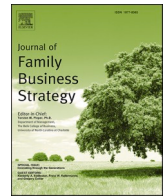


Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

## Journal of Family Business Strategy

journal homepage: [www.elsevier.com/locate/jfbs](http://www.elsevier.com/locate/jfbs)

## Strings attached: Socioemotional wealth mixed gambles in the cash management choices of family firms

Domenico Rocco Cambrea<sup>a</sup>, Yuliya Ponomareva<sup>b,\*</sup>, Daniel Pittino<sup>c,e</sup>, Alessandro Minichilli<sup>d</sup>

<sup>a</sup> *Università Cattolica del Sacro Cuore, Largo Gemelli, 1, 20123, Milano, Italy*

<sup>b</sup> *The Autonomous University of Barcelona, Campus de la UAB, Plaça Cívica, 08193, Bellaterra, Barcelona, Spain*

<sup>c</sup> *Jönköping International Business School, Box 1026, 551 11, Jönköping, Sweden*

<sup>d</sup> *Bocconi University, Via Roberto Sarfatti, 25, 20136, Milano, Italy*

<sup>e</sup> *University of Udine, Via Tomadini, 30/a, 33100, Udine, Italy*

## ARTICLE INFO

## Keywords:

Cash holdings

Corporate governance

SEW

Mixed gamble

Boards of directors

## ABSTRACT

Family owners differ from other types of owners due to the presence of socioemotional wealth (SEW) concerns. We take a closer look at this distinctive aspect by examining the impact of family control and influence dimension of SEW on the cash management choices of family firms, conceptualizing it as a mixed gamble choice. Our empirical analysis of 195 Italian firms listed on the Milan Stock Exchange between 2003 and 2015 shows that family firms derive more value and incur lower costs than nonfamily firms when they increase their cash holdings. We then delve deeper into family firms' cash management choices by exploring how different levels of family control and influence as well as types of board governance arrangements moderate this relationship. The empirical results indicate that the positive effects of family ownership are more pronounced under a high level of family control and influence and with separation of the board chair and CEO positions.

### 1. Introduction

In recent years, corporate cash holdings have become a subject of extensive scrutiny by researchers (Deb, David, & O'Brien, 2017; Kim & Bettis, 2014; Li & Luo, 2020) as well as by practitioners, and corporate governance activists (Burgess, 2020; Powell, 2019). The debate revolves around the two main motives for cash accumulation: precautionary and opportunistic. On the one hand, scholars contend that cash accumulated based on precautionary motivation can serve as a critical resource for a firm, specifically in the context of uncertainty and changing market conditions (Brown & Petersen, 2011; Schroth & Szalay, 2010). On the other hand, the proponents of the free cash flow theory (Jensen, 1986) draw attention to the risks of increasing cash holdings due to potential opportunistic expropriation by managers (Bammens, Voordeckers, & Van Gils, 2011; Harford, Mansi, & Maxwell, 2008). As a means of reconciling these divergent perspectives, other scholars suggest a curvilinear relationship between cash holdings and firm value, in which both too little and too much cash can hurt performance (George, 2005;

Kim & Bettis, 2014).

Despite the large body of research on the performance effects of cash holdings, the extant literature dominated by the free cash flow hypothesis (Jensen, 1986) is largely silent about the role of shareholder identity in shaping the optimal level of cash holdings. In this vein, it is implicitly assumed that the sole priority of shareholders is the maximization of financial returns. The socioemotional wealth (SEW) perspective challenges this view, arguing that family firms differ from other types of owners due to the prominence of "nonfinancial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty"<sup>1</sup> (Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007: 106). Numerous studies have shown the relevance that SEW concerns for strategic choices made by family firms (for reviews, see Berrone, Cruz, & Gómez-Mejía, 2012; Swab, Sherlock, Markin, & Dibrell, 2020). Indeed, the SEW perspective provides a relevant angle to examine the cash management choices of family firms because such choices are closely related to the risk and control domains

\* Corresponding author.

E-mail addresses: [domenicorocco.cambrea@unicatt.it](mailto:domenicorocco.cambrea@unicatt.it) (D.R. Cambrea), [yulia.ponomareva@uab.cat](mailto:yulia.ponomareva@uab.cat) (Y. Ponomareva), [daniel.pittino@ju.se](mailto:daniel.pittino@ju.se) (D. Pittino), [alessandro.minichilli@unibocconi.it](mailto:alessandro.minichilli@unibocconi.it) (A. Minichilli).

<sup>1</sup> Although SEW concerns have been mainly examined in the context of family firms, some scholars have acknowledged the possibility that SEW may also be an important reference point for other categories of owners such as nonfamily owners or owner-managers (Schulze, 2016).

<https://doi.org/10.1016/j.jfbs.2021.100466>

1877-8585/© 2021 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

(Amess, Banerji, & Lampousis, 2015; Deb et al., 2017; Kim & Bettis, 2014), and thus have direct implications for the influence and control dimension of family SEW. Yet, apart from rare exceptions (Durán, Lozano, & Yaman, 2016; Laffranchini & Braun, 2014), it has rarely been applied in the domain of capital-management choices, thus prompting the following research question: *how does the presence of family owners shape the tradeoffs between precautionary and opportunistic motives for cash accumulation?*

Drawing on SEW perspective, we contend that an increase in cash holdings constitutes a *mixed gamble*, i.e., a choice that implies the possibility of both gain and loss outcomes (Gómez-Mejía, Patel, & Zellweger, 2018; Gómez-Mejía et al., 2014), as SEW benefits may be derived from increased financial stability but can also provoke a financial loss due to family opportunism. When making cash management choices, family firms then weigh these current and potential SEW gains and losses against respective financial gains and losses. For example, when cash resources are scarce, posing a threat to firm survival, an alignment between SEW and financial concerns will occur, generating benefits that extend to all shareholders, denoted as *extended SEW* (Miller & Le Breton-Miller, 2014; Gómez-Mejía et al., 2018). However, the balance between extended and restricted SEW may not be identical across all levels of cash holdings. When cash resources are abundant, firm survival is less of a concern, thus driving a wedge between SEW and financial concerns. This division may eventually result in the family owners' pursuit of SEW at the expense of financial losses, reflecting in benefits exclusive to the owning family, denoted as *restricted SEW* (Miller & Le Breton-Miller, 2014). Because of the alignment of SEW and financial concerns at low to medium levels of cash holdings, we predict that family firms will profit more from increasing their cash holdings than their nonfamily counterparts.

We subsequently explore heterogeneity among family firms based on the nature and extent of family control and influence (Alessandri, Cerreto, & Eddleston, 2018; Swab et al., 2020) as a boundary condition for the relationship between cash holdings and firm value in family firms. More specifically, we theorize that, at different levels of cash holdings, the extent of family control and influence will accentuate SEW concerns, thereby reinforcing both extended and restricted SEW. In our theorization, we recognize the board of directors as an important corporate governance mechanism (Fama & Jensen, 1983). We argue that in the context of high family control and influence, vigilant board monitoring will limit family owners' pursuit of restricted SEW at high levels of cash holdings, flattening the inverted U-shaped relationship between cash holdings and firm value.

We test our hypotheses on a longitudinal sample of 195 Italian listed firms between 2003 and 2015. Italy provides an interesting setting to explore the effects of family governance strategies due to the strength of the family institution in Italian society (Alesina & Giuliano, 2014) and the country's long family business tradition. First, unlike Anglo-Saxon countries characterized by widely diffused ownership, a large percentage of Italian listed firms are controlled and often managed by families (Minichilli, Brogi, & Calabrò, 2016; Volpin, 2002). Second, less liquid financial markets make cash resources an essential internal source of financing for Italian firms. These two distinctive features of the focal country context allow us to rigorously examine differences in cash management strategies between family and nonfamily firms.

Our study provides three key contributions. First, we provide empirical support for the SEW perspective on the influence of family principals on firm strategic decisions (Gómez-Mejía et al., 2011; Gómez-Mejía, Cruz, Berrone, & DeCastro, 2011; Gómez-Mejía, Neacsu, & Martin, 2019) by extending the analysis to the domain of cash management. More specifically, we explain how and why the salience of the mixed gamble choices faced by family ownership influences the performance outcomes of cash management decisions. In doing so, we integrate the concept of the mixed gamble (Gómez-Mejía et al., 2018) with the recently developed concepts of extended vs. restricted SEW (Tsao, Le Breton-Miller, Miller, & Chen, 2020). We argue that the

perception of firm vulnerability, proxied by the level of cash holdings, will shape the tradeoffs between financial and SEW concerns and will eventually be reflected in different combinations of extended and restricted SEW. Using the mixed gamble approach to predict the prevalence of extended versus restricted SEW benefits provides a more nuanced understanding of family decision-making. Specifically, it predicts under which circumstances the presence of family owners may lead to positive outcomes and when its influence could be detrimental for an organization, an issue that has long been debated in the family business literature (Craig & Newbert, 2020; Madison, Holt, Kellermanns, & Ranft, 2016).

Second, we tap into the boundary conditions of our model by exploring how heterogeneity among family firms in terms of family control and influence shapes the mixed gamble between SEW and financial goals, and ultimately is reflected in the balance between restricted and extended SEW. We contribute to the rapidly evolving research on family-firm heterogeneity (Daspit, Chrisman, Ashton, & Evangelopoulos, 2021; Dibrell & Memili, 2019; Nason, Carney, Le Breton-Miller, & Miller, 2019) by showing that the mixed gamble choices, and consequently extended and restricted SEW outcomes, may not be identical in all family firms. Rather, they vary depending on the degree of family control and influence and on corporate governance mechanisms. Particularly, we theorize and provide empirical evidence that the presence of family owners will render the most benefits to the firm when two conditions are fulfilled: a) the family enjoys a high degree of control and influence, and b) the board chairperson and CEO offices are separated.

