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Family involvement and firm performance: Evidence from UK listed firms

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ABSTRACT

This study examines how family involvement affects the performance of UK companies listed on the London Stock Exchange (LSE). Using a panel dataset from 1998 to 2008, the econometric models evaluate the effect of family involvement in terms of ownership and management on firm performance (measured with accounting ratios and Tobin's *Q*) while controlling for a number of conditions external to the firm as well as business characteristics. Our findings illustrate a non-linear relationship between family ownership and firm performance, with performance increasing until family shareholding reaches thirty-one percent, at which point performance begins to decrease. Moreover, the findings illustrate that the higher the involvement of the family in terms of management (i.e., through a family CEO) and governance (board representation and/or CEO-Chairman dual role), the higher the performance the firm appears to sustain over the long run and across generations.

Introduction

A plethora of studies have provided evidence that family ownership is a relatively common phenomenon in publicly listed firms across market economies worldwide (La Porta, Lopez-de-Silanes, & Shleifer, 1999). For instance, in the U.S., one-third of the 500 largest corporations have been classified as family-owned (Anderson & Reeb, 2003; Villalonga & Amit, 2006; among others), while in Western Europe, family firms represent approximately 44% of listed firms (Faccio & Lang, 2002). Given the dominance of the family firm model, research in the field of governance has increasingly embarked on exploring the influence of family on the performance of a listed firm (e.g., Anderson & Reeb, 2003; Andres, 2008; Barontini & Caprio, 2006; Block, Jaskiewicz, & Miller, 2011; Sraer & Thesmar, 2007; Villalonga & Amit, 2006).

Studies conducted to date reveal inconclusive evidence regarding the influence of family involvement on the performance of listed firms. Some studies show that family involvement in ownership creates value (Anderson & Reeb, 2003; Kowalewski, Talavera, & Stetsyuk, 2010; Maury, 2006; Pindado, Requejo, & Torre, 2008; San Martin-Reyna & Duran-Encalada, 2012), while others claim that listed family firms do not outperform their non-family counterparts (Filatotchev, Lien, & Piesse, 2005; McConaughy & Phillips, 1999; Miller, Le Breton-Miller, Lester, & Cannella, 2007). The same dichotomy is evident with regard to the relationship between family involvement in management and performance (Anderson & Reeb, 2003; Andres, 2008; Giovannini, 2010; Villalonga & Amit, 2006) and family involvement in governance (e.g., through board representation or a board chair role) and performance (Filatotchev et al., 2005; García-Ramos & García-Olalla, 2011; Giovannini, 2010; Villalonga & Amit, 2006), where both positive and negative relationships are established. These contradictory results are apparent due to a number of interplaying factors including the diverse definitions of a "family firm," sampling techniques, variables, methodologies, study periods, and institutional settings that different scholars consider (Sacristán-Navarro, Gómez-Ansón, & Cabeza-García, 2011).

Our study contributes to the field of family ownership and performance by addressing several factors associated with family influence on firm performance that are not addressed adequately in previous work. These include the dimensions of family ownership, family management, and family governance as well as the separate effect of founders versus descendants on firm performance. We also establish the need to appreciate firm age and

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nonlinearities in the relationship between family ownership and firm performance (Anderson & Reeb, 2003). This study may contribute to an appreciation of a complex set of dynamics of family influence and strengthen our understanding of the family effect on firm performance.

Furthermore, our work draws data from the UK context, where the relationship between family influence and listed firm performance is still relatively under-explored. The UK exhibits an idiosyncratic institutional and regulatory business environment characterized by high shareholder protection (Dahya, Dimitrov, & McConnell, 2009; Franks, Mayer, & Rossi, 2005) and efficient monitoring (Franks et al., 2005). Another key contribution of this work is that it offers fresh evidence on the relationship between family involvement and firm performance from a different stock market context. The UK listed market can offer further insights on what has been reported to date on the effect of family involvement on firm performance. It could also help explore the similarities and differences between this context and other areas in which this relationship has been explored.

An econometric investigation that aims to offer a rigorous examination of the separate effect of family ownership and management on firm performance is undertaken.[2] We focus exclusively on the UK listed sector using financial, board, and ownership data of FTSE constituent firms from 1998 to 2008 in order to examine the impact of the family effect in terms of ownership and management involvement on business performance.

The rest of the article is organized as follows: "Theoretical framework and hypotheses" offers a review of the theories and outlines the development of our hypotheses. "Data" describes the UK database and offers summary statistics. "Empirical findings" discusses our empirical methodology and reports our results, examining the relationships between family ownership and involvement and firm performance. "Discussion and conclusions" offers a discussion of the present results, concluding remarks and implications.

Theoretical framework and hypotheses

Agency and stewardship theories

The theoretical base of the majority of investigations seeking to examine the effect of family on firm performance has been agency theory (Block et al., 2011; Dyer, 2006; García-Ramos & García-Olalla, 2011; Miller et al., 2007; Sacristán-Navarro et al., 2011; Sciascia & Mazzola, 2008), with an increasing number of studies also drawing upon stewardship theory (Miller & Le Breton-Miller, 2006; Uhlaner, Floren, & Geerlings, 2007).

Jensen and Meckling (1976) introduced the agency theorem to expound that the separation of ownership and management creates conflicting goals between principals (i.e., shareholders) and agents (i.e., managers). This divergence could arise from their variant utility functions (profits versus private gains) and information asymmetries about their views on growth, variant investment horizons, and different attitudes to risk diversification and external growth strategies (e.g., takeovers), inter alia. Stewardship theory, in turn, advocates that managers do not always seek to accomplish their own individual goals but rather act as stewards of the business (Davis, Schoorman, & Donaldson, 1997). This theory has been found very relevant within the family firm context, where owners are often managers of the same firm and may assume a stewardship role (Corbetta & Salvato, 2004). In this sense, family owner-managers can often become highly altruistic and forgo personal interests for business goals (Corbetta & Salvato, 2004; Eddleston & Kellermanns, 2007). In this sense, a collectivistic culture may be established in the business, which nurtures a pro-organizational behavior and willingness among family members to join efforts toward further business growth, profitability, and innovation. Stewardship is considered to be a distinctive feature of family firms. Because family members that own a business are also involved in its management, goal alignment is likely to occur between business owners and managers (Miller & Le Breton-Miller, 2006; Pieper, Klein, & Jaskiewicz, 2008), which suppresses agency costs (Corbetta & Salvato, 2004; Miller & Le Breton-Miller, 2006). Although not all family firms may exhibit a stewardship orientation, when family members see themselves as stewards of their family's business, then benefits can be expected for the business (Corbetta & Salvato, 2004; Eddleston & Kellermanns, 2007; Miller & Le Breton-Miller, 2006).

The present article advocates that a real understanding of family influence over firm performance needs to expound the principles and dynamics associated with agency and stewardship theories. In this section, the major empirical studies and theories are reviewed in order to guide the synthesis of the key hypotheses examined by this investigation.

Family involvement in ownership and firm performance

This study draws upon principles of agency theory (Anderson & Reeb, 2003; Dyer, 2006; Miller et al., 2007; Villalonga & Amit, 2006) and stewardship perspectives (Corbetta & Salvato, 2004; Miller & Le Breton-Miller, 2006; Uhlaner et al., 2007), which set the prospects of explaining the influence of family ownership on the performance of the family firm.

Studies drawing upon agency theory reveal mixed evidence regarding the role of family ownership. Certain agency theorists believe that family ownership maximizes agency problems and erodes firm performance (Barclay & Holderness, 1989; DeAngelo & DeAngelo, 2000; Gomez-Mejia, Nunez-Nickel, & Gutierrez, 2001; Morck, Percy, Tian, & Yeung, 2005; Schulze et al., 2003). Empirical evidence expounds the failure of family capitalism as a result of family oligarchic control (Morck et al., 2005) and altruistic nepotism (Schulze et al., 2003) that can lead to agency problems that erode performance. Family owners that build control mechanisms to exploit ownership rights in order to control management and substitute professionalism with nepotism and tolerate incompetence, entrenchment (Barclay & Holderness, 1989; Gomez-Mejia et al., 2001), and the expropriation of private benefits (DeAngelo & DeAngelo, 2000) end up disenchanting both 'insider' and 'outsider' shareholders, which triggers feuding (Barclay & Holderness, 1989). On the other hand, a number of agency theory-driven studies argue that concentrated family ownership in the hands of founding family owner-managers can, in fact, help minimize agency problems (both principal-agency type I and type II agency costs when there is a dominant family versus other owners) (Villalonga & Amit, 2006) and thus enhance performance and build shareholder value (Anderson & Reeb, 2003; Maury, 2006; San Martin-Reyna & Duran-Encalada, 2012).

This investigation has an explicit focus on the financial performance of listed family firms. Previous evidence illustrates that within economies in which stakeholder protection is sufficient, family ownership is likely to have a positive influence on firm performance. This is because conflicts of interest between minority shareholders and controlling families are reduced, and agency problems are minimized (Anderson & Reeb, 2003; Sacristán-Navarro et al., 2011). The present article draws data

[2] More recent studies have examined various aspects of family-controlled firms (see for instance the work of Croci et al. (2011), Masulis, Pham, and Zein (2011), and Brav (2009), among others.

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from the UK market, which has a high anti-director rights index of 50 (Dahya et al., 2009) and may perhaps foster a context in which family members, as large shareholders, may not extract private benefits to a significant extent. Our review of the available evidence (see the Appendix) illustrates that the majority of studies exploring the influence of family ownership on firm performance draws upon agency theory and illustrates positive links between the two. These studies draw primarily upon listed firms in the U.S. and Western Europe that are said to exhibit high shareholder protection (Anderson & Reeb, 2003; Sacristán-Navarro et al., 2011).

