, P., & Patel, A. (2013). The impact of ownership structure of voluntary corporate disclosure in annual reports. Evidence from Fiji. *Accounting and Taxation, 5*(1)*, 47-58.*

Kim, J., Chung, R., & Firth, M. (2003). Auditor conservative, asymmetric monitoring and earnings management. *Contemporary Accounting Research*, *20*(2), 323-359.

Kyaw, K., Olgbode, M., & Petracci, B. (2015). Does gender diverse board mean less earnings management? *Finance Research Letters*, *14*(C) 135–141.

Kothari, S., Leone, A., & Wasley, C. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics, 39*(1), 163-197.

Lank, A. (1995). *Key Challenges Facing Family Entreprise*. Lausanne, Switzerland: *IMD Publication*.

Landry, S., Deslandes, M., & Fortin, A. (2013). Tax aggressiveness, corporate social responsibility and ownership structure. *Journal of Accounting, Ethics and Public Policy*, *14*(3), 611-645.

Leuz, C., Nanda, D., & Wysocki, P. (2003). Earnings management and investor protection: An international comparison. *Journal of Financial Economics*, *69*(3), 505-527.

Liu, Y., Valenti, A., & Chen, Y. (2016). Corporate governance and information transparency in Taiwan's public firms. The moderating effect of family ownership. *Journal of Management & Organization*, *22*(5), 662–679.

López-Delgado, P., & Diéguez-Soto, J. (2015). Lone founders, types of private family businesses and firm performance. *Journal of Family Business Strategy*, *6*(2), 73-85.

López-Iturriaga, F., & Zarza-Herranz, C. (2010). Corporate governance and determinants. *Spanish Journal of Finance and Accounting*, *39*(147), 521-549.

Martin, G., Campbell, J., & Gómez-Mejía, L. (2016). Family control, socioemotional wealth and earnings management in publicly traded firms. *Journal of Business Ethics*, *133*(3), 435-469.

Mazzioni, S., Pugol, V., Moura, G., & Klann, R. (2016). Influence of corporate governance and capital structure on earnings management. *Revista Contemporânea de Contabilidade*, *12*(27), 61-86.

Michelon G., & Parbonetti A. (2012). The effects of corporate governance on sustainability disclosure. *Journal of Management and Governance*, *16*(3), 477-509.

Miller, D., & Le Breton-Miller, I. (2006). Family governance and firm performance: Agency, stewardship, and capabilities. *Family Business Review*, *19*(1), 73–87.

Miller, D., Le Breton-Miller, I., & Lester, R. H. (2013). Family firm governance, strategic conformity and performance: Institutional versus strategic perspectives. *Organization Science*, *24*(1), 189–209.

Miller, D., Le Breton-Miller, I., & Scholnick, B. (2008). Stewardship vs. stagnation: An empirical comparison of small family and non-family businesses. *Journal of Management Studies*, *45*(1), 51–78.

Miralles-Quirós,M., Miralles-Quirós, J, Sánchez-Hernández, M. I., & Guia-Arraiano, I (2017). Sustainability, reporting in Europe: Differences in terms of legislation and valuation. R-LEGO - *Revista Lusófona de Economia e Gestão das Organizações*, *5*, 105-120.

Monterrey-Mayoral, J., & Sánchez-Segura, A. (2008). Gobierno corporativo y calidad de la información contable. Evidencia empiríca española. *Spanish Accounting Review*, *11*(1), 67-99.

Moura, G., Theiss, V., & Cunha, P (2014). Ativos intangíveis e gerenciamento de resultados: uma análise em empresas brasileiras listadas na BM&FBovespa BASE. *Revista de Administração e Contabilidade da UNISINOS*, *11*(2), 111-122.

OCDE. (2016). *Principios de Gobierno Corporativo de la OCDE y del G20*. OCDE. https://doi.org/10.1787/9788485482726-es.

Paiva, I., Lourenço, I., & Branco, M. (2016). Earnings management in family firms: current state of knowledge and opportunities for future research. *Review of Accounting and Finance, 15*(1), 85-100.

Paiva, I., Lourenço, I., & Curto, J. (2018). Earnings management in family versus non-family firms: the influence of analyst coverage. *Spanish Journal of Finance and Accounting/Revista Española de Financiación y Contabilidad*, DOI: 10.1080/02102412.2018.1463764.

Pazzaglia, F., Mengoli, S., & Sapienza, E. (2013). Earnings quality in acquired and non-acquired family firms: a socioemotional wealth perspective. *Family Business Review*, *4*(26), 374-386.

Pereira, A. & Alves, M. (2017). Earnings management and European Regulation 1606/2002: Evidence from non-financial Portuguese companies listed in Euronext. *Spanish Accounting Review*, *20* (2), 107–117.