Finally, we contribute to the research on corporate cash holdings (Deb et al., 2017; George, 2005; Kim & Bettis, 2014) by introducing ownership as an essential contingency factor shaping the motives for cash accumulation. The previous research focusing on cash management choices grounded in the free cash flow hypothesis (Jensen, 1986) treats owners primarily as a homogeneous group. Our study complements the emerging work applying SEW perspective to explain the financial choices of family firms (Baixauli-Soler, Belda-Ruiz, & Sánchez-Marín, 2021; Belda-Ruiz, Sánchez-Marín, & Baixauli-Soler, 2021; Comino-Jurado, Sánchez-Andújar, & Parrado-Martínez, 2021), showing the relevance of this perspective toward understanding the divergent motives among business owners when making cash management choices, as well as the reflections of these motives on different performance outcomes.

Our study also provides practical implications. Namely, our findings highlight that the accumulation of cash holdings may enhance firm value in listed family firms, and that this value is maximized when board monitoring practices designed to mitigate family opportunism exist. In light of the current trend of shareholder activists pushing firms to redistribute cash back to shareholders by increasing their share repurchases and dividends (Loop, 2016), our study expresses a word of caution to practitioners about the expected positive implication of such policies for firm value in the context of listed family firms. We contend that shareholder identity should be considered when interpreting the effectiveness of firm cash management choices.

## 2. Theoretical framework

According to the behavioral theory of the firm, the strategic decision-making process is the outcome of a consensus generated within the dominant coalition (Cyert & March, 1963). In contrast to agency theory, which assumes that firm principles are motivated solely by the maximization of the returns on the principals' capital (Jensen & Meckling, 1976), behavioral theory acknowledges the heterogeneity among principals and posits that the decisions of the members of the dominant coalition can be attributed not only to financial but also to behavioral motives. Family owners represent an important group within the dominant coalition (Chua, Chrisman, & Sharma, 1999) and are characterized by unique preferences due to the close alignment of ownership, management, and control (Chrisman, Chua, & Sharma, 2003).

For family owners, the firm is not only a source of financial profits but also provides nonfinancial benefits in the form of SEW. Entailing both positive and negative implications for the firm, SEW goals may be derived from distinctive sources (Dou, Wang, Su, Fang, & Memili, 2020). Examples of activities enhancing socioemotional wealth include building and preserving the legacy of the family and passing on family wealth to subsequent generations (Berrone, Cruz, Gómez-Mejía, & Larraza-Kintana, 2010; Zellweger, Nason, Nordqvist, & Brush, 2013). However, a strong orientation toward the family can also impose some costs, giving rise to nepotism and altruism toward family members (Bertrand & Schoar, 2006). Given both the positive and negative implications of a family's pursuit of SEW for firm and nonfamily stakeholders, family business research distinguishes between extended SEW, i.e., the benefits that spill over to the firm and its shareholders, and SEW benefits that are restricted to family only, which may come at the expense of the firm and nonfamily owners (Laffranchini, Hadjimarcou, & Kim, 2020; Miller & Le Breton-Miller, 2014).

Advancing the understanding of the theoretical mechanisms explaining how family ownership influences organizational outcomes, Wiseman and Gómez-Mejía (1998) proposed the behavioral agency model (BAM). The BAM postulates that since family owners derive greater utility from SEW than from other sources, their aversion to a SEW loss will shape their risk preferences and ultimately be reflected in firm decision making. According to this perspective, SEW rather than financial wealth-at-risk represents the fundamental endowment for family owners and constitutes the primary reference point for decision making (Gómez-Mejía, Nuñez-Nickel, & Gutierrez, 2001; Gómez-Mejía, Makri, & Kintana, 2010). Previous research has provided empirical support for this model by demonstrating how affective investments by family members influence various outcomes, including financial risk-taking (Gómez-Mejía et al., 2007), diversification strategies (Gómez-Mejía et al., 2010) and CEO turnover (Visintin, Pittino, & Minichilli, 2017).

The notion of SEW loss proposed in the behavioral agency model has been further developed by Gómez-Mejía et al. (2014), who argue that rather than considering the pure loss in undertaking decisions, family members balance the potential gains and losses in socioemotional and in financial wealth domains, dubbing such choices "mixed gambles" (Bromiley, 2010). The two wealth domains are, however, not fully fungible, which implies that an increase in SEW may come in conflict with the preservation of financial wealth (Gómez-Mejía et al., 2018). Consideration of the trade-offs between financial and socioemotional wealth has contributed to a more nuanced understanding of the strategic choices in family firms and has been applied to numerous real-life business situations, including initial public offering (IPO) pricing (Kotlar, Signori, De Massis, & Vismara, 2018), internationalization (Alessandri et al., 2018), business growth (Bauweraerts, Diaz-Moriana, & Arzubaga, 2020), and tax aggressiveness (Bauweraerts, Vandernoot, & Buchet, 2020). Furthermore, studies also show that rather than evaluating mixed gambles based on current gains and losses, family firms evaluate those mixed gambles against future financial and SEW gains and losses (Alessandri et al., 2018). Overall, this literature demonstrates that the strategic decisions of family firms may differ from those of nonfamily firms because of diverging reference points. While nonfamily firms base their decisions primarily on financial wealth concerns, family firms weigh the two sometimes competing reference points of financial and SEW concerns in tandem (Chua, Chrisman, & De Massis, 2015).

However, the perception of mixed gambles may not be uniform across family firms; instead, their priorities may alternate between SEW and financial wealth depending on the firm context (Jiang, Kellermanns, Munyon, & Morris, 2018). Under conditions of high firm vulnerability, "meeting firm financial obligations is a necessary condition for the family owners to enjoy any SEW and financial utility" (Gómez-Mejía et al., 2018: 1371); thus, firm vulnerability poses a dual threat to both financial and SEW concerns, which in turn attenuates the potential tradeoffs between the two (Calabrò, Minichilli, Amore, & Brogi, 2018;

Gómez-Mejía et al., 2018). In contrast, stable environments decrease firm vulnerability, thereby putting SEW and financial concerns at odds and making family owners prioritize SEW concerns in their decision-making. Furthermore, the importance attributed to SEW relative to financial concerns may change depending on family involvement in the business. For example, greater control and involvement of the family in the business has been suggested to amplify both SEW and financial concerns of family owners (Alessandri et al., 2018; Bauweraerts, Diaz-Moriana et al., 2020).

Building on these theoretical advancements, we further nuance the notion of mixed gamble choices in family firms by linking these mixed gamble choices to SEW outcomes. The current research on extended versus restricted SEW and the family firms' mixed gamble choices has been developed largely in silos; the discussion on extended versus restricted SEW has mainly evolved in a broader debate about the influence of family firms on organizational performance (e.g., Dow & McGuire, 2016), whereas the mixed gamble concept has been primarily applied to explain the strategic choices of family firms (e.g., Alessandri et al., 2018). However, the two concepts are closely related as SEW concerns in a mixed gamble choice can lead to both extended and restricted SEW. A natural step to extend this body of research is thus to examine how the mixed gamble choices reflect in firm performance outcomes. In doing so, we propose that depending on the firm's vulnerability, which results from the firm's level of cash holdings, the tradeoffs between SEW and financial concerns may be reflected in different combinations of extended and restricted SEW. Particularly, when cash holdings are low, family firms have a smaller "buffer" against performance shortfalls, increasing firm vulnerability. Under high vulnerability, SEW and financial concerns are likely to be aligned because "if the firm fails to survive, SEW and financial wealth would disappear altogether" (Gómez-Mejía et al., 2018: 1373). The alignment of SEW and financial concerns implies the alignment between the interests of family and nonfamily shareholders and thus should lead to the dominance of extended SEW. However, as cash holdings increase, the level of firm vulnerability decreases, thus providing family owners with the opportunity to engage in mixed gambles in which an increase in SEW can come at the cost of financial losses for their firm. In the face of such mixed gambles, family owners are more likely to prioritize SEW concerns, leading to restricted SEW dominance. In the next section, we apply this theoretical framework to explain how different combinations of SEW and financial concerns influence firm value at different levels of cash holdings.

### 3. Hypotheses development

The decision to accumulate cash holdings has been attributed to both precautionary and opportunistic motives. When accumulated due to the precautionary motive, cash holdings may constitute a valuable resource for adaptive advantages and thus can lead to value creation (Bourgeois, 1981; Cyert & March, 1963). Slack allows executives to quickly reemploy resources to invest in attractive business opportunities (Hambrick & Snow, 1977) while providing a necessary buffer for strategic adaptation, insulating firms from cash flow volatility (O'Brien, 2003). However, the increase in cash holdings may not be costless for the firm. By decreasing environmental constraints, slack reduces the incentives for continuous adaptation while weakening the discipline of the resource allocation (Kim, Kim, & Lee, 2008). Managers with access to substantial cash resources may become complacent and overoptimistic, investing in pet projects with unjustified risk and negative net present value simply because the funds are available. In addition to weakened financial discipline, the availability of slack might also enable opportunistic behaviors, leading to value destruction. As resource availability and managerial discipline are imperative for value creation, we expect an inverted U-shaped relationship between firm value and cash holdings, in which value generation is at its maximum at moderate levels of cash holdings. Low and high cash holdings may lead to inhibited

strategic opportunities and increased agency costs, respectively (George, 2005; Kim & Bettis, 2014; Nason & Patel, 2016).