Stewardship theory is another perspective that this article considers in constructing relevant hypotheses. Studies that draw upon stewardship theory argue that family firms outperform their non-family counterparts due to the prevalence of high altruistic attitudes, trust, and a high desire for achievement, which have a positive influence on firm performance (Corbetta & Salvato, 2004; Miller & Le Breton-Miller, 2006; Uhlaner et al., 2007). Stewardship has been limitedly employed to explain listed family firm performance (Andres, 2008; Chu, 2011), with the available evidence suggesting that stewardship attitudes may, in fact, shape positive links between family ownership and firm performance (see the Appendix for a review of studies on family influence and listed firm performance).

Drawing upon understandings of agency and stewardship, we argue for the positive influence of family ownership on firm performance. Because this study draws upon the UK economy, which exhibits high shareholder protection (Dahya et al., 2009; Franks et al., 2005), it is believed that agency problems are likely to be minimal. At the same time, we argue that the presence of the family as the key shareholder may help nurture relevant stewardship attitudes that are conducive to firm performance. We thus hypothesize:

Hypothesis 1a. There is a positive relationship between family ownership concentration and firm performance.

Agency theorists have increasingly acknowledged that the relationship between family ownership and firm performance may be non-monotonic. They argue that despite lowering owner-manager agency problems, family ownership, especially at high levels, may lead to increasing family opportunism that can eventually hinder performance (Anderson & Reeb, 2003; Maury, 2006; Pindado, Requejo, & de la Torre, 2011). Relevant evidence among listed family firms indicates that firm performance increases until family ownership reaches a tipping point beyond which the performance is likely to begin declining (Anderson & Reeb, 2003; Kowalewski et al., 2010). This article also builds on the rationale that family ownership can induce positive firm performance only when family members act as stewards of the firm (Andres, 2008; Pindado et al., 2011). We thus posit that the relationship between family ownership and performance is non-linear and that increasing ownership concentration may lead to additional risks and non-stewardship attitudes on behalf of family members:

Hypothesis 1b. There is a curvilinear (inverted U) relationship between family ownership concentration and firm performance, with firm performance increasing and then decreasing as the stake of the family in the firm increases.

Scholars suggest that family firm performance erodes as the business becomes older and especially when the ownership of the firm is transferred to later family generations (Anderson & Reeb, 2003; Villalonga & Amit, 2006; Block et al., 2011). Relevant evidence illustrates that that younger quoted family firms (Anderson & Reeb, 2003; Villalonga & Amit, 2006), are more likely to have a positive influence on firm performance compared to older firms. Agency and stewardship theories have not been explicitly used to address the effect of firm age on family firm performance. However, these perspectives have the potential to furnish an understanding of this relationship. Scholars argue that older family firms may not perform as well as their younger counterparts due to the loss of the long-term orientation that is brought along by the founders (Block et al., 2011), the prevalence of nepotistic behavior (Anderson & Reeb, 2003; Miller et al., 2007; Villalonga & Amit, 2006), the entrenchment effect (Anderson & Reeb, 2003; Miller et al., 2007; Villalonga & Amit, 2006), and even conflicts that may emerge between owners as the family expands to include distant relatives (Anderson & Reeb, 2003). It can thus be argued that agency costs are likely to increase as the family business becomes older because family members as managers may seek to extract private benefits (Anderson & Reeb, 2003; Villalonga & Amit, 2006) or engage in other non-transparent practices (e.g., nepotistic behavior) that may bring them into conflict with other minority shareholders. At the same time, this may denote that stewardship attitudes driven by altruistic behavior and the collective commitment to business goals (Corbetta & Salvato, 2004; Eddleston & Kellermanns, 2007) fade as the business becomes older and moves beyond the early committed generations of the family in the business.

We argue that it may be more likely to see higher firm performance when the firm is still young. We thus posit that:

Hypothesis 1c. The positive relationship between family ownership concentration and performance is stronger in younger firms.

Family involvement in management and firm performance

Another dimension that can illuminate the influence of family involvement on firm performance is family control, or having a family member at the helm of the firm.

From an agency perspective, mixed evidence exists regarding the effect of family management on the performance of the (listed) firm. A group of agency theorists (e.g., Bebchuk, Kraakman, & Triantis, 2000; DeAngelo & DeAngelo, 2000; Morck & Yeung, 2004; Morck, Shleifer, & Vishny, 1988) argues that agency problems in family-owned and -managed firms emerge because managers act solely for one single, entrenched, dominant family shareholder and overlook the interests of other shareholders. Consequently, this can allow members of the controlling family to play an active role in strategic management, cultivating a nepotistic culture that leads to favoritism for family insiders and the extraction of private benefits at the cost of non-family shareholders (Morck et al., 1988; Morck & Yeung, 2004) and making it difficult to resolve certain types of conflicts and to curb unproductive behaviors (Barclay & Holderness, 1991; Schulze, Lubatkin, & Dino, 2003; Schulze, Lubatkin, Dino, & Buchholtz, 2001).

On the contrary, other agency-inspired scholars (Ang, Cole, & Lin, 2000; Chrisman, Chua, & Litz, 2004; Daily & Dollinger, 1992; Eisenhardt, 1989) advocate that owner-managed family firms do not experience such agency costs due to goal alignment that results from the overlapping role of owners and managers at the helm of organizations, representing owning families and stakeholders. Evidence within publicly listed firms (see the Appendix for a review of relevant studies) specifically illustrates that family management has a positive influence on (listed) firm performance as long as the founder is at the helm (Anderson & Reeb, 2003; McConaughy, Walker, Henderson, & Mishra, 1998; Miller et al., 2007; Saito, 2008; Villalonga & Amit, 2006). Studies highlight the positive role of founders (Anderson & Reeb, 2003; Barontini & Caprio, 2006; Block et al., 2011; Sraer & Thesmar, 2007; Villalonga & Amit, 2006) and lone founders (Miller et al., 2007) on firm performance. Publicly listed family firms (Anderson & Reeb, 2003;

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Villalonga & Amit, 2006) that are owned by growth-inspired founders are observed to possess unique resources and dynamic capabilities (in the form entrepreneurial leadership and proprietary assets) that have a positive influence on firm performance.

Stewardship-led studies also provide evidence that family leaders, especially founders, can contribute positively to the performance of quoted firms, provided that they act as stewards and adhere to best practices in terms of governance and management (Andres, 2008). It may therefore be the case that the superior performance of founder-led family firms is due to the commitment and zeal of founders to contribute to the business that helps minimize agency costs and maximize stewardship attitudes. We thus posit:

Hypothesis 2a. There is a positive relationship between firm performance and family involvement in management, more specifically, through a founder CEO.

Studies drawing upon agency theory argue that when firm leadership is passed from the founder to subsequent generations of family members, then listed family firms are not likely to outperform their non-family counterparts (Andres, 2008; Barontini & Caprio, 2006; González, Guzmán, Pombo, & Trujillo, 2012; Miller et al., 2007; Saito, 2008; Villalonga & Amit, 2006). This is because subsequent generations may not be as committed to the business as the founders, and they may be more likely to exhibit nepotism and entrenchment behavior. In line with these findings, Cucculelli and Micucci (2008) purport that when family descendants are lined up for succession and business leadership moves to the second generation and beyond, financial performance is likely to be negatively affected. For this reason, a number of scholars advocate for the replacement of founder-CEOs with external professional managers instead of passing the leadership to family descendants (Block et al., 2011; Daily & Dalton, 1992; Flamholtz & Randle, 2012).

Stewardship theorists, however, offer a diverse perspective, arguing that family leadership is healthy across the generations (Davis, Allen, & Hayes, 2010; Eddleston, Kellermanns, & Zellweger, 2012; Miller & Le Breton-Miller, 2006). Sustained firm control through a family CEO is observed to bring along superior performance because it helps maintain a productive long-term orientation (Eddleston et al., 2012; Miller and Le Breton-Miller, 2005, 2006), accumulated learning (Miller & Le Breton-Miller, 2006), ongoing entrepreneurialism (Eddleston et al., 2012), cohesive organizational cultures and non-bureaucratic forms of organization (Le Breton-Miller & Miller, 2009). Although stewardship theory does not provide relevant insight with regard to publicly listed family firms, we argue that sustained family leadership across the generations may help establish prolonged stewardship attitudes and therefore positive firm performance. We thus posit:

Hypothesis 2b. There is a positive relationship between firm performance and family involvement in management, more specifically, through a family descendant CEO.

Family involvement in governance and firm performance

Board representation is another means through which family members can exert control over their publicly traded business (Anderson & Reeb, 2003, 2004; Giovannini, 2010). Agency-informed studies explain the influence of family board representation on firm performance; however, they provide conflicting explanations of this relationship. A number of studies drawing upon agency theory favor the use of independent directors on the board of the family firm to make sure that family control is not exerted at the expense of non-family shareholders (Anderson & Reeb, 2003, 2004; García-Ramos & García-Olalla, 2011). Other scholars that embrace this perspective argue that family board representation is healthy, especially during the founder generation (González et al., 2012; Lee, 2006; Miller et al., 2007). The stewardship rationale, in turn, purports that family control of the board leads to improved performance (Andres, 2008; Chu, 2011; Giovannini, 2010), with certain evidence illustrating that founders as board directors can contribute positively to firm performance as a result of strong stewardship (Andres, 2008). We thus argue:

Hypothesis 3a. There is a positive relationship between firm performance and family involvement through board representation, more specifically, through the presence of a founder on the board of directors.