Prencipe, A., Bar-Yosef, S., Mazzola P., & Pozza, L. (2011). Income smoothing in family firm-controlled companies: Evidence from Italian listed companies. *Corporate Governance: An International Review, 19*(6), 529-546.

Prencipe, A., Bar-Yosef, S., & Dekker, H. (2014). Accounting research in family firms: Theorical and empirical challenges. *European Accounting Review*, *23*(3), 361-385.

Prencipe, A., Markarian, G., & Pozza, L. (2008). Earnings management in family firms: Evidence from R&D cost capitalization in Italy. *Family Business Review, 21*(1), 71-88.

Prior, D., Surroca, J., & Tribó, J. (2008). Are socially responsible managers really ethical? Exploring the relationship between earnings management and corporate social. *Corporate Governance: An International Review*, *16*(3), 160-177.

Pucheta-Martínez, M., Bel-Oms, I. & Olcina-Sempere, G. (2018). The association between board gender diversity and financial reporting quality, corporate performance and corporate social responsibility disclosure: A literature review. *Academia Revista Latinoamericana de Administración*, *31*(1), 177-194.

Razzaque, R., Ali, M. & Mather, P. (2016). Real earnings management in family firms: Evidence from an emerging economy. *Pacific-Basin Finance Journal*, *40*(PB), 237–250.

Reguera-Alvarado, N., Laffarga-Briones, J., & Fuentes-Ruiz, P. (2015). Modelos de gestión de resultados: un estudio transnacional. *Spanish Accounting Review*, *18*(1), 11-19.

Rojo-Ramírez, A., Diéguez-Soto, J., & López-Delgado, P. (2011). Importancia del concepto de empresa familiar en investigación: utilización de la base de dados SABI para su clasificación. *Revista de Empresa Familiar*, *1*(1), 53-67.

Salvato, C., & Moores, K. (2010). Research on accounting in family firms: past accomplishments and future challenges. *Family Business Review*, *3*(16), 160-177.

Samara, G. & Arenas, D. (2017). Practicing fairness in the family business workplace. *Business Horizons*. Article in press, Doi.org/10.1016/j.bushor.2017.05.08.

Sánchez-Ballesta, J., & García-Meca (2007). Ownerchip structure, discretionary accruals and the informativeness of earnings. *Corporate Governance: An International Review*, *15*(4), 677-691.

Schipper, K. (1989). Commentary on earnings management. *Accounting Horizons, 3*(4), 91-102.

Silva, G., & Costa, F. (2017). Quality of accountig information and sustainability in Brazilian companies listed on BM&FBovespa. *Journal of Administrative Sciences*, *23*(1), 103-127.

Sirmon, D., & Hitt, M. (2003). Creating wealth in family business through managing resources. *Entrepreneurship Theory and Practice*, *27*(4), 339–359.

Stockmans, A., Lybaert N., & Voordeckers, W. (2010). Socioemotional wealth and earnings management in private family firms. *Family Business Review, 23*(3), 280-294.

Stockmans, A., Lybaert, N., & Voordeckers, W. (2013). The conditional nature of board characteristics in constraining earnings management in private family firms. *Journal of Family Business Strategy*, *2*(4), 84-92.

Sue, S, Chin, C., & Chan, A. (2013). Exploring the causes of accounting restatements by family firms. *Journal of Business Finance & Accounting*, *9-10(*40), 1068-1094.

Tendeloo, B., & Vanstraelen, A. (2008). Earnings management and audit quality in Europe: Evidence from the private client segment market. *European Accounting Review, 17*(3), 447-469.

Tong, Y. (2007). Financial reporting practice of family firms. *Advances in Accounting*, *23*(1), 231-261.

Torchia, M., & Calabrò, A. (2016). Board of directors and financial transparency and disclosure. Evidence from Italy. *Corporate Governance*, *16*(3), 593-608.

Yang, S. (2010). The impact of controlling families and family CEOs on earnings management. *Family Business Review*, *3*(23), 266-279.

Vieira, E. (2016). Earnings management in public family firms. *Australian Accounting Review*, *77*(26), 190-207.

Villalonga, B., & Amit, R. (2010), Family control of firms and industries. *Financial Management*, *39*(3), 863-904.

Wang, D. (2006). Founding family ownership and earnings quality. *Journal of Accounting Research*, *44*(3), 619-656.

Zahra, S., Hayton, J., & Salvato, C. (2004). Entrepreneurship in family vs. non-family firms: A resource-based analysis of the effect of organizational culture. *Entrepreneurship Theory and Practice, 28*(4), 363-381.