### 3.1. Cash holding and firm value in family versus nonfamily firms

Due to the significance of SEW concerns for family owners, the balance between precautionary and opportunistic motives in family firms should differ from that in their nonfamily counterparts. Family owners' preference for control (Michiels & Molly, 2017) and the constraints faced when obtaining external financing (Zata Poutziouris, 2001) make cash holdings a critical investment resource and an important source of wealth security and stability (Boubakri & Ghouma, 2010; Fernando, Schneible, & Suh, 2014; Gómez-Mejía et al., 2018; Tanaka, 2014). The firm-specific knowledge obtained by family owners through their close involvement in the management and ownership of the firm (Thomsen & Pedersen, 2000) enables them to make better assessments of managerial decisions and to exercise their control, which allows them to derive extended SEW by effectively decreasing the costs of managerial opportunism (Collin, Ponomareva, Ottosson, & Sundberg, 2017). Taken together, the precautionary motives for cash accumulation in family firms are expected to be stronger than those in their nonfamily counterparts, while the opportunistic use of cash holdings is expected to be less of a concern.

In contrast, nonfamily shareholders can diversify their investments and thus benefit from pursuing a high-risk/high-return strategy (Anderson & Reeb, 2003), making them less likely to favor accumulating cash resources out of precautionary motives. At the same time, opportunistic reasons may increase as the absence of a significant endowment in a firm makes nonfamily shareholders less capable and motivated to engage in the monitoring and stewardship of the firm. Furthermore, nonfamily firms' ability to attract external financing is less constrained (Zata Poutziouris, 2001), increasing the opportunity costs of cash holdings. Consequently, nonfamily firms may experience higher costs and lower benefits associated with an increase in cash holdings, magnifying the harmful effects of cash holdings on firm value while limiting the positive impact. Based on these arguments, we expect the opportunistic motives for cash accumulation to be stronger and the precautionary motives to be less pronounced in nonfamily firms. This should, in turn, manifest in a flattened inverted U-shaped relationship between cash holdings and firm value in family firms, with the turning point shifted to the right compared with that of nonfamily firms.

Although family firms can enjoy greater benefits and reduced costs from the accumulation of cash holdings compared to nonfamily firms, the positive effect may eventually plateau and then change to a negative effect as the tradeoffs associated with the mixed gamble choice between protecting and increasing SEW shift (Gómez-Mejía et al., 2014, 2018; Kotlar et al., 2018). Low and medium levels of cash holdings pose a threat to firm survival and put family ownership at risk. Such situations entailing grave consequences for both socioemotional and financial wealth can align SEW and financial concerns (Gómez-Mejía et al., 2018; Minichilli et al., 2016), thereby making family owners more prone to exhibit stewardship behaviors toward the firm and alleviating the risk of family opportunism (Gómez-Mejía et al., 2019). In contrast, precautionary motives become less relevant at high levels of cash holdings, driving a wedge between SEW and financial concerns. In such an environment, when firm survival and consequently family ownership are less threatened, an abundance of cash resources may give rise to nepotism, family entrenchment (Schulze, Lubatkin, Dino, & Buchholtz, 2001), and dysfunctional conservatism (Cater & Schwab, 2008; Naldi, Nordqvist, Sjöberg, & Wiklund, 2007). These "exploitative investments," which correspond to low-risk, low-return strategies, may come at the cost of more attractive growth opportunities (Patel & Chrisman, 2014; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008). Consequently, at high levels of cash holdings, when the potential for SEW wealth gains is high, but the loss is less apparent, family owners may face a mixed gamble in which SEW concerns are at odds with financial ones. In the absence of financial

distress, family owners will be more likely to pursue SEW goals, the achievement of which will ultimately be reflected in restricted SEW outcomes.

To summarize, because extended SEW benefits are unique to family businesses, we expect that family firms should derive higher benefits from cash holdings at a lower cost compared to nonfamily firms. At low and medium levels of cash, when the firm survival threat is most apparent, SEW and financial concerns should be aligned, leading to the prevalence of extended SEW, which will be reflected in higher firm performance due to the accumulation of cash. However, at very high levels of cash holdings, financial and SEW concerns are likely to clash and should eventually lead to the prevalence of restricted SEW, thereby changing the slope of the curve to negative. We thus propose the following hypothesis:

**Hypothesis 1.** Compared to nonfamily firms, family firms display a flatter inverted U-shaped relationship between cash holdings and firm value, and the curve's turning point is shifted to the right.

### 3.2. The moderating role of family control and influence

As we have explained the distinct preferences shaping cash management choices in family and nonfamily firms, we now turn to how the degree of family control and influence shapes the relationship between cash holdings and firm value among family firms. Family control and influence constitute one of the central components of SEW theory and one of the most studied dimensions of SEW (Berrone et al., 2012; Swab et al., 2020). This dimension becomes especially relevant in cash management mixed gambles since control and influence enable owners with power and legitimacy to pursue SEW concerns (Zellweger, Kellermanns, Chrisman, & Chua, 2012). Particularly, the greater control and influence of family owners strengthen their emotional ties and identification with the firm and thus enhance both their importance and legitimacy to act in ways to increase SEW (Jiang, Ma, & Shi, 2017; Zellweger et al., 2012).

Drawing on insights from the emergent debate on heterogeneity among family firms (Daspit et al., 2021; Dibrell & Memili, 2019; Nason et al., 2019), we argue that both extended and restricted SEW outcomes should be more pronounced in the presence of the high control and influence of family owners. Previous research has argued that the family pursuit of SEW goals depends on the firm's degree of family control and influence (Calabrò et al., 2018; Gómez-Mejía et al., 2014). Due to the presence of socioemotional tradeoffs, which differ depending on the scarcity of cash resources, this effect should become particularly salient in the context of cash holdings (Gómez-Mejía et al., 2014). As socioemotional and financial concerns are more aligned at low and medium levels of cash holdings, the high control and influence of the family will enhance the family's emotional ties with the firm while providing the owners with the capacity and the motivation to pursue SEW goals. The presence of the high control and influence of family owners at low and medium levels of cash holdings enables them to protect their SEW endowment in the firm by lessening the pressure for short-term financial results and shifting the strategic focus toward sustainable long-term growth (Prencipe, Bar-Yosef, Mazzola, & Pozza, 2011). Such strategies may require extensive investments spread over the years, thus making cash reserves a valuable source of capital and enabling the firm to reduce the risks associated with external financing. In addition, controlling owners are more motivated and capable of reducing managerial opportunism (Collin et al., 2017). In contrast, a low level of family control and influence is expected to decrease the capacity, motivation, and legitimacy to pursue SEW goals (Zellweger et al., 2012), ultimately reflecting in reduced extended SEW. Taken together, at low to medium levels of cash holdings, when SEW and financial concerns are more aligned, greater control and influence of family owners will enable them to act in ways that increase their SEW, finally reflecting extended SEW outcomes.

On the other hand, at high levels of cash holdings, in a situation in

which SEW and financial goals are more likely to be at odds, in cash management choices, controlling family owners may use their power and legitimacy to prioritize SEW benefits over financial wealth. When possessing a high level of control and influence, family owners may have greater motivation and ability to pursue family-centric goals, which may be reflected in more pronounced restricted SEW benefits (Cho, Miller, & Lee, 2018). In contrast, low levels of control and influence will constrain family owners from protecting and increasing their SEW at the expense of financial wealth. We thus propose that a high level of family control and influence will augment extended SEW benefits at low and medium levels of cash holdings and augment restricted SEW at high levels of cash holdings. Therefore, we propose the following hypothesis:

**Hypothesis 2.** Family control and influence moderate the inverted U-shaped relationship between cash holdings and firm value such that under high levels of family control and influence, the curve is flattened and the turning point shifts to the right.

### 3.3. The role of board monitoring in family firms' cash allocation choices

As we argued above, a high level of family control and influence will accentuate both extended and restricted SEW outcomes. As the SEW literature is largely silent on how to mitigate restricted SEW outcomes, we turn to the corporate governance literature, which has long argued that effective governance by the board of directors can mitigate the opportunistic use of cash holdings (Belkhir, Boubaker, & Derouiche, 2014; Boubaker, Derouiche, & Nguyen, 2015; Kuan, Li, & Liu, 2012). Previous studies have shown that the effectiveness of governance mechanisms in cash management depends on a firm's investment opportunities (Belghitar & Khan, 2013). We build on this body of literature by proposing that monitoring by the board of directors can serve as an effective lever to align the interests of insiders (family and management) and outsiders (nonfamily shareholders). We contend that the effects of board monitoring will be most pronounced at high levels of cash holdings and under a high degree of family control and influence, thereby reducing family-restricted SEW while preserving the extended SEW.

Representing an arena for principals to exercise their control and influence over a firm, the board of directors constitutes a central governance body for protecting shareholders' interests in family firms by balancing the interests of insiders and outsiders (Anderson & Reeb, 2004; Bammens et al., 2011; Corbetta & Salvato, 2004). Previous studies have shown the particular importance of boards for publicly listed family firms as effective monitoring by the board can reduce the family owners' ability to engage in opportunistic actions at the expense of nonfamily shareholders and can thus reduce family-restricted SEW (Le Breton-Miller & Miller, 2013). Under a high level of family control and influence and when cash resources are abundant, family owners will have the capacity and motivation to pursue restricted SEW benefits (Cho et al., 2018). Consequently, when a family enjoys a high level of control and influence, board monitoring is expected to be particularly important at high levels of cash holdings, i.e., a situation in which SEW and financial concerns are at odds and restricted SEW outcomes are likely to prevail. By exercising effective monitoring, boards of directors can attenuate family opportunism, thereby reducing restricted SEW. In contrast, under a low level of cash holdings, when SEW and financial concerns are aligned, the threat of family opportunism is less of a concern, and thus, the effects of board monitoring will be less pronounced.