While most studies illustrate positive links between board representation and firm performance only at the founder stage (Andres, 2008; González et al., 2012; Lee, 2006; Miller et al., 2007), it may be that these links persist across the generations. While intergenerational differences (in terms of family board representation) are not sufficiently addressed, stewardship-led studies illustrate a strong positive influence of family board presence on the performance of the firm (Chu, 2011; Giovannini, 2010). Giovannini (2010) argues that this phenomenon may result due to the minimization of conflicts between family members and external non-executive directors, the further accumulation of family knowledge in the business, and the uninterrupted management of the firm by the controlling family. We thus posit:

Hypothesis 3b. There is a positive relationship between firm performance and family involvement through board representation, more specifically, through the presence of family descendants on the board of directors.

Another dimension of family control explored in this study is the dual Chair-CEO roles that family members may hold in the business. The agency and stewardship theories provide conflicting explanations of the impact of this duality on the performance of the family firm. Advocates of the stewardship theory argue that when decision making is concentrated under a single individual, the more likely the firms is to see higher firm performance (Donaldson & Davis, 1991). On the other extent, agency theorists purport that a separation between the roles of the CEO and Chairperson are necessary to avoid managerial entrenchment and secure better monitoring of managerial behavior (Millstein & Katsh, 2003; Rechner & Dalton, 1991).

Evidence among publicly traded family firms fails to provide sufficient understanding of the nature of links between CEO-Chair duality and firm performance. Among the few agency-driven studies that explored this relationship, García-Ramos and García-Olalla (2011) offer evidence that contrasts the predictions of agency theory, illustrating that CEO-Chair duality has a positive influence on family firm performance. A rationale behind these findings might be that this study drew data from the Western European context, which is characterized by high shareholder protection (Anderson & Reeb, 2003; Dahya et al., 2009; Sacristán-Navarro et al., 2011) and therefore the minimization of agency problems that high family involvement can bring. Drawing data from another well-protected context, that is, the UK economy (Dahya et al., 2009), and building upon a stewardship perspective, we argue that duality may be important in business performance. Braun and Sharma (2007), while failing to find any support between duality (under an individual) and performance, propose that a single family member as CEO-Chair, acting as a proper steward, can help manage the business effectively for the sake of securing the benefits of all owners, both family and non-family, over the long run. In line with this and considering that duality

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beyond the founder generation can also help shape a highly performing family firm (Sacristán-Navarro et al., 2011), we posit:

Hypothesis 4a. There is a positive relationship between firm performance and family involvement through CEO-Chair duality, more specifically, through a founder assuming a dualistic role.

Hypothesis 4b. There is a positive relationship between performance and family involvement through CEO-Chair duality, more specifically, through a family descendant assuming a dualistic role.

The following section (part 4) offers details on the methodologies that were employed in data collection and analysis to test the aforementioned hypotheses.

Data

The database incorporates London Stock Exchange FTSE firms, excluding financial firms, and it involves financial data and business characteristics for 107 and 34 family-controlled listed companies (which represents all family-controlled firms that fulfill our selection criteria) and consists of 1477 firm-years covering the period from 1998 to 2008. We do not attempt to collect data after 2008, when the financial markets went into severe trouble. Thus, we choose to focus on a period prior to the financial crisis, which would help in our endeavors to properly test the family influence on firm performance. Firm-specific financial, ownership and corporate governance ownership and corporate governance for all sample firms is derived from DataStream, Hemscott and annual reports.

Both stratified sampling and matched-paired designs are used to select our sample. A stratified sampling technique is employed to make sure that the selected sample is proportionate to the actual population of quoted family and non-family firms listed in open stock markets such as that of the U.S., for which Anderson and Reeb (2003) document that approximately one-third of the S&P 500 corporations can be classified as family-controlled firms. A matched-paired design is employed to control for the effect of industry specificities and firm size (McConaughy et al., 1998). For each family-controlled firm identified, we aimed to select three peer firms that were comparable in terms of their scale of operation and sectoral activities to ensure that our results will be adequately generalizable. Matching family firms with rival firms operating in the same sector and on a similar scale of operations helps further improve the robustness of our models.

We select FTSE firms that represent industrial activities (excluding financial firms) and that hold at least 10% of shareholding in family hands. Based on these selection criteria, we identified 34 family-controlled PLCs. Our approach of using the 10% ownership threshold is in line with Becht and Röell (1999), who reported the median block-holding of UK 250 listed companies to be 9.9%. Moreover, the 10% boundary has been widely used in many other family firm investigations (La Porta et al., 1999; Maury, 2006; Peng & Jiang, 2010; Pindado et al., 2008; Villalonga & Amit, 2006) and is considered high enough for an owning family to exercise effective control. The family status of firms in the sample was determined through the use of a range of sources including Fame and Hemscott databases, annual reports, and historical accounts of businesses as they appeared on their websites. These sources helped in the collection of information around ownership and management structures and assisted in the identification of family-controlled firms, considering the 10% threshold that was set.

The final sample that is considered (i.e., 34 family and 107 non-family) is not an exact one-to-three match. While striving to secure a proportionate number of non-family firms that would fulfill the three-to-one criterion, efforts to identify comparable family firms to facilitate effective matching led in the consideration of 107 non-family firms. In a couple of sectors, we have not managed to exactly meet our matched sampling criteria due to the lack of firms with a similar scale of operations and due to the over-diversification of certain groups that could have complicated the comparative analysis.

Descriptive statistics

Table 1 reports the sectors/industries in which the firms operate along with the number of family and non-family firms in each sector. It transpires that family firms are more prevalent in retail, the trade of consumer goods, and construction; evidently, they are less prolific in certain capital-intensive sectors (oil equipment, services and distribution, natural resources).

Variables of the study

Dependent variables

In line with previous studies measuring the influence of family involvement on firm performance (see Table 1), our performance measures include returns on assets (ROA) based on EBITDA as well as net income (ROANI) and Tobin's *Q* (TOBQ). The first two measures examine the accounting performance of the firm, while the latter examines the market performance. In practice, to examine the accounting performance, we only use the first two measures. Tobin's *Q* is calculated as the market value (MV) of the firm divided by the total assets, where MV is the market value of common equity plus the book value of preferred stocks plus the debt. According to Villalonga and Amit (2006), this measure is used to avoid the arbitrary assumptions about depreciation and inflation rates that more sophisticated measures of Tobin's *Q* require.

Independent variables

Table 2 offers a description of the independent variables that our study employs. We adopt the definition by Anderson and Reeb (2003) in identifying family firms, which involves either fractional equity ownership and/or board representation by family members. Thus, family firms are distinguished from non-family firms by a dummy variable that equals one when founding families hold shares (a 10% threshold is used) in the firm (Family) or when there is family representation on the board of directors (family board representation).

Other dummy variables help determine firm age (young/old), family representation in the board of directors, family firm generation, the presence of the founder as the controlling

Table 1
% of family and non-family firms by sector.

Sector	Non-family firms (n = 107)	Family firms (n = 34)
Oil Equipment, Services and Distribution	5.6 (6)	2.9 (1)
Construction and Property	12.1 (13)	11.9 (4)
Consumer Goods	16.8 (18)	17.6 (6)
Engineering	2.8 (3)	2.9 (1)
Health	2.8 (3)	2.9 (1)
Leisure	11.2 (12)	8.8 (3)
Media	12.1 (13)	11.9 (4)
Natural Resources	1.9 (2)	2.9 (1)
Retailing	24.4 (26)	26.6 (9)
Technology	2.8 (3)	2.9 (1)
Telecoms	2.8 (3)	2.9 (1)
Transport	1.9 (2)	2.9 (1)
Professional and Support Services	2.8 (3)	2.9 (1)
Total	100% (107)	100% (34)

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shareholder, the presence of a family CEO, CEO-Chair duality, and family CEO succession.

At a lateral stage, we attempt to isolate the non-linearity effect, and thus, we use a continuous measurement of family ownership across the 1998–2008 period. Family ownership is defined as the fractional equity ownership of the firm's founding family.

Control variables

In order to control for industry and firm characteristics, we employ the following variables in our model. The natural log of a firm's total assets (TA) represents the size of the company. Growth opportunities (Growth) are calculated as the capital expenditures over sales, while leverage (debt in capital structure) is measured by the debt over total assets. A firm's age is given by the natural log of the number of years since the firm's incorporation. A firm's risk is the standard deviation of monthly stock returns for the prior five years (60 months).

These variables are controlled for because previous studies have shown that they may influence the relationship between family ownership-involvement and firm performance (Anderson & Reeb, 2003).

Model

In order to estimate whether a family firm performs better than a non-family firm, we employ the two-way fixed effects model (in line with the work of Anderson & Reeb, 2003):[3]

$$\text{Firm performance} = \alpha_0 + \alpha_1(\text{family firm}) + \alpha_2(\text{control variables}) + \alpha_3(\text{industry}) + (1)\alpha_{98-08}(\text{yearly dummies}) + \varepsilon$$

where

Firm performance = ROA, ROANI, and TOBQ;
Family firm = binary variable that takes the value of one when the founding family is present in the firm, and zero otherwise;
Control variables = growth opportunities, leverage effects, stock return volatility, the natural log of total assets and the natural log of firm age;
Industry code = one for each industry in our sample;
Year dummy variables = one for each year of our sample period.

Robustness and specification tests

Various robustness and specification tests have also been performed. Specifically, we run the regressions with different proxies for the independent variables, we test for endogeneity, and we perform the regressions using random effects, among other tests. We include different proxies for the independent variables as well as different combinations of the core regressors to check the robustness of the estimated coefficients. Furthermore, specification tests were conducted to ensure the proper specification of our model. The Hausman test found the random effects model to be inconsistent.

To check for endogeneity, we extract the residuals of the reduced-form regression against the suspected endogenous variables. We then run the main regression including these residuals. The significance tests are all rejected.

As a final robustness check, we obtain the results from different models, for example, a random effects model, even though the Hausman test found evidence against it. The results remain qualitatively similar to the results reported in the tables.

Summary statistics

Table 2 presents three panels of descriptive statistics for firms. Calculations in Table 3 are based on averages across time for each firm as well as averages across firms. Panel A provides means and standard deviations for measures. According to Panel A, on average, Tobin's *Q* is 0.68, which suggests that the market undervalues the matched sub-group of firms. This measure is the ratio of the asset's market value to its replacement value, and even though the usual interpretation of this discount is the pessimistic nature of the market, in our case, we believe that it is the lack of reliable measures of intangible assets.

Panel B reports on the results of difference-of-means tests between family and non-family firms. It shows that:

- Evidently, in comparative terms, there is a tendency for family firms to exhibit better profitability across all measurements.
- Non-family firms tend to be more leveraged, have higher growth potential and are subject to more stock return volatility. It has been argued that family-controlled firms tend to be more conservative in terms of their funding strategies: they tend to retain more profits and do not borrow excessively (Ampenberger, Schmid, Achleitner, & Kaserer, 2011; Poutziouris, 2001, 2006; Romano, Tanewski, & Smyrnios, 2001), despite the fact that they are more reluctant to raise capital through equity offerings (Croci, Doukas, & Gonenc, 2011).
- Tobin's *Q* remains below 1 for both sub-groups (this is attributed to our matched sampling methodology controls for sectoral-scale demographics); however, family-controlled firms experience lower market valuations compared to their peers.
- Non-surprisingly, family firms live longer than their non-family rivals, a consequence of the long-term commitment of family stakeholders.

Finally, the correlation matrix, panel C, shows relatively small correlations between family ownership and the different measures of performance. More specifically, the correlation between family control and total assets (TA) is negative and close to zero, −0.0127 – this is symptomatic of the matched sample. Furthermore, the relationships between ownership type and profitability measures are again close to zero and thus negligible. The different profitability measures show a positive correlation, with ROA strongly associated with ROANI. Interestingly, the profitability measures show little association or a negative association with Tobin's *Q*, the age of the firm, and firm size measured by total assets. Generally, low correlations suggest that our models and estimates do not suffer from any multicollinearity problems.

The section that follows offers details on the study's findings, shedding light on the validity of the hypothesized relationships between family ownership-management and firm performance.

Empirical findings

The effect of ownership on performance

Family ownership and firm performance

Table 4 presents the results using accounting performance measures (ROA in columns 1–2 and ROANI in columns 3–4). Focusing on columns 1 and 4, we find strong evidence that family firms outperform non-family firms. More specifically, our results show that the coefficient estimate on family firms is positive and significant under both measures. Based on average ROA (EBITDA) in the sample, family firms appear to earn 13.2% more returns

[3] Random-effects panel data regressions are also used, with the results (available upon request) remaining qualitatively the same. We control for serial correlation and heteroskedasticity using the Huber–White Sandwich estimator (clustered) for variance.

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Table 2
Variable description.

Variable		Description
Dependent		
1	Returns on assets (EBITDA) (%)	Firm's performance measure
2	Returns on assets (net income) (%)	Firm's performance measure
3	Tobin's Q	The market value (MV) of the firm divided by the total assets, where MV is the market value of common equity plus the book value of preferred stocks plus the debt.
Independent		
4	Family firm	A binary variable that takes the value of 1 if the firm is a family firm and 0 otherwise.
5	Young/old family	The value for a young family firm equals one when the firm age is less than 30 years (split into two subcategories: fewer than 20 years and between 20 and 30 years) and the family is present in the firm. The value for an old family firm equals one when the firm age is greater than or equal to 30 years and the family is present in the firm.
6	Family board representation	Family representation is a binary variable that equals one when a family member is present on the board of directors.
7	Founder	Founder is a binary variable that equals one when the founder is the controlling shareholder.
8	Duality	Duality equals one when the CEO is also the Chairman.
9	Family executive (CEO)	Family Executive equals one when the CEO is from the owning family.
10	Family/non-family succession	Succession is a binary variable that equals one when a family member succeeds as CEO.
11	Family ownership (%)	Family ownership is the fractional equity ownership of the firm's founding family.
Control variables		
12	Growth opportunities	Capital expenditure over sales
13	Leverage	Debt over total assets
14	Stock return volatility	The standard deviation of monthly stock returns for the prior five years (60 months)
15	Total assets (ln) (£000,000)	The natural log of the firm's total assets
16	Firms age (ln)	The natural log of the number of years since the firm's incorporation

Table 3
Descriptive statistics for family and non-family firms.

Panel A: Summary statistics for the full sample

		Mean (Std)
1	Returns on assets (EBITDA) (%)	12.880 (14.598)
2	Returns on assets (net income) (%)	4.458 (13.799)
3	Tobin's Q	0.680 (0.189)
4	Growth opportunities	22.522 (58.777)
5	Leverage	21.861 (23.816)
6	Stock return volatility	2.170 (1.186)
7	Total assets (ln) (£000,000)	13.067 (1.691)
8	Firms age	71.466 (58.511)

Panel B: Difference of means tests

		Non-family firms (n = 107)	Family firms (n = 34)	t-Statistic
1	Returns on assets (EBITDA) (%)	12.100	14.831	3.258*
2	Returns on assets (net income) (%)	3.7500	6.227	3.126*
3	Tobin's Q	0.686	0.663	2.105*
4	Growth opportunities	25.140	16.052	2.686*
5	Leverage	23.334	18.177	3.777*
6	Stock return volatility	2.221	2.042	2.623*
7	Total assets (ln) (£000,000)	13.081	13.031	0.521
8	Firm age	66.766	84.358	5.377*

Panel C: Correlation data

	Family	ROA	ROANI	TOBQ	Age	TA	Lever	SRV	Growth	Founder	Duality	F-CEO	Board
Family	1	0.08	0.08	−0.06	0.15	−0.01	−0.10	−0.07	−0.05	0.00	−0.01	0.00	0.01
ROA		1	0.89	−0.16	0.02	0.02	−0.10	−0.28	−0.19	−0.06	−0.03	−0.07	−0.04
ROANI			1	−0.03	0.06	0.07	−0.14	−0.35	−0.06	−0.01	0.00	−0.03	−0.03
TOBQ				1	0.05	0.27	0.16	−0.15	0.44	0.19	0.11	0.17	0.09
Age					1	0.17	−0.12	−0.13	−0.03	0.03	0.05	0.02	0.02
TA						1	0.14	−0.06	0.23	0.09	0.09	0.11	0.07
Leverage							1	−0.02	0.21	0.04	0.02	0.07	0.05
SRV								1	−0.13	−0.09	−0.06	−0.08	−0.04
Growth									1	0.27	0.14	0.32	0.19
Founder										1	0.49	0.51	0.20
Duality											1	0.72	0.51
F-CEO												1	0.72
Board													1

Notes: In Panel A, standard deviations are in parenthesis. Panel B provides difference-of-means tests between family and non-family firms and indicates significance at the 5 percent (*) level. t-Statistics are corrected for serial correlation using the Huber–White Sandwich estimator for variance. Panel C provides the correlation data for the variables used in the analysis.

* Statistically significant differences.

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Table 4
Accounting measures of performance and founding-family ownership.

	Returns on assets (using EBITDA)		Returns on assets (using net income)	
	(1)	(2)	(3)	(4)
Intercept	**0.189****	**0.183****	**0.090****	**0.080****
	(0.038)	**(0.034)**	**(0.032)**	**(0.032)**
Family firm	**0.017***		**0.017***	
	(0.008)		**(0.007)**	
Growth opportunities	**−0.027****	**−0.030****	−0.011	−0.010
	(0.007)	**(0.010)**	(0.007)	(0.007)
Leverage	0.005	0.004	−0.005	−0.005
	(0.016)	(0.020)	(0.015)	(0.015)
Stock return volatility	**−0.046****	**−0.046****	**−0.050****	**−0.050****
	(0.004)	**(0.004)**	**(0.003)**	**(0.003)**
Total assets	**0.008****	**0.007****	**0.009****	**0.009****
	(0.002)	**(0.002)**	**(0.002)**	**(0.002)**
Firm age	**−0.012****	**−0.010****	**−0.010***	**−0.008***
	(0.004)	**(0.004)**	**(0.004)**	**(0.004)**
Young family firm (age ≤20)		**0.077****		**0.064****
		(0.026)		**(0.024)**
Young family firm (20 < age ≤ 30)		0.012		0.017(0.018)
		(0.019)		
Old family firm (age >30)		0.012		0.012
		(0.009)		(0.008)
Adjusted R^2	0.181	0.182	0.170	0.170

Notes: Standard errors are in parentheses and are corrected for serial correlation with the Huber–White Sandwich estimator of variance. Significant coefficients (≤5%) are in bold.
* Significance at 5% level.
** Significance at 1% level.

Table 5
Market measures of performance and founding-family ownership.