Effective board monitoring has been associated primarily with the two central elements of board structure: directors' independence and the separation between the CEO and board chair positions (van Essen, Engelen, & Carney, 2013; Cambrea, Calabrò, La Rocca, & Paolone, 2021). The presence of independent directors in family firms has been argued to aid the reconciliation of conflict between family and nonfamily shareholders by reducing the potential overemphasis on family issues, reducing the information asymmetry between family and

nonfamily principals, and limiting the discretion of the former (Anderson & Reeb, 2004; Goel, Voordeckers, van Gils, & van den Heuvel, 2013). Family firm boards with a greater proportion of independent directors are in a better position to contain family opportunism and thus protect nonfamily shareholders from wealth expropriation (Bettinelli, 2011). When family opportunism is effectively contained, the negative effects of accumulating significant cash holdings decrease, allowing firms to derive greater benefits from accumulating cash reserves and realize these benefits over more extended periods. We expect the positive effect of board independence to be more pronounced at a higher level of family control and influence and when cash resources are abundant as the threat of family opportunism is the highest in this context (Cho et al., 2018). In contrast, when cash resources are restrained, which poses a threat to firm survival, family owners are more likely to use their control and influence in pursuit of extended SEW, reducing the threat of family opportunism. When the danger of family opportunism is less of a concern, as reflected in a low level of restricted SEW, the effects of board monitoring are unlikely to be reflected in performance outcomes. We, therefore, propose that board independence moderates the inverted U-shaped relationship between cash holdings and firm value, flattening the curve and simultaneously shifting the turning point to the right. Therefore, we propose the following hypothesis:

**Hypothesis 3a.** Under a high level of family control and influence, board independence moderates the inverted U-shaped relationship between cash holdings and firm value in family firms such that the curve is flattened and the turning point shifts to the right.

Balancing the power between insiders and outsiders on the board can also be achieved by separating the CEO and the board chair positions. Due to the specificity of their goals and capacity to influence their firm, family owners tend to have strong formal and informal influences over management (Nordqvist, 2012; Steier, 2003). It is not uncommon for family members to hold executive positions. A concentration of authority in the hands of insiders by maintaining CEO duality can be detrimental for family firms as it provides the family with largely uncontested power to divert cash resources from their firms. In contrast, splitting the authority between the chairperson and the CEO can aid in restoring the balance of power between insiders and outsiders, thereby reducing the potential for family opportunism at high levels of cash holdings. In line with the arguments above, we expect the effect of the separation of the board chair and CEO positions to be most pronounced when the threat of family opportunism is the highest, namely, when cash resources are abundant and when the family retains significant control and influence over the firm. Conversely, when cash resources are restrained, which poses a threat to firm survival, family owners are more likely to use their control and influence in pursuit of extended SEW, thereby reducing the threat of family opportunism and consequently making the effects of board monitoring less pronounced. We thus propose the following hypothesis:

**Hypothesis 3b.** Under a high level of family control and influence, CEO duality moderates the inverted U-shaped relationship between cash holdings and firm value in family firms such that the curve steepens and the turning point shifts to the left.

## 4. Data and methods

### 4.1. Sample

Our initial sample comprised all Italian listed industrial firms from the *Mercato Telematico Azionario* (MTA), the leading Italian equity market dedicated to midsize and large companies. Characterized by a long family business tradition in which family firms represent a large percentage of listed companies, Italy provides fertile ground to examine the strategic choices by heterogeneous family owners. Furthermore, in

Italy, weak investor protection legislation (Lepore, Paolone, & Cambrea, 2018; Pagano & Volpin, 2005) and the difficulty of obtaining external financing (D'Aurizio, Oliviero, & Romano, 2015; La Rocca & Cambrea, 2019; Stacchini & Degasperis, 2015) signify the importance of cash management choices amplifying both opportunistic and precautionary motives for hoarding cash.

We excluded banks, insurance companies, and financial institutions from our sample (Dittmar & Mahrt-Smith, 2007). From the initial sample of 2,263 firm-year observations, we excluded 119 observations with insufficient financial/ownership data and 68 observations with incomplete governance data, arriving at the final sample of 2,076 firm-year observations of both family and nonfamily firms for the period between 2003 and 2015. Because we controlled for the previous year's performance ( $MTBR_{n-1}$ ) and some companies entered and others exited the stock market during the analyzed period, from the sample of 2,076 firm-year observations, our final sample was reduced to 1,881 firm-year observations, of which 1,408 were for family firms and 473 for nonfamily firms. Consistent with previous studies (Andres, 2008), we defined a *family firm* as a firm in which the individual shareholder (founder and/or family members) or entity holds more than 25 % of shares and/or the family is represented on the board of directors.

To classify the controlling shareholder (family vs. nonfamily), we examined the ownership structure using several public sources, such as *Consob* (*Commissione Italiana per le Società e la Borsa*) filings, the Italian Stock Exchange website, the annual reports on corporate governance and the financial statements of the individual company. Additionally, we referred to the information disclosed by corporations in the 'investor relations' section of their official websites. Based on the information included in these reports, we identified the majority shareholders of each company. When a legal entity (company) is a shareholder, we inspected *Consob* filings, which allowed us to clarify the identity of the ultimate owner whenever firms are controlled through intermediate corporations or pyramids.

To identify the presence of family members on boards, we examined the board composition information using the firms' corporate governance annual reports and matching the reports with those available in *Consob* filings and public information collected through company websites and specialized financial press (i.e., MF Milano Finanza, Il Sole 24 Ore). We identified the presence of family on a board if the last name of one of the majority shareholders matched the last name of one or more directors on the board (Miller, Minichilli, & Corbetta, 2013). The financial data were obtained from *Datastream*.

## 4.2. Variables

### 4.2.1. Dependent variable

Firm value was operationalized through the market-to-book ratio (*MTBR*), which was measured as the market value of assets divided by the book value of total assets. The market value of assets was computed as the book value of assets plus the market value of equity minus the sum of the book value of common equity and deferred taxes (O'Brien & Folta, 2009). We opted to use *MTBR* as our dependent variable because it reflects both market- and accounting-based performance (Deb et al., 2017).

### 4.2.2. Independent variable

*Cash holdings* were measured as the ratio of cash and cash equivalents to total assets (Ozkan & Ozkan, 2004).

### 4.2.3. Moderating variables

*Family firm* was coded as a dichotomous variable and was given a value of one when at least one of two criteria was met: (a) the individual shareholder (founder and/or family members) or entity held more than 25 % of the shares, or (b) the family was represented on the board of directors (Andres, 2008). Otherwise, it was given a value of zero.

The *family control & influence (FCI)* dimension of SEW was

operationalized as the percentage of firm equity held by the family in firms in which the board chair position was held by a family member (Berrone et al., 2012; Calabrò et al., 2018). If the chair of the board was not a family member, the variable was coded as zero. *CEO duality* was coded as a dummy variable that took a value equal to one if the CEO was also the chairperson of the board and took a value of zero otherwise. *Independent directors* is a variable that was measured as the ratio of independent directors to the number of directors on the board.

### 4.2.4. Control variables

We included several financial variables as controls in all the regressions. *Firm size* was measured as the natural logarithm of total sales (Martínez-Sola, García-Teruel, & Martínez-Solano, 2013). *Debt* was calculated as the ratio of long-term debt to total assets (Bates, Kahle, & Stulz, 2009). *Sales growth* was a proxy to identify the sales growth of the firm's industry (using the industry classification provided by the Italian Stock Exchange) and to identify the firm's growth opportunities (Brisker, Çolak, & Peterson, 2013). *Dividend* was computed as the total cash common dividends paid with respect to market capitalization (Mancinelli & Ozkan, 2006). *Cash flow* was calculated as the cash flow divided by total sales (Huang, 2009). *Capex* was used as a proxy for the capital expenditures of a company and was computed as capital expenditures divided by total assets (Kim & Bettis, 2014). *Board size* is the number of members of the board of directors. Additionally, we included *firm age*, measured in the number of years and subsequently logarithmized (Miller, Amore, Le Breton-Miller, Minichilli, & Quarato, 2018). To control for the influence of the firm's ownership structure, we included the dummy variable *institutional investor*, which is coded as one if at least one institutional investor held more than 2% of the shares (Bianco, Ciavarella, & Signoretti, 2015), and the variable *ownership concentration*, which is measured by the proportion of shares held directly by the largest three shareholders (Deman, Jorissen, & Laveren, 2018). Finally, we controlled for economic fluctuations by including the variable *crisis*, which took a value of one for the years 2008–2013 and a value of zero otherwise (Cambrea et al., 2021).

## 4.3. Empirical approach

To test our hypotheses, we followed the empirical approach adopted by Deb et al. (2017) and conducted the Hausman test, which suggested a preference for fixed effects over a random effects model. In line with previous studies, to mitigate endogeneity issues, we included the lagged *MTBR* as a control variable in all regressions (O'Brien & Folta, 2009; Wu, Yang, & Zhou, 2017). In addition, using the Davidson-MacKinnon test, we tested whether the independent variable of the study, *cash holdings*, created endogeneity problems. The test result was not significant; therefore, the fixed effects model was confirmed to be suitable for our empirical analysis. All models included year fixed effects. The results of the main empirical analyses are shown in Table 3.

Furthermore, although some studies on the relationship between cash holdings and firm value do not detect endogeneity issues (Attig, El Ghouli, Guedhami, & Rizeanu, 2013; Kim & Bettis, 2014; La Rocca & Cambrea, 2019; Pinkowitz, Stulz, & Williamson, 2006; Platikanova, 2016), others indicate potential endogeneity concerns due to omitted variables and reverse causality (Deb et al., 2017; Liu, Luo, & Tian, 2015; Nason & Patel, 2016). To reduce the omitted variable bias, we performed fixed effects regression analysis, which allowed us to control for time-invariant firm-specific characteristics and to consider heterogeneity issues that may arise from our panel data (Jiang et al., 2017). Regarding potential reverse causality issues, we followed the empirical approach of Kim and Bettis (2014) and performed a Granger causality test (Granger, 1969). The empirical findings, not reported for reasons of brevity, show that the estimated lagged coefficient of cash holdings is positive and statistically significant ( $\beta = 0.412$ ,  $p < 0.05$ ). In contrast, the estimated coefficient of *MTBR* is not statistically significant ( $\beta = 0.006$ ,  $p > 0.10$ ), suggesting the presence of unidirectional causality

from cash reserves to firm value. Consequently, it does not appear that possible reverse causality problems affect the validity of our econometric results.

## 5. Analyses and results

### 5.1. Descriptive statistics

Table 1 reports the summary statistics for our sample. Panel A

**Table 1**  
Descriptive statistics.

Panel A: descriptive statistics for the entire sample of firms					
Variable	Mean	Standard deviation	First quartile	Median	Third quartile
MTBR	1.519	0.753	1.098	1.315	1.704
Tobin's Q	0.964	0.693	0.587	0.792	1.090
ROA	0.018	0.199	-0.018	0.032	0.075
Cash holdings	0.112	0.113	0.041	0.080	0.143
Cash holdings squared	0.025	0.068	0.002	0.006	0.020
Family firms	0.744	0.436	0.000	1.000	1.000
Family control & influence (FCI)	0.441	0.810	0.000	0.550	0.640
Firm size (millions €)	2.403.496	9.833.584	85.756	248.075	1136.833
Debt	0.170	0.155	0.048	0.135	0.250
Sales growth	0.085	0.355	-0.062	0.047	0.160
Dividend	0.024	0.052	0.000	0.011	0.033
Cash flow	-0.146	5.180	0.028	0.076	0.145
Capex	0.039	0.054	0.028	0.076	0.145
CEO duality	0.239	0.426	0.000	0.000	0.000
Independent directors	0.392	0.181	0.286	0.375	0.500
Board size (number of directors)	9.556	3.140	7	9	11
Firm age (years)	36.80	33.25	15	26	45
Institutional investor	0.688	0.464	0.000	1.000	1.000
Ownership concentration	0.591	0.169	0.496	0.620	0.700
Crisis	0.502	0.500	0	1	1
Panel B: comparison of Family and Nonfamily Firms					
Variables	Family Firms	Nonfamily Firms	Difference	t-statistic	
Number of firm-years	1408	473			
MTBR	1.530	1.482	0.048	1.34	
Tobin's Q	0.966	0.957	0.009	0.26	
ROA	0.022	0.007	0.015	1.41	
Cash holdings	0.117	0.097	0.020***	3.57	
Cash holdings squared	0.027	0.020	0.007**	2.02	
Firm size (millions €)	1.312.182	5.577.155	-4.264.973***	-8.97	
Debt	0.164	0.187	-0.023***	-3.11	
Sales growth	0.080	0.097	-0.017	-0.93	
Dividend	0.023	0.027	-0.004**	-1.82	
Cash flow	0.047	-0.710	0.757***	2.97	
Capex	0.037	0.046	-0.009***	-3.50	
CEO duality	0.251	0.202	0.049**	2.36	
Independent directors	0.364	0.470	-0.106***	-12.22	
Board size (number of directors)	9.274	10.377	-1.103***	-7.22	
Firm age (years)	37.56	34.57	2.99**	1.83	
Institutional investor	0.625	0.870	-0.245***	-11.05	
Ownership concentration	0.620	0.505	0.115***	14.43	
Crisis	0.500	0.506	-0.006	-0.21	

provides the main descriptive statistics (mean, median, standard deviations, and first and third quartiles) for the entire sample of companies. Panel B shows the results of the difference of means tests between family and nonfamily firms.

Concerning the independent variable of the study, on average, Italian listed companies have cash holdings equal to 11.2 % of their total assets. This percentage is close to the 14 % level found for all publicly traded U. S. firms (Deb et al., 2017) and for a set of sixteen European listed firms (Mortal, Nanda, & Reisel, 2020); this percentage is also very similar to the 10 % level of cash documented for Italian private companies (Bigelli & Sánchez-Vidal, 2012). In our sample, family firms represent approximately 75 % of all companies. Concerning board characteristics, the results show that, on average, the CEO is also the board chair in about 24 % of cases. Additionally, the average percentage of independent directors on the boards is 39 %.

Regarding the differences in the means for variables between family and nonfamily firms (Panel B of Table 1), the main independent variable of the study, *cash holdings*, differs significantly between family and nonfamily firms. Consistent with previous research (Lozano & Durán, 2017), family firms tend to hold greater cash reserves than nonfamily firms. In terms of board structure, the boards of family firms differ significantly from those of their nonfamily counterparts. Compared with nonfamily firm boards, family firm boards are, on average, smaller, less independent and characterized by CEO duality.

As shown in Table 2, the correlations of *cash holdings*, *cash holdings squared* and *MTBR* are positive and strongly significant. The correlation between family companies and *MTBR* is positive and significant. We do not detect any strong correlations among variables that could cause multicollinearity concerns. Additionally, an inspection of the variance inflation factor (VIF) values shows that the correlation among the independent variables is marginal and does not alter the results.

### 5.2. Results

The results presented in Model 1 of Table 3 are consistent with the empirical literature showing the existence of a curvilinear effect of cash reserves on firm value (Nason & Patel, 2016; Deb et al., 2017; Kim & Bettis, 2014). Indeed, the coefficient of the variable *cash holdings* is positive and statistically significant ( $\beta = 1.555$ ,  $p < 0.01$ ), whereas the sign of the variable *cash holdings squared* is negative and statistically significant ( $\beta = -2.008$ ,  $p < 0.01$ ). To assess the presence of the inverted U-shaped relationship, we followed Lind and Mehlum's (2010) procedure. In addition to verifying that both coefficients ( $\beta_1$  and  $\beta_2$ ) are statistically significant and reflect the expected sign ( $\beta_1$  must be positive, and  $\beta_2$  must be negative), we tested the joint significance of the *cash holdings* and *cash holdings squared* terms, using Sasabuchi (1980) test, and we estimated the turning point, which needs to be located within the data range, computed based on both the Fieller method and the Delta method (Haans, Pieters, & He, 2016; Lind & Mehlum, 2010). As shown in Table 4, because all conditions are verified, an inverted U-shaped relationship does indeed exist.

Models 2 and 3 of Table 3 report the findings on the relationship between cash holdings and firm value within nonfamily and family firms, respectively. Concerning the impact of the control variables in our model, both the *firm size* and *sales growth* coefficients are negative and statistically significant in nonfamily firms, whereas *cash flow* is positive and significant. However, the *firm size* and *sales growth* coefficients are not statistically significant in the family firms subsample. The variable *capex* is positively correlated with firm value in family firms. Consistent with empirical evidence of difficulties associated with intergenerational succession (Miller, Steier, & Le Breton-Miller, 2003), our data show that older family companies are related to lower firm value, suggesting greater preferences toward restricted SEW in older vs. founder-led firms. *Independent directors* and *institutional investors* appear to lead to higher firm value only within the nonfamily firm subsample. Interestingly, the sign of the *crisis* variable in Models 2 and 3 of Table 3 suggests that

**Table 2**  
Correlation matrix.

Variables	1	2	3	4	5	6	7	8	9	10
1 MTBR	1.000									
2 Tobin's q	0.940***	1.000								
3 ROA	0.291***	0.159***	1.000							
4 Cash holdings	0.241***	0.198***	-0.183***	1.000						
5 Cash holdings squared	0.144***	0.135***	-0.309***	0.889***	1.000					
6 Family firms	0.029	0.006	0.030	0.076***	0.043**	1.000				
7 Family control & influence (FCI)	0.050**	0.031	0.044*	0.018	0.003*	.	1.000			
8 Firm size	-0.027	-0.102***	0.298***	-0.082***	-0.153***	-0.123***	0.031	1.000		
9 Debt	-0.204***	-0.040*	0.037*	-0.180***	-0.162***	-0.067*	-0.048*	0.183***	1.000	
10 Sales growth	0.048**	0.035	0.062***	0.007	0.002	-0.020	0.015	0.039*	-0.039*	1.000
11 Dividend	-0.009	-0.046**	0.106***	0.002	-0.010	-0.040*	0.049**	0.218***	0.079***	-0.006*
12 Cash flow	-0.002	-0.007	0.239***	-0.073***	-0.086***	0.064***	0.012	0.212***	0.004	0.013
13 Capex	0.066***	0.090***	0.043**	-0.078***	-0.058***	-0.076***	-0.009	-0.007	0.112***	0.005
14 CEO duality	0.043**	0.037*	-0.045**	0.057***	0.043**	0.051**	0.068***	-0.103***	-0.126***	0.013
15 Independent directors	-0.006	0.041	-0.003	-0.081***	-0.081***	-0.254***	-0.074***	0.260***	0.181***	0.012
16 Board size	0.144***	0.143***	-0.038*	0.044**	0.004	-0.096***	-0.042*	0.048**	0.084***	-0.024
17 Firm age	-0.188***	-0.194***	-0.044**	-0.022	-0.011	0.100***	-0.024	0.048**	0.017	-0.024
18 Institutional investor	0.141***	0.105***	0.086***	0.024	0.010	-0.231***	0.004	0.241***	0.096***	0.040*
19 Ownership concentration	0.075***	0.031	0.011	0.019	0.038*	0.296***	0.077***	-0.108***	-0.062***	0.003
20 Crisis	-0.180***	-0.161***	-0.031	-0.086***	-0.057***	-0.005	0.026	-0.006	0.037*	-0.211***