	Tobin's Q	
	(1)	(2)
Intercept	**0.408****	**0.409****
	(0.047)	**(0.043)**
Family firm	**−0.020***	
	(0.010)	
Growth opportunities	**0.061****	**0.057****
	(0.009)	**(0.009)**
Leverage	0.031	0.032
	(0.020)	(0.019)
Stock return volatility	**−0.017****	**−0.016****
	(0.005)	**(0.004)**
Total assets	**0.020****	**0.022****
	(0.003)	**(0.003)**
Firm age	**0.010***	−0.002
	(0.005)	(0.005)
Young family firm (age ≤20)		**−0.117****
		(0.032)
Young family firm (20 < age ≤ 30)		**−0.091****
		(0.024)
Old family firm (age >30)		0.004
		(0.011)
Adjusted R^2	0.199	0.207

Notes: Standard errors are in parentheses and are corrected for serial correlation with the Huber–White Sandwich estimator of variance. Significant coefficients (≤5%) are in bold.
* Significance at 5% level.
** Significance at 1% level.

relative to non-family firms. We calculate this figure as: return = coefficient estimate/average ROA. This equals 0.017/0.1288 = 0.132. We also estimate this coefficient using ROANI, and the return is equal to 0.371.

Evidence of the superior performance of family firms is in line with other studies (Anderson & Reeb, 2003; Andres, 2008; Block et al., 2011; Miller et al., 2007; Sraer & Thesmar, 2007), suggesting that as active owners and/or managers, family shareholders act as an effective mechanism to alleviate agency problems. In addition to monitoring and control advantages, it has been argued that owning families have longer investment horizons that can mitigate managerial myopia and opportunism and can provide specialized knowledge and enduring ties that can generate unique dynamic capabilities and advantages (Anderson & Reeb, 2003; Block et al., 2011; James, 1999). These findings support the hypothesized (positive) relationship between family ownership and firm performance (i.e., Hypothesis 1a).

Concerning control variables, we find that ROA and ROANI are negatively related to growth opportunities, risk, and firm age. We note a positive association of profitability to firm size (as firms scale up to enjoy economies of scale and thus achieve better profitability). No significant association was found between debt usage and performance. Given the conservative financial philosophy of family owner-managers (Mishra & McConaughy, 1999), family firms often use less debt; however, Anderson and Reeb (2003) found that family firms use similar levels of debt as non-family firms, with family ownership reducing the cost of debt. Moreover, Croci et al. (2011) reported that family firms have a preference for debt financing, as it is a non-control-diluting security. Owing to the mixed results reported in the literature, the relationship between family control and financing decisions needs further investigation. However, this is beyond the scope of the current study.

Table 5 demonstrates the results of our models that seek to evaluate how family ownership impacts market value measured with Tobin's Q. According to column 1, ownership concentration in family hands does not create value. More specifically, the coefficient estimate on family firms is negative and significant. This finding suggests that Tobin's Q in family firms is 2.94% less than it is in non-family firms.[4] This could reflect the prevailing conditions in the UK context where outsider investors sometimes feel that they cannot align their interests with strongly committed family owner-managers. The latter often have a long-term strategic horizon, which may come into conflict with the short-term aspirations of institutional investors (Poutziouris, 2006). To avoid this prospective agency problem, outside investors may prefer non-family to family firms, and this may undermine the market performance of family firms. Given these conditions, Tobin's Q may not necessarily reflect the actual financial performance of family firms in our sample.

Nonlinearities between firm performance and founding-family ownership

The results from prior estimations suggest that founding-family presence exhibits controversial behavior depending on the measure used (accounting or market performance). In this section, we examine the possibility of nonlinearities between firm performance and family ownership. Evidence of nonlinearities between equity ownership structure and firm performance is given by Morck et al. (1988). Empirical evidence is also given by Anderson and Reeb (2003). To test whether family firms continue to have the same behavior when nonlinearities are taken into account, we modify our regression by including the percentage of family ownership and the percentage of family ownership squared. Table 6 reports the results of our models. Columns 1 and 2 use accounting measures, while column 3 uses market performance.

The results suggest that the relationship between family ownership and performance is non-linear; the family effect is initially a positive offering premium, but then turns. More specifically, the inflection point at which the positive effect of concentrated ownership in the founding family begins to taper off

[4] We calculate this as the coefficient estimate of family firms (−0.020) divided by the average Tobin's Q for the sample (0.0068).

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Table 6
Nonlinearities between performance and founding-family ownership.

	Returns on assets (using EBITDA)	Returns on assets (using net income)	Tobin's Q
Intercept	**0.193****	**0.088****	**0.419****
	(0.034)	**(0.033)**	**(0.048)**
% of family's ownership	**0.049****	**0.050****	**0.010****
	(0.005)	**(0.003)**	**(0.001)**
(% of family's ownership)^2	**−0.080****	**−0.084****	**−0.012****
	(0.001)	**(0.001)**	**(0.001)**
Growth opportunities	**−0.028****	−0.011	**0.059****
	(0.007)	(0.007)	**(0.009)**
Leverage	0.007	**−0.046****	0.029
	(0.016)	**(0.015)**	(0.020)
Stock return volatility	**−0.046****	**−0.050****	**−0.018****
	(0.004)	**(0.004)**	**(0.005)**
Total assets	**0.008****	**0.009****	**0.020****
	(0.002)	**(0.002)**	**(0.003)**
Firms age	**−0.011****	**−0.009***	0.006
	(0.004)	**(0.004)**	(0.005)
Adjusted R^2	**0.212**	**0.199**	**0.196**
Inflection point (%)	**30.6**	**30.5**	**41.7**

Notes: Standard errors are in parentheses and are corrected for serial correlation with the Huber–White Sandwich estimator of variance. Significant coefficients (≤5%) are in bold.
* Significance at 5% level.
** Significance at 1% level.

is approximately 31% using EBITDA and Net income to compute ROA and approximately 42% using Tobin's Q. The inflection point is calculated by setting the first derivative of the equation equal to zero with respect to the actual percentage of the family's ownership. Thus, our findings offer support for Hypothesis 1b, which points to the curvilinear relationship between family ownership and performance.

These results mirror the findings of Anderson and Reeb (2003), who identify an inflection point where performance gains associated with family ownership begin to taper off at 30.8% (27.6%) percent using EBITDA (net income) to compute ROA. Using Tobin's Q again, they report a similar inflection point at 31%.

Firm age and performance

We extend our analysis by including dummy variables to control for firm age. We introduce three age categories, namely: fewer than 20 years, 20–30 years, and more than 30 years, aiming to capture evidence of younger-generation and older-generation family firms that progressively move beyond the founder generation (i.e., considering that a family firm transcends generations every 30 years on average, Aronoff et al., 2003). More specifically, columns 2 and 4 of Table 4 show the results of the regression of accounting measures of performance on young and old family firms. Our results suggest that only young firms (less than 20 years of age) exhibit a significant and positive association to ROA (and ROANI), while older family firms (20–30 years of age and 30+) have similar performance to non-family firms, supporting Hypothesis 1c. Younger family firms are characterized by entrepreneurial vigor, enjoying meta-growth during the post-flotation era, with founders bringing unique resources and value-adding capabilities that result in better performance.

Using Tobin's Q as the performance measure, we reach different results. According to column (2) of Table 5, younger family firms, which normally have founders at the helm and are characterized by entrepreneurialism and a drive to grow, are found to be negatively associated with market value. This could be explained in the context of a contingency perspective, as in the UK, the business press has repeatedly featured sour relations between founders of family-controlled firms and their stakeholders, notably, institutional investors. Anecdotal evidence drawn from interview-based case studies point to an empathy gap between strongly committed family owner-managers (characterized by a long-term strategic horizon) and outside investors, often with a shorter investment horizon (Poutziouris, 2006). As a result, market performance may not necessarily reflect the actual financial performance of family firms in our sample.

The effect of governance and succession

We modify our models with the introduction of additional factors in order to moderate the effect of management and governance, namely: the role of a family CEO at the helm, family board representation, and the role of duality where the family CEO is also the Chairperson. This procedure is in line with Miller et al. (2007), advocating that explanations of performance must take into account not simply owners but also owners or executives and how their social context might influence their strategic priorities.

According to Table 7, columns (1), (3), (6), and (8) reveal that the presence of founders as both owners and CEOs of younger, fledgling companies is associated positively with performance, as measured by profitability ratios. These findings are in line with previous studies that stress the positive links between founder involvement and profitability (Anderson & Reeb, 2003; Block et al., 2011; Villalonga & Amit, 2006), supporting Hypothesis 2a. The results reveal that the presence of a family descendant as the CEO positively impacts performance (columns 3, 4, 8, and 9 of Table 7). This evidence supports Hypothesis 2b, which proposes positive links between performance and family leadership (i.e., a family member as the CEO) beyond the founder generation. These findings contrast a great deal of evidence in the field that supports the notion that family firms' outperformance is associated with lone-founder CEOs (Miller et al., 2007) or when the business is still in the first generation (Anderson & Reeb, 2003; Cucculelli & Micucci, 2008; McConaughy et al., 1998; Villalonga & Amit, 2006).

We then explore whether family representation on the board affects firm performance (in columns 5 and 10 of Table 7). The findings show a positive (and significant) association of family board representation with ROA and ROANI. They highlight the importance of family involvement, which helps to monitor and support management. Delving deeper into the findings, we identify a significant positive relationship between board representation and firm performance (using ROA and ROANI) during both the founder (in columns 1, 5, 6, and 10 of Table 7) and descendant generations (in columns 4, 5, 9 and 10 of Table 7). These findings support Hypothesis 3a, indicating that a positive relationship between firm performance and family control through the presence of a founder on the board of directors is possible. They also support Hypothesis 3b, illustrating that this positive relationship is maintained even when family representation on the board takes place through family descendant(s).