	11	12	13	14	15	16	17	18	19	20
11 Dividend	1.000									
12 Cash flow	0.026	1.000								
13 Capex	0.016	0.019	1.000							
14 CEO duality	-0.029	0.012	-0.019	1.000						
15 Independent directors	0.029	0.007	0.062***	-0.100***	1.000					
16 Board size	0.058*	-0.032	0.010	-0.139***	0.035*	1.000				
17 Firm age	0.014	0.025	0.011	-0.003	-0.048**	0.039*	1.000			
18 Institutional investor	0.108***	-0.022	0.025	-0.094***	0.153***	0.141***	-0.011	1.000		
19 Ownership concentration	0.005	0.008	0.057***	0.028	-0.109***	-0.058***	0.082***	-0.067***	1.000	
20 Crisis	0.085***	0.025	-0.007	0.036*	-0.013	0.019	0.032	0.003	0.034	1.000

\*, \*\* and \*\*\* indicate statistical significance at the 0.10, 0.05 and 0.01 levels, respectively.

nonfamily companies suffer more from the economic downturn than family companies, confirming recent empirical evidence of family firms' superior performance during crises (Minichilli et al., 2016).

Regarding the main independent variable of the research, for nonfamily firms, the coefficient of the variable *cash holdings* is positive and statistically significant ( $\beta = 3.008, p < 0.01$ ), whereas the coefficient of the variable *cash holdings squared* is negative and statistically significant ( $\beta = -7.317, p < 0.01$ ). Similarly, in the subsample of family firms, both the variables *cash holdings* and *cash holdings squared* maintain the same signs as those of their counterparts in the subsample of nonfamily firms. However, in the family firms subsample, the squared term coefficient is lower than the coefficient of *cash holdings* (1.243 vs. -1.196). Consequently, higher cash reserves do not reduce the family firm value, but the marginal effect of increased cash holdings decreases. Model 4 of Table 3 shows that our results are robust to including a full set of interactions for *cash holdings* and *cash holdings squared* and the family firm dummy. Because the interpretation of moderating effects can be challenging based solely on outcome tables, we graphically illustrate the curvilinear relationship in the nonfamily and family subsamples (see Fig. 1). The turning point for nonfamily firms is 0.26 and then steeply decreases. Conversely, consistent with H1, the family turning point for the family firm subsample is 0.47, after which it declines. Because *MTBR* peaks afterward in family firms, the graph shows that cash holdings are more beneficial in family firms than in nonfamily firms.

Models 5–7 of Table 3 depict the moderating influence of family control and influence and board characteristics on the relationship between cash holdings and firm value within the sample of family firms. In particular, Models 5 and 6 of Table 3 show the econometric findings on the link between cash holdings and firm value in family firms with low family control and influence and in those with high family control and influence, respectively.

Examining the subsample of family firms with high family control and influence, the empirical findings show that the coefficient of the variable *cash holdings* is positive and statistically significant ( $\beta = 1.524, p < 0.01$ ), whereas the coefficient of the variable *cash holdings squared* is not statistically significant. In contrast, the relationship between *cash holdings* and *MTBR* is not significant for family firms with low family control and influence (Model 5). In Model 7 of Table 3, we repeat the analyses of Models 5 and 6 by adding interaction terms between *cash holdings* and *cash holdings squared* and the *family control & influence (FCI)* dummy to the regression. The results indicate that the curvilinear relationship between *cash holdings* and *MTBR* is more pronounced in firms with high family control and influence, providing support for H2.

Fig. 2 presents a plot showing how family firm value is related to cash holdings under different family control and influence levels. In line with our prediction in H2, the turning point for the family firm subsample with high family control and influence is 0.58, after which *MTBR* declines. In contrast, *MTBR* in family firms with low family control and influence peaks earlier (0.33) and then steeply decreases. Thus, our model indicates that cash holdings are more beneficial in family firms with high family control and influence.

Models 1–4 of Table 5 reveal the moderating effects of board structure on the relationship between cash holdings and firm value in family firms. The empirical results shown in Model 1 do not support H3a. One potential explanation of the lack of support for H3a is that family firms are generally reluctant to include outsiders on their boards and are thus prone to hiring directors that may only formally comply with independence requirements but who are not actually independent (Nordqvist, 2012; Roberts, McNulty, & Stiles, 2005). Conversely, the findings reported in Model 4 of Table 5 and in which the interaction variable *CEO duality*\**Cash holdings squared* is negative and statistically significant ( $\beta = -3.497, p < 0.05$ ) support Hypothesis H3b. The empirical findings show that separation between the board chair and CEO positions flattens the



**Table 3**  
Relationship between cash holdings and MTBR in nonfamily and family firms.

VARIABLES	(1) MTBR Full sample	(2) MTBR Nonfamily firms	(3) MTBR Family firms	(4) MTBR Interaction	(5) MTBR Low- FCI	(6) MTBR High- FCI	(7) MTBR Interaction
<b>Explanatory</b>							
Cash holdings	1.555*** (0.000)	3.009*** (0.000)	1.243*** (0.000)	3.209*** (0.000)	0.052 (0.863)	1.524*** (0.000)	0.189 (0.662)
Cash holdings squared	-2.008*** (0.000)	-7.317*** (0.000)	-1.196*** (0.003)	-6.377*** (0.000)	-0.246 (0.501)	-0.981 (0.140)	-0.339 (0.543)
<b>Linear moderating effects</b>							
Cash holdings*FFs				-2.006*** (0.001)			
Cash holdings*FCI							2.457*** (0.002)
<b>Nonlinear moderating effects</b>							
Cash holdings squared*FFs				5.137*** (0.000)			
Cash holdings squared*FCI							-1.816* (0.077)
<b>Controls</b>							
Family firms (FFs)				-0.070 (0.348)			
Family control & influence (FCI)							-0.214*** (0.001)
L.MTBR	0.439*** (0.000)	0.312*** (0.000)	0.506*** (0.000)	0.451*** (0.000)	0.437*** (0.000)	0.509*** (0.000)	0.505*** (0.000)
Firm size	-0.000 (0.990)	-0.117* (0.052)	0.016 (0.463)	-0.002 (0.918)	-0.021 (0.434)	0.011 (0.759)	0.020 (0.368)
Debt	-0.186** (0.048)	-0.094 (0.601)	-0.151 (0.174)	-0.176* (0.060)	0.004 (0.970)	-0.168 (0.280)	-0.136 (0.219)
Sales growth	-0.004 (0.889)	-0.099* (0.095)	-0.017 (0.566)	-0.001 (0.972)	0.001 (0.968)	-0.011 (0.780)	-0.015 (0.615)
Dividend	-0.194 (0.261)	0.094 (0.718)	-0.352 (0.124)	-0.160 (0.349)	-0.368 (0.377)	-0.374 (0.165)	-0.367 (0.108)
Cash flow	0.011 (0.270)	0.128** (0.011)	0.014 (0.649)	0.005 (0.618)	-0.029 (0.241)	0.052 (0.312)	0.002 (0.954)
Capex	0.486** (0.029)	0.416 (0.335)	0.456* (0.081)	0.447** (0.043)	-0.079 (0.752)	0.577 (0.141)	0.516** (0.048)
CEO duality	0.037 (0.241)	0.109 (0.117)	0.003 (0.933)	0.045 (0.144)	-0.048 (0.332)	0.021 (0.652)	0.008 (0.808)
Independent directors	0.021 (0.791)	0.234* (0.056)	0.044 (0.683)	0.053 (0.501)	-0.290** (0.022)	0.132 (0.372)	0.026 (0.813)
Board size	0.005 (0.482)	0.014 (0.214)	-0.003 (0.692)	0.006 (0.369)	-0.003 (0.788)	-0.002 (0.891)	-0.000 (0.997)
Firm age	-0.118* (0.071)	0.190 (0.178)	-0.156** (0.045)	-0.113* (0.080)	-0.047 (0.486)	-0.206* (0.079)	-0.145* (0.062)
Institutional investor	-0.002 (0.937)	0.179* (0.055)	-0.018 (0.542)	-0.012 (0.658)	-0.049 (0.151)	-0.008 (0.842)	-0.010 (0.729)
Ownership concentration	0.060 (0.588)	-0.071 (0.813)	0.087 (0.534)	0.158 (0.160)	0.016 (0.910)	0.015 (0.940)	0.086 (0.538)
Crisis	0.054 (0.306)	-0.234* (0.069)	0.109* (0.061)	0.043 (0.406)	-0.064 (0.335)	0.151* (0.054)	0.098* (0.092)
Constant	1.090*** (0.000)	1.678* (0.057)	0.946*** (0.007)	1.057*** (0.001)	1.445*** (0.000)	1.137** (0.034)	0.928*** (0.008)
Observations	1,881	473	1,408	1,881	372	1,036	1,408
R-squared	0.384	0.431	0.435	0.399	0.629	0.432	0.442
Adjusted R-squared	0.302	0.302	0.353	0.318	0.501	0.337	0.360
Number of Id	195	62	153	195	70	123	153
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes

pval in parentheses. \*\*\*, \*\* and \* indicate statistical significance at the 1 %, 5 % and 10 % levels, respectively.