However, the findings depicted in Table 7 demonstrate that the family effect is negatively related to market performance, as measured by Tobin's Q. Evidently, family involvement in terms of board representation also has an adverse effect on market value. These findings may be a reflection of the perceptions of outside investors on owner-managed controlled firms and certain agency problems that they foresee from investing in closely held enterprises. Stronger family influence over firm practices may signify a potential risk of the misalignment of interests between agents (family owner-managers) and principals (investors). Thus, institutional investors tend not seek investments in family firms. Arguably, Tobin's Q may not necessarily reflect the real influence of family involvement on firm financial performance.

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Table 7
Ownership and performance as moderated by governance and succession in family firms.

	Returns on assets (using EBITDA)					Returns on assets (using net income)					Tobin's *Q*				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Intercept	**0.173****	**0.177****	**0.206****	**0.172****	**0.175****	**0.075****	**0.081***	**0.082***	**0.078***	**0.077***	**0.423****	**0.410****	**0.413****	**0.416****	**0.418***
	(0.033)	**(0.033)**	**(0.036)**	**(0.033)**	**(0.034)**	**(0.031)**	**(0.031)**	**(0.031)**	**(0.031)**	**(0.030)**	**(0.046)**	**(0.046)**	**(0.046)**	**(0.046)**	**(0.045)**
Founder	**0.039****					**0.035****					**−0.045****				
	(0.012)					**(0.012)**					**(0.015)**				
Duality		**0.032***					**0.029***					**−0.028***			
		(0.014)					**(0.013)**					**(0.013)**			
Family executive (CEO)			**0.030****					**0.028****					−0.011		
			(0.011)					**(0.011)**					(0.014)		
Family succession				**0.038****					**0.031****					−0.014	
				(0.015)					**(0.014)**					(0.018)	
Non-family succession				0.014					**0.019***					−0.016	
				(0.009)					**(0.009)**					(0.011)	
Board representation					**0.022****					**0.020****					**−0.026****
					(0.008)					**(0.008)**					**(0.010)**
Growth opportunities	**−0.026****	**−0.027****	**−0.027****	**−0.027****	**−0.026****	−0.010	−0.010	−0.011	−0.010	−0.010	**0.060****	**0.060****	**0.060****	**0.060****	**0.060****
	(0.007)	**(0.007)**	**(0.007)**	**(0.007)**	**(0.007)**	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	**(0.009)**	**(0.009)**	**(0.009)**	**(0.009)**	**(0.009)**
Leverage	0.006	0.005	0.006	0.005	0.005	−0.005	−0.005	−0.005	−0.005	−0.005	0.031	0.033	0.034	0.034	0.034
	(0.016)	(0.015)	(0.016)	(0.016)	(0.016)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)
Stock return volatility	**−0.046****	**−0.046****	**−0.046****	**−0.046****	**−0.046****	**−0.050****	**−0.050****	**−0.050****	**−0.050****	**−0.050****	**−0.016****	**−0.016****	**−0.016****	**−0.016****	**−0.016****
	(0.004)	**(0.004)**	**(0.004)**	**(0.004)**	**(0.004)**	**(0.003)**	**(0.003)**	**(0.003)**	**(0.003)**	**(0.003)**	**(0.005)**	**(0.004)**	**(0.004)**	**(0.004)**	**(0.004)**
Total assets	**0.007****	**0.007****	**0.007****	**0.007****	**0.007****	**0.009****	**0.009****	**0.009****	**0.009****	**0.009****	**0.020****	**0.021****	**0.021****	**0.021****	**0.021****
	(0.002)	**(0.002)**	**(0.002)**	**(0.002)**	**(0.002)**	**(0.002)**	**(0.002)**	**(0.002)**	**(0.002)**	**(0.002)**	**(0.003)**	**(0.003)**	**(0.003)**	**(0.003)**	**(0.003)**
Firm age	−0.005	**−0.006***	**−0.006***	**−0.006****	**−0.006****	−0.003	−0.005	−0.005	**−0.007***	**−0.007***	−0.001	−0.001	−0.001	−0.001	−0.001
	(0.003)	**(0.003)**	**(0.003)**	**(0.003)**	**(0.003)**	(0.003)	(0.003)	(0.003)	**(0.003)**	**(0.003)**	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Adjusted R^2	0.183	0.178	0.164	0.164	0.168	0.174	0.179	0.173	0.181	0.179	0.202	0.201	0.201	0.203	0.202

Notes: Standard errors are in parentheses and are corrected for serial correlation with the Huber–White Sandwich estimator of variance. Significant coefficients (≤5%) are in bold.
* Significance at 5% level.
** Significance at 1% level.

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Moreover, columns (1) (2), (6) and (7) show that having a founder CEO as a family leader in the dual role of CEO-Chairperson is positively related to accounting performance. The findings illustrate that this duality can bring improved performance, even when this role is assumed by subsequent generations of family members (in columns 2, 4, 7, and 9 of Table 7). This evidence supports both Hypotheses 4a and 4b, suggesting a consistently positive relationship between family duality and firm performance, which spans generations. This, contrasts the findings by Miller et al. (2007) that support that duality may be beneficial only when the business is at the lone-founder stage and not in family firms in which subsequent generations may assume this role. In fact, the present findings show that duality may positively relate to performance beyond the founder generation. This makes duality have a positive influence on family firm performance.

Finally, as columns (11) and (12) in Table 7 demonstrate, re-running the models using Tobin's *Q* as a performance measurement leads us to find that certain relationships are reversed. More specifically, the presence of the founder at the helm and the adoption of a duality role reduce market value. The presence of a family CEO and having a family descendant at this position is not found to be a significant factor in terms of its impact on market value. This finding could again reflect outside investors' perceived agency problems associated with family involvement. Non-family firms may be preferred because they may be perceived to maintain sounder corporate governance and meritocratic succession practices. This may contribute to the reduced market performance of family firms, which we believe may not realistically reflect the impact of family involvement and its overall influence on firm (financial) performance.

Discussion and conclusions

This research examined the impact of family involvement on performance measured on the basis of accounting profitability and market value.

Our models based on panel data provide evidence that the performance of listed firms (measured as returns on assets) is positively related to having concentrated ownership in the founding family. These findings mirror prior evidence in the field that emphasizes the positive links between family ownership and listed firm performance (Allouche, Amann, Jaussaud, & Kurashina, 2008; Anderson & Reeb, 2003; Andres, 2008; Lee, 2006; Maury, 2006; San Martin-Reyna & Duran-Encalada, 2012; Villalonga & Amit, 2006). A rationale behind these findings is the fact that concentrated family ownership may lead to reduced agency problems (Anderson & Reeb, 2003; Dyer, 2006; Miller et al., 2007) and enhanced stewardship attitudes (Corbetta & Salvato, 2004; Miller & Le Breton-Miller, 2006; Uhlaner et al., 2007), which can, in turn, improve performance.

Our study contributes to the literature on the influence of family ownership and firm performance by providing evidence that helps appreciate a non-static and non-linear understanding of this relationship. These findings are important because they help shed light on the conflicting evidence that exists around the links between family ownership and performance, which may not be necessarily purely negatively or purely positively correlated. We identify that while family ownership appears to positively influence performance, the relationship between the two is non-linear, and it is likely to be reversed beyond a specific level of share ownership. In line with Anderson and Reeb (2003), our study reveals that the performance of listed family firms increases until family shareholding reaches one-third of the firm's total shares, while beyond this level, the financial performance begins to decline.

We also identify that the positive relationship between family ownership concentration and performance is likely to be stronger in younger, founder-centered family firms. These results are consistent with previous studies (Anderson & Reeb, 2003; Barontini & Caprio, 2006; Miller et al., 2007; Sraer & Thesmar, 2007; Villalonga & Amit, 2006). A rationale for these findings may be the fact that younger family firms are characterized by an entrepreneurial vigor on behalf of the founders that results in better performance. This may offer a diverse perspective on the influence of the family on business that may not be necessarily explained by agency or stewardship theories. Improved performance may be tied to a high entrepreneurial orientation that characterizes young (lone) founders. These findings build on studies that call for an explanation of the influence of the family on firm performance using perspectives that span beyond the traditional agency and stewardship frameworks (e.g., Miller et al., 2007).

Furthermore, we find evidence to support the thesis that the involvement of family members in management (i.e., CEO) and governance (i.e., board representation, CEO-Chair duality) enhances the performance of the family business model. Our evidence illustrates that family involvement through both management and governance is likely to be fruitful across the generations (i.e., beyond the founder generation). Our work addresses a complete set of family involvement options (including generational differences) in a single study, offering further insight on the dynamics of family involvement and their respective influence on firm performance.

This study offers evidence that contrasts much literature in the field pertaining the influence of next-generation family members (through a family CEO, family board representation, and CEO-Chair duality) on firm performance (Anderson & Reeb, 2003; Cucculelli & Micucci, 2008; McConaughy et al., 1998; Miller et al., 2007; Villalonga & Amit, 2006). While other studies purport that the family effect may erode when succeeding family generations become business leaders (Anderson & Reeb, 2003; Cucculelli & Micucci, 2008; McConaughy et al., 1998; Villalonga & Amit, 2006), our findings suggest the contrary. Our study also empirically proves that CEO-Chair duality beyond the founder generation can be beneficial. This contrasts much research in the field that calls for a separation of these two roles in avoiding managerial entrenchment (Millstein & Katsh, 2003; Rechner & Dalton, 1991). These findings are important in the sense that they provide an alternative perspective to current thought, illustrating a consistent positive relationship between family involvement and performance that spans generations. The findings reinforce the significance and applicability of stewardship theory (Giovannini, 2010), which had been limitedly employed in explaining family influence. This is a perspective that could set prospects for appreciating the long-term, intergenerational family influence over firm performance.

This study is among the few that offer a consistent account of the applicability of agency and stewardship theories in explaining the way that family involvement influences firm performance. Our evidence shows that family involvement across generations helps promote stewardship attitudes and effective governance that ensures goal alignment and limits the entrenchment effect. Conversely, we can posit that when family companies are dominated by entrenched family oligarchs – overlooking growth opportunities that could jeopardize the dominant position of the controlling family and fail to adopt effective governance and meritocratic succession – the markets undermine their value.

Furthermore, these findings also reflect the importance of the context in shaping an enduring positive relationship between family involvement and performance. The UK is a context in which equity markets are characterized by the prevalence of the sound governance protection of minority shareholders (Dahya et al., 2009; Franks et al., 2005), and therefore, the family firm model works and creates value for all stakeholders. While in other

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prominent contexts such as the U.S. (Daily & Dalton, 1992; Block et al., 2011; Villalonga & Amit, 2006), Germany (Andres, 2008) and Japan (Saito, 2008), performance is likely to erode when family descendants are involved, this does not appear to be the case in the UK. Our findings suggest that the UK appears to be ideally situated for listed family firms to maintain family control across the generations because it appears to help nurture strong stewardship attitudes that minimize agency-related problems and maximize shareholder value over the long term. These findings emphasize the need to appreciate the institutional context when exploring the relationship between family involvement and performance, which may vary across market contexts.

Limitations

This research is not free from limitations. Evidently, the relatively small sample of family firms constitutes a methodological caveat. The database under investigation has been monotonous, characterized primarily by 'survivors', which begs for a more in-depth examination. More precisely, we observe only one family-controlled firm that has experienced financial distress and thus went into administration and only one new family-controlled flotation during the 1998–2008 period.

Moreover, the definition of family ownership and management control could be revisited. Our modeling uses both dummy variables and the actual-continuous measurement of family ownership control. Nevertheless, one could also use the *Power* (proportion of family shareholding; proportion of family representation on the board, proportion of family representation in management) and *Experience* sub-scales (the generation of the owning family in terms of ownership; the generation of the owning family in terms of board representation, etc.) of the F-PEC scale (Klein, Astrachan, & Smyrnios, 2005). However, this is a difficult task because it needs a survey instrument (as there are eleven items to capture the cultural configuration of family in business). Unfortunately, our previous experience suggests that PLCs often have a policy not to participate in empirical surveys.

Our management and governance variables simply allow us to delineate the effect of founders and descendants at the helm of the firm either as CEOs, board members, and/or CEO-Chairman dualistic roles. Thus, we do not attempt to evaluate the mediating effect of governance practices (the balance of family members on the board, independence of board members, ownership of non-family directors, the use of sub-committees, etc.). Moreover, our data do not allow us to examine the nature of family owners (lone owners, the use of family trusts to act in concert, and the family net worth interlocked in the company). Additionally, we do not attempt to control for the profile of other block-holding shareholders (financial or not), the use of pyramidal and cross-shareholding used to increase voting power in excess of cash rights, and the interplay of other block-shareholders that can collide or collude with family shareholders.

Another limitation relates to the use of performance measures in the context of this work. While a diverse account of measures exists to capture performance, including financial and non-financial measures (e.g., customer ratings, quality-percentage of returns, employee training hours) (Neumann, Roberts, & Cauvin, 2011), the present article considered only financial performance-related measures. It is acknowledged that the use of measures outside the financial domain could help obtain a more balanced representation of the influence of family on firm performance.

Lastly, the focus on the UK context brings forth additional limitations. This is the fact that the findings become context-specific and the efforts to generalize across contexts are diminished. The UK presents its own idiosyncratic context in terms of institutional arrangements, stock market regulations, and culture, which may influence the relationship between family ownership/management and performance in a different way. As a result, the findings from this study may not be necessarily applicable to other country contexts.

Implications and future research

In light of the general view that the UK equity market is well-regulated and transparent and thus does not suffer from problematic governance and various types of agency problems (that emerge as a result of the use of ownership pyramids, cross-shareholding and voting power-enhancing schemes), we can conclude that with the right governance and professional managerialism, family-controlled owner-managed listed firms can add value to the business to the benefit of all stakeholders.

Regulators and advisors should encourage the owner-managers of family firms to be careful not to build excessive powers that can lead to retrenchment, nepotism, and oligarchic behavior. It is paramount to draw lessons from other studies that expound the failure of descendants to inherit the dynamic capabilities of the founders of family firms. There is a need to adopt best practices in terms of governance schemes and strategic planning in order to safeguard the long-term entrepreneurial development of listed family firms.

Future research should be directed toward a more dynamic and context-specific understanding of the influence of family on business performance. Scholars should acknowledge the need to consider multiple firm/family/ownership/involvement-specific variables, such as variations in the level of ownership concentration, differences in terms of family involvement in management, firm age, roles that family members may have in the business, and the generational lifecycle stage, among others, to gain a fruitful understanding of this relationship. At the same time, there is a need to conduct research that will explicitly acknowledge the need to measure the separate effect of family ownership and involvement on firm performance (Block et al., 2011). All of these suggestions can potentially contribute to a more dynamic understanding of the influence that the family has on the performance of the firm.

Furthermore, the findings illustrate that context may have a mediating role on the influence of the family on firm performance. It may be the case that scholars should direct their attention to context-specific variables, such as institutional arrangements, regulatory frameworks and cultures/sub-cultures in terms of fully comprehending the way in which the family impacts firm performance. To achieve this, qualitative studies that can help unveil the influence of the context on this relationship may be needed. Ideally, multi-case research conducted in different country contexts could help provide a more thorough account of cross-national differences and the relevant idiosyncratic influences on the relationship between family ownership/involvement and performance.

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Appendix. Family influence and the performance of listed companies

References	Sample	Definition of family-controlled firms	Dependent variable	Theory	Family involvement				Results
					Ownership	Management (CEO)	Governance	Inter-generational	
Anderson and Reeb (2003)	Standard and Poor's 500, 1992–1999	Fractional equity ownership of the founding family and (or) the presence of family members on the board of directors	ROA (EBITDA, Net Income) & Tobin's Q	Agency	Yes	Yes	No	No	Superior performance of family firms over non-family firms, regardless of firm age. Family firms are better performers only when family members serve as CEOs. The relation between firm performance and founding family ownership is nonlinear.
Miller et al. (2007)	Fortune 1000 firms, 100 smaller public companies	Multiple members of the same family are involved as major owners or managers, distinguishing "lone founder" businesses from family firms, the former having one or more founders with no other relatives in the business	Tobin's Q		Yes	Yes	No	Yes	Family firms do not outperform non-family firms. Only businesses with a lone founder outperform.
Villalonga and Amit (2006)	Fortune 500 firms, 1994–2000	Definition by Anderson and Reeb (2003)	Tobin's Q, ROA	Agency	Yes	Yes	Yes (Chair)	Yes	Family ownership creates value only when the founder serves as the CEO of the family firm or as Chairman with a hired CEO. When descendants serve as CEOs, firm value is destroyed
Maury (2006)	Faccio and Lang's (2002) sample of Western European firms, WorldScope database	Family controlling shareholder holding at least 10% of the voting rights	Tobin's Q, ROA, ROE	Agency	Yes	Yes (CEO, Chair, Vice-Chair control measured altogether as part of the active management)		No	Superior performance of family firms over non-family firms. Active family control (CEO, Honorary Chairman, Chairman, and Vice Chairman positions) is associated with higher profitability compared to non-family firms, whereas passive family control does not affect profitability.
San Martin-Reyna and Duran-Encalada (2012)	Companies listed on the Mexican Stock Exchange, 2005–2009	Family firms are companies where the founder or family member holds more than 50% ownership	Tobin's Q	Agency	Yes	No	Yes	No	Superior performance of family firms over non-family firms. In family firms, the presence of outside directors on the Board has a negative impact on performance, while the participation of shareholders and affiliate directors has a positive effect on value creation.

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Appendix (*Continued*)

References	Sample	Definition of family-controlled firms	Dependent variable	Theory	Family involvement				Results
					Ownership	Management (CEO)	Governance	Inter-generational	
González et al. (2012)	523 listed and non-listed Colombian firms, 1996–2006	Firms with family involvement in management and ownership	ROA, AROA (industry-adjusted returns on assets)	Agency	Yes	Yes	Yes (% of family members on the board)	Yes	Family firms exhibit better financial performance on average than non-family firms when the founder is still involved in operations, although this effect decreases with firm size. With heirs in charge, there is no significant difference in financial performance. Family ownership positively influences performance.
Block et al. (2011)	Standard and Poor's 500	Family firms determined by the family's ownership stake and role in top management. Ownership by the family is the percentage of common equity owned by one or several founding family members, where relatives of the founder serve as major owners or officers of the company.	Tobin's Q (market-to-book value)	Agency	Yes	Yes	No	No	Whereas family ownership and founder ownership are associated with superior performance, the results for family and even founder management are more ambiguous.
Sacristán-Navarro et al. (2011)	Spanish stock exchange firms, 2002–2008	Defined family firms using an ownership criterion. Searching for the stake held by individuals or families (adding for families the voting rights held by the various family members)	ROA (the book value of operating profit over the book value of total assets)	Agency	Yes	Yes	Yes (Chair)	No	Family ownership has no significant influence on profitability and family control seems to matter (a family CEO and/or Chair).
Perrini, Rossi, and Rovetta (2008)	Consob database (Italy) 297 firms from 2000 to 2003	Firms where the largest ultimate owner is an identified family or individual	Tobin's Q	Agency	Yes	Yes	No	No	Ownership concentration is beneficial to firm valuation. On the contrary, managerial ownership is only beneficial in non-concentrated firms, suggesting that the controlling owner may use his/her position in the firm to extract private benefits at the expense of the other shareholders by appointing managers that represent its own interest.
Peng and Jiang (2010)	Asian Corporate Governance Archival Data Center and Worldscope	Firms having a family member as the largest shareholder. A five percent control rights share is used as a cutoff	Firm value (percentage of cumulative stock return)	Agency, Resource-based view	Yes	Yes	No	No	The net balance of the benefits and costs of family control of large firms is systematically linked to the legal and regulatory institutions governing investor protection.