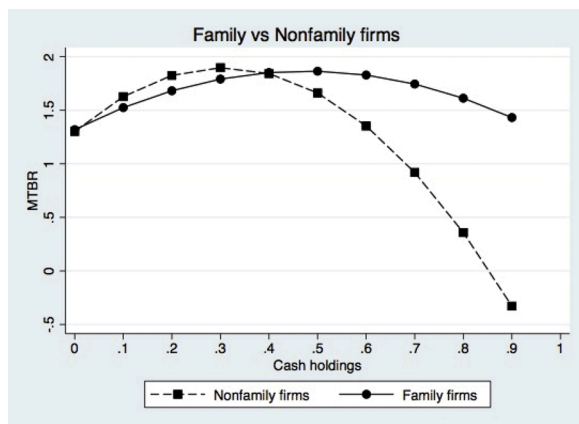
curvilinear relationship between *cash holdings* and *MTBR* and moves the turning point to the right (as depicted in Fig. 3). Consistent with our prediction in *H3b*, the turning point of family firms with a high degree of family control and influence without CEO duality is 0.65; this turning point is to the right of the one for family firms with a high degree of family control and influence with CEO duality.

## 6. Robustness checks

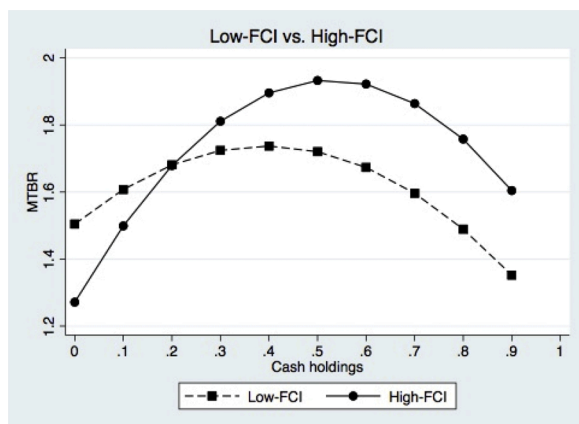
As a robustness check, we repeated the baseline empirical analyses shown in Table 3 by considering two alternative measures of firm performance: Tobin's Q (Table 6) and ROA (Table 7). Specifically, we used an alternative market-based measure, Tobin's Q, computed as the firm's market value divided by total assets. The market value is the sum of the calendar year end values of the firm's common stock, the market value of the firm's preferred stock, the book value of the firm's long-term debt,

**Table 4**  
Test of an inverse U-shaped relationship between cash holdings and MTBR.

Dependent variable: MTBR	
Test of joint significant of cash holdings and cash holdings squared variables (p value)	0.00
Sasabuchi-test of inverse U-shape in cash holdings (p value)	0.00
Estimated turning point	0.424
95 % confidence interval - Fieller method	(0.377; 0.490)
95 % confidence interval - Delta method	(0.370; 0.478)



**Fig. 1.** Marginal effects of cash across the full range of cash within family and nonfamily firms.



**Fig. 2.** Moderating effect of family control and influence (FCI) on the relationship between cash holdings and MTBR in family firms.

and the book value of the firm's short-term debt (Kim & Bettis, 2014); an accounting proxy, ROA, is calculated as operating income divided by net assets (total assets minus cash and cash equivalents). The results were largely in line with our main models.

To ensure that our results are robust to different specifications, we applied the generalized method of moments (GMM) methodology (Arellano & Bond, 1991; Blundell & Bond, 1998). Applying the dynamic panel model procedure mitigated potential endogeneity issues arising from reverse causality, measurement errors, and omitted variables/selections (Ullah, Akhtar, & Zaeferian, 2018). We reproduced the main analyses of the study, shown in Table 3; the empirical findings, not tabulated for brevity, are qualitatively identical to those of the fixed-effects model.

**Table 5**  
Relationship between cash holdings and firm MTBR in low-/high-FCI family firms.

VARIABLES	(1)	(2)	(3)	(4)
	MTBR Low-FCI	MTBR High-FCI	MTBR Low-FCI	MTBR High-FCI
<b>Explanatory</b>				
Cash holdings	0.584 (0.423)	0.159 (0.858)	0.062 (0.839)	1.460*** (0.001)
Cash holdings squared	-0.430 (0.627)	0.405 (0.794)	-0.261 (0.480)	-0.615 (0.388)
<b>Linear moderating effects</b>				
Cash holdings*Independent directors	-1.142 (0.475)	4.027* (0.097)		
Cash holdings*CEO duality			-0.818 (0.635)	0.805 (0.347)
<b>Nonlinear moderating effects</b>				
Cash holdings squared*Independent directors	0.207 (0.924)	-4.000 (0.389)		
Cash holdings squared*CEO duality			1.537 (0.752)	-3.497** (0.049)
<b>Controls</b>				
L.MTBR	0.427*** (0.000)	0.503*** (0.000)	0.439*** (0.000)	0.511*** (0.000)
Firm size	-0.025 (0.357)	0.010 (0.772)	-0.020 (0.469)	0.011 (0.765)
Debt	0.001 (0.994)	-0.179 (0.251)	-0.001 (0.991)	-0.142 (0.363)
Sales growth	0.004 (0.901)	-0.010 (0.787)	-0.001 (0.986)	-0.006 (0.884)
Dividend	-0.341 (0.413)	-0.346 (0.199)	-0.352 (0.401)	-0.363 (0.176)
Cash flow	-0.026 (0.294)	0.053 (0.302)	-0.029 (0.246)	0.058 (0.260)
Capex	-0.113 (0.653)	0.582 (0.137)	-0.076 (0.763)	0.501 (0.201)
CEO duality	-0.053 (0.290)	0.021 (0.647)	-0.007 (0.938)	0.006 (0.939)
Independent directors	-0.183 (0.282)	-0.236 (0.339)	-0.299** (0.020)	0.151 (0.308)
Board size	-0.004 (0.638)	-0.003 (0.808)	-0.003 (0.766)	-0.002 (0.891)
Firm age	-0.049 (0.464)	-0.203* (0.084)	-0.048 (0.484)	-0.266** (0.026)
Institutional investor	-0.047 (0.167)	-0.007 (0.858)	-0.047 (0.172)	-0.008 (0.843)
Ownership concentration	0.033 (0.812)	-0.022 (0.916)	0.021 (0.884)	-0.022 (0.916)
Crisis	-0.065 (0.332)	0.151* (0.054)	-0.064 (0.342)	0.163** (0.037)
Constant	1.472*** (0.000)	1.302** (0.017)	1.428*** (0.000)	1.343** (0.013)
Observations	372	1036	372	1036
R-squared	0.631	0.435	0.629	0.437
Adjusted R-squared	0.500	0.339	0.498	0.341
Number of Id	70	123	70	123
Year dummies	Yes	Yes	Yes	Yes

pval in parentheses. \*\*\*, \*\* and \* indicate statistical significance at the 1 %, 5 % and 10 % levels, respectively.

## 7. Discussion

Our study sought to understand how the presence of family owners shapes the tradeoffs between precautionary and opportunistic motives for cash accumulation. Integrating the insights from the SEW perspective (Gómez-Mejía et al., 2007; 2011) and the notions of extended and restricted SEW (Miller & Le Breton-Miller, 2014; Tsao et al., 2020) with the concept of the mixed gamble (2018, Gómez-Mejía et al., 2014) in the

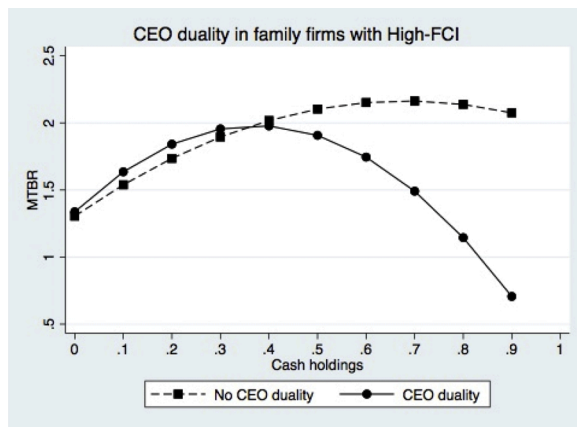


Fig. 3. Moderating effect of CEO duality on the relationship between cash holdings and MTBR in family firms with high family control and influence (FCI).

domain of cash management decisions, we argue that the mixed gamble choices confronting family owners at different levels of cash holdings will shape the balance between extended and restricted SEW, thereby reflecting in different financial performance outcomes. In line with recent studies showing the dynamic nature of SEW and financial concerns in family firms (Calabrò et al., 2018; Gómez-Mejía et al., 2018), we theorize and provide empirical evidence that the perception of firm vulnerability, which is herein proxied by a low level of cash holdings, may lead to the alignment between SEW and financial concerns, reflecting in the dominance of extended SEW outcomes. However, when the vulnerability is no longer a concern, i.e., high levels of cash holdings, family ownership may face a mixed gamble choice in which SEW concerns are at odds with financial problems. Because of family owners' preferences toward SEW concerns, restricted SEW may eventually prevail over extended SEW at high levels of cash holdings, changing the slope of the inverted U-shaped relationship between cash holdings and firm value from positive to negative. Corroborating and further nuancing earlier studies on cash management choice in family firms (Durán et al., 2016; Laffranchini & Braun, 2014), our study provides empirical evidence that family firms enjoy greater benefits and incur lower costs from increasing cash holdings.