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Lee (2006)	Standard and Poor's 500, 1992–2002	Definition by Anderson and Reeb (2003)	Employment growth, revenue growth, gross income (before taxes) growth, and net profit margin	Agency	Yes	Yes	Yes (Board rep)	No	Family firms exhibit better financial performance than non-family firms. Firm performance improves when founding family members are involved in management.
McConaughy et al. (1998)	The Business Week CEO 1000, 1986–1988	Public corporations whose CEOs are either founders or members of the founder's family	Market-to-book equity ratios; market returns	Agency	Yes	Yes	No	Yes	Family relationships improve monitoring while providing incentives that are associated with better firm performance. Founding-family-controlled firms are more efficient and valuable than non-founding-family-controlled firms. Descendant-controlled firms are more efficient than founder-controlled firms. Younger founder-controlled firms are more efficient than older founder-controlled firms.
Allouche et al. (2008)	Worldscope database, Kurashina's (2003) list; 1998–2003	Family control exists in terms of both capital (family members are among the largest shareholders) and management (family members hold management positions or are on the board of directors)	ROA, ROE, ROIC	Agency	Yes	Yes (CEO and/or board representation measured altogether as part of family control)		No	Family firms in Japan achieve better performance than non-family firms in Japan. The level of family control strongly influences performance.
Andres (2008)	Frankfurt Stock Exchange 275 firms	(a) The founder and/or family members hold more than 25% of the voting shares, or (b) if the founding family owns less than 25% of the voting rights, they have to be represented on either the executive or the supervisory board	Tobin's *Q*, returns on assets (EBITDA and EBIT)	Agency, Stewardship	Yes	Yes	Yes (Chair, board rep)	Yes	Family firms not only are more profitable than widely held firms but also outperform companies with other types of block-holders. However, the performance of family businesses is only better for firms in which the founding family is still active either on the executive or the supervisory board.
Barontini and Caprio (2006)	Faccio and Lang's (2002) sample of Western European firms	Family firms are those where the largest shareholder invests on average more than one-third of the total shareholder capital in terms of ultimate cash-flow rights (10% cutoff)	ROA, Tobin's *Q*		Yes	Yes	Yes (chair, board rep)	Yes	Valuation and operating performance are significantly higher in founder-controlled firms and in firms controlled by descendants who sit on the board as non-executives. When descendants become CEOs, family-controlled firms are not significantly different from non-family firms in terms of valuation and performance.
Bjuggren and Palmberg (2010)	Stockholm Stock Exchange, 1999–2005	A firm is defined as a family firm if the largest owner is a family member or an individual who controls at least 20% of the outstanding votes	Marginal Q	Agency	Yes	Yes (CEO and/or board representation measured altogether as part of family control)		No	Family control has a positive impact on investment performance when ownership and control are aligned, whereas the separation of ownership and control in terms of vote-differentiated shares reduces investment performance.

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Appendix (*Continued*)

References	Sample	Definition of family-controlled firms	Dependent variable	Theory	Family involvement				Results
					Ownership	Management (CEO)	Governance	Inter-generational	
Bonilla et al. (2010)	Economatica, SVS, Santiago Stock Market; 1998–2007	Use of three criteria: (a) Clearly associated with a business family; (b) Controlled at the senior management level by one or more members of a family-controlled firm, (c) If its board of directors is controlled by one or more members of a family	ROA	Agency	Yes	No	No	No	Family-controlled firms not only perform better but also show less volatility in their returns.
García-Ramos and García-Olalla (2011)	Bureau Van Dijk; Amadeus Database; Spanish, Portuguese and Italian PLC FBs; 2001–2007	Through the control chain, the main shareholder directly or indirectly holds a percentage of ownership equal to or higher than 25% and is a family member; additionally, family members are participants in the management team and/or on the board of directors of the firm	Tobin's *Q*	Agency	Yes	No	Yes (CEO-Chair duality, board rep)	Yes	Board size has a positive effect on firm performance in non-founder-led family firms and a negative effect on founder-led family firms. The presence of independent directors on the board has a positive effect on performance when a firm is run by its founder. When descendants lead the firm, the presence of independent directors has a negative effect on performance. Although the effect of board meetings on performance is positive, this relationship is weaker when the family firm is run by its founder. CEO duality improves performance when descendants run the firm.
Giovannini (2010)	56 Italian IPOs, 1999–2005	The F-PEC score is used to identify family firms (FB $\geq$ 0.5)	Long-term firm performance (T period buy-and-hold abnormal returns)	Agency, Stewardship	Yes	Yes	Yes (Chair, board rep)	No	The presence of independent directors positively affects performance, while family involvement and the presence of execution committees negatively impacts share performance.
Hamadi (2010)	147 Belgian listed firms, 1991–1996	Define a family firm as one where there is a known link to the family of the founding owner(s) through direct shareholding in the firm	Tobin's *Q*	Agency	Yes	No	No	No	In family firms, the effect of large controlling shareholders on performance is positive except when they are organized in voting blocks. The presence of a second shareholder in the firm has no significant effect.
Kowalewski et al. (2010)	217 listed Polish companies, 1997–2005	A firm where the family has legal control of voting stocks or where the founder (or founder's descendant) runs the company. Use of a 25% family ownership cutoff.	ROE, ROA	Agency	Yes	Yes	Yes (Chair)	No	An inverted U-shaped relationship between the share of family ownership and firm performance. Firms with family CEOs are likely to outperform their counterparts that have non-family CEOs.

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Martínez, Stöhr, and Quiroga (2007)	175 listed Chilean firms, 1995–2004	Use of one of the following criteria: (1) A firm whose ownership is clearly controlled by a family, in which family members participate as members on the board of directors and/or top management (2) A firm whose ownership is clearly controlled by a group of two to four families (3) A firm that is included in a specific business group clearly associated with a business family	ROA, ROE, Tobin's *Q*	Agency	Yes	No	No	No	Public family firms perform better than public non-family firms.
McConaughy and Phillips (1999)	175 listed U.S. firms, 1986–1988	Firms in which founding-family control plays an active role. CEOs acknowledge their firms as family firms	ROE, Profit margin, ROA	Agency	Yes (ownership and family CEO measured altogether as part of family control)		No	Yes	Family firms are less profitable than non-family firms. Descendant-controlled firms are more profitable.
Saito (2008)	1818 Japanese listed firms, 1990–1998	Family firm equals one if a founder or a descendant is a president or chairman and/or the founding family is the largest shareholder of the firm	Tobin's *Q*	Agency	Yes	Yes (CEO and/or Chair measured altogether as part of family management)		Yes	Family firms managed by founders are traded at a premium. After the retirement of founders, the results are mixed. The performance of family firms both owned and managed by the founder's descendants is inferior to that of non-family firms. In contrast, the performance of family firms owned or managed by the founder's descendants is superior to that of non-family firms.
Cai, Luo, and Wan (2012)	351 Chinese listed family firms on Shanghai and Shenzhen Stock Exchanges, 2004–2007	Firms having a family or an individual ultimate owner that holds at least 20% of firm-control rights	Tobin's *Q*, ROA	Agency	Yes	Yes	No	No	Family CEOs are positively related to firm performance. There is a stronger positive effect in family firms when family owners have higher ownership, when family ownership and family control are less divergent, and when firms have multiple large-shareholder structures.
Chu (2011)	786 Taiwanese listed firms on the Taiwan Stock Exchange (TSE) and Over-the-Counter (OTC) securities exchange market, 2002–2007	Following Anderson and Reeb (2003), it uses the existence of family shareholdings to identify family firms	ROA	Agency, stewardship	Yes	Yes	Yes (Chair, board rep)	No	Family ownership is positively associated with firm performance. The positive association is strong, particularly when family members serve as CEOs, top managers, chairpersons, or directors of the firms; however, the association becomes weak when family members are not involved in firm management or control. The association between family ownership and firm performance is stronger in small- and medium-sized enterprises (SMEs) than it is in large firms.

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Appendix (*Continued*)

References	Sample	Definition of family-controlled firms	Dependent variable	Theory	Family involvement				Results
					Ownership	Management (CEO)	Governance	Inter-generational	
Filatotchev et al. (2005)	228 firms listed on the Taiwan Stock Exchange (TSE)	Use of a measure of the ownership-equity holding of the largest individual shareholder and close family	Market-to-book value, ROCE, ROA, sales revenue per issued capital, earning per share	Agency	Yes	No	Yes	No	Family control is not associated with performance. Board independence from the founding family's and board members' financial interests have a positive impact on performance.
Jiang and Peng (2011)	Two samples: (a) 744 large listed family firms in Hong Kong, Indonesia, Malaysia, Philippines, Singapore, South Korea, Taiwan, and Thailand; (b) 688 listed family firms in the same eight Asian countries	A "family-owned and -controlled large firm" is defined as a firm having a family and/or its identifiable members as the largest owner(s). A five-percent family control rights cutoff is used	Cumulative stock return	Agency	Yes	Yes	No	No	(a) There is mixed evidence on the influence of family ownership and control on large firm performance. (b) Family CEOs enhance firm value in less developed institutional environments.

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