Building on recent findings suggesting that SEW increases as the extent of family firm control and influence over firms increases (Calabrò et al., 2018; Zellweger et al., 2012), our results further show that the influence of family firms on the performance effects of cash holdings is not uniform but differs across firms depending on the degree of control and influence exercised by the family. Particularly, our results indicate that a high degree of family control and influence may increase both SEW and financial concerns, reflecting in increased extended SEW benefits at low and medium levels of cash holdings and more pronounced restricted SEW benefits at high levels of cash holdings. Integrating insights from research on the role of board governance in cash management choices (Belkhir et al., 2014; Boubaker et al., 2015; Kuan et al., 2012) and SEW literature (Cho et al., 2018), we theorize and find some empirical support for the notion that board governance, particularly the separation between the CEO and board chair positions, can constitute an effective instrument to mitigate the restricted SEW outcomes derived from family opportunism in firms with a high degree of family control and influence. Overall, our results indicate that the positive effect of family ownership is most pronounced under a high level of family control and influence and when the board chair and CEO roles are separated. Contrary to some prior studies arguing for the substitution effect between concentrated ownership and board monitoring (Desender, Aguilera, Crespi, & García-cestona, 2013), our findings indicate that family control and influence and board monitoring could be complementary when board monitoring is directed at limiting family

opportunism (Federo, Ponomareva, Aguilera, Saz-Carranza, & Losada, 2020).

### 7.1. Implications for theory

The contribution of the present study is three-fold. First, the exploration of family firms' cash management choices provides empirical support for the rapidly developing SEW literature that addresses the differences in both the motives and capacity of principals to influence their corporations (Chirico, Gómez-Mejía, Hellerstedt, Withers, & Nordqvist, 2020; Dou et al., 2020; Gómez-Mejía et al., 2018). Our theory highlights the importance of both the nature and salience of SEW concerns in the previously unaddressed domain of cash management decisions. By theorizing the family owners' concerns as mixed gambles, we argue that SEW loss aversion can lead to both benefits and costs for the firm and its shareholders, providing a bridge for the SEW concept between family and nonfamily firms (Chua et al., 2015; Miller & Le Breton-Miller, 2014). Our empirical findings indicate support for our theory and contribute to the currently evolving debate on "why, when and how SEW might have a positive impact on firm financial performance" (Schulze & Kellermanns, 2015: 451) by underlining the importance of vulnerability in the choice between the pursuit of financial and SEW concerns by family principals in their strategic decision making (Gómez-Mejía et al., 2018).

While previous studies have mainly conceptualized SEW as having a positive effect on firm value (Cennamo, Berrone, Cruz, & Gómez-Mejía, 2012; Kellermanns, Eddleston, & Zellweger, 2012), our findings contribute to the expanding area of research recognizing both positive and negative effects of SEW (Kabbach de Castro, Aguilera, & Crespi-Cladera, 2017; Kellermanns et al., 2012; Laffranchini et al., 2020; Miller & Le Breton-Miller, 2021). In doing so, we conceptually link the concepts of the mixed gamble and extended vs. restricted SEW outcomes. Particularly, we theorize and provide empirical evidence that family firms consider both SEW and financial concerns when undertaking strategic decisions and that these choices can lead to both extended and restricted SEW outcomes depending on the perception of firm vulnerability. Whereas previous studies have mainly discussed the notion of restricted and extended SEW in relation to firm performance, the literature applying a mixed gamble perspective has mainly examined the strategic choices of family firms. Our study makes a step toward the integration of these two streams within the family business literature by conceptualizing the mixed gamble choice as an antecedent of the balance struck between extended and restricted SEW outcomes. By drawing attention to the importance of firm vulnerability as a determinant of the balance between SEW and financial concerns and the implications of these determinants for family firm outcomes (Calabrò et al., 2018; Gómez-Mejía et al., 2018) and theoretically linking it with the notions of extended and restricted SEW (Miller & Le Breton-Miller, 2014), we provide a more nuanced explanation of the differences in the performance effects of cash management decisions among family firms, offering an elaboration of something that the dominant free cash flow hypothesis has not been able to explain (George, 2005; Kim & Bettis, 2014).

Second, our study also contributes to the rapidly evolving research on family business heterogeneity (Daspit et al., 2021; Nason et al., 2019) by showing that the tradeoffs between SEW and financial concerns are not identical across family firms but vary depending on the degree of family control and influence and the corporate governance arrangements within a firm. In particular, our study shows that greater control and family influence in a firm can amplify both value creation and value destruction in a firm. We then draw attention to the role of corporate governance and, more specifically, to the separation of the board chair and CEO positions in firms as a mechanism to reduce the negative effects of family opportunism and preserve the benefits generated through family ownership (Cho et al., 2018); in addition, we highlight the particular importance of this separation of positions in the context of a

**Table 6**  
Relationship between cash holdings and Tobin's Q in nonfamily and family firms.

VARIABLES	(1) Tobin's q Full sample	(2) Tobin's q Nonfamily firms	(3) Tobin's q Family firms	(4) Tobin's q Interaction	(5) Tobin's q Low-FCI	(6) Tobin's q High-FCI	(7) Tobin's q Interaction
<b>Explanatory</b>							
Cash holdings	1.397*** (0.000)	3.458*** (0.000)	1.195*** (0.000)	2.860*** (0.000)	-0.234 (0.453)	1.429*** (0.000)	0.279 (0.511)
Cash holdings squared	-1.627*** (0.000)	-8.609*** (0.000)	-0.898** (0.021)	-5.810*** (0.000)	0.297 (0.431)	-0.727 (0.262)	-0.095 (0.862)
<b>Linear moderating effects</b>							
Cash holdings*FFs				-1.743*** (0.002)			
Cash holdings*FCI							2.154*** (0.006)
<b>Nonlinear moderating effects</b>							
Cash holdings squared*FFs				4.884*** (0.000)			
Cash holdings squared*FCI							-1.771* (0.078)
<b>Controls</b>							
Family firms (FFs)				-0.043 (0.560)			
Family control & influence (FCI)							-0.187*** (0.004)
L.Tobin's q	0.432*** (0.000)	0.300*** (0.000)	0.504*** (0.000)	0.438*** (0.000)	0.410*** (0.000)	0.500*** (0.000)	0.504*** (0.000)
Firm size	-0.030* (0.084)	-0.108** (0.045)	-0.017 (0.425)	-0.037** (0.034)	-0.062** (0.030)	0.000 (0.995)	-0.014 (0.512)
Debt	0.164* (0.082)	0.192 (0.283)	0.188* (0.083)	0.172* (0.064)	0.457*** (0.000)	0.094 (0.539)	0.201* (0.064)
Sales growth	-0.002 (0.947)	-0.091 (0.126)	-0.017 (0.542)	0.000 (0.997)	-0.018 (0.574)	-0.010 (0.788)	-0.016 (0.565)
Dividend	-0.162 (0.344)	0.074 (0.775)	-0.324 (0.148)	-0.131 (0.441)	-0.380 (0.382)	-0.338 (0.200)	-0.337 (0.132)
Cash flow	-0.001 (0.732)	-0.003 (0.385)	-0.003 (0.921)	-0.001 (0.725)	-0.039 (0.138)	0.027 (0.590)	-0.013 (0.683)
Capex	0.129 (0.561)	0.185 (0.670)	0.143 (0.575)	0.087 (0.693)	-0.219 (0.395)	0.182 (0.636)	0.187 (0.463)
CEO duality	0.051* (0.099)	0.160** (0.020)	-0.001 (0.967)	0.060* (0.051)	-0.109** (0.036)	0.013 (0.776)	0.003 (0.923)
Independent directors	0.090 (0.253)	0.298** (0.015)	0.153 (0.151)	0.120 (0.126)	-0.206 (0.122)	0.229 (0.112)	0.139 (0.191)
Board size	0.003 (0.630)	0.002 (0.835)	-0.000 (0.970)	0.005 (0.477)	-0.008 (0.439)	-0.001 (0.924)	0.002 (0.781)
Firm age	-0.087 (0.168)	0.277* (0.051)	-0.135* (0.075)	-0.088 (0.163)	-0.083 (0.241)	-0.213* (0.063)	-0.126* (0.095)
Institutional investor	-0.023 (0.397)	0.232** (0.014)	-0.032 (0.254)	-0.029 (0.297)	-0.036 (0.317)	-0.020 (0.595)	-0.027 (0.341)
Ownership concentration	-0.051 (0.643)	-0.014 (0.964)	-0.059 (0.667)	0.021 (0.850)	0.015 (0.916)	-0.176 (0.379)	-0.054 (0.695)
Crisis	0.082 (0.118)	-0.271** (0.035)	0.141** (0.014)	0.073 (0.158)	-0.006 (0.933)	0.181** (0.019)	0.132** (0.021)
Constant	1.084*** (0.000)	0.937 (0.250)	0.998*** (0.004)	1.130*** (0.000)	1.728*** (0.000)	1.060** (0.044)	0.984*** (0.004)
Observations	1,884	474	1,410	1,884	375	1,035	1,410
R-squared	0.342	0.407	0.416	0.358	0.548	0.411	0.421
Adjusted R-squared	0.255	0.273	0.331	0.271	0.392	0.313	0.335
Number of Id	195	62	154	195	71	123	154
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes

pval in parentheses. \*\*\*, \*\* and \* indicate statistical significance at the 1 %, 5 % and 10 % levels, respectively.

high degree of family control and influence. The empirical results regarding the optimal board composition in family businesses have been largely inconclusive (Bammens et al., 2011). Our findings explain the conflicting evidence suggesting that boards of directors and ownership can act as either substitute or complements depending on the balance between SEW and financial concerns. When the latter are aligned, family ownership can act as a governance mechanism allowing the firm to benefit from accumulating cash holdings. However, when financial and SEW concerns are at odds, presenting a mixed gamble choice for family principals, effective board governance can reduce the family owners'

pursuit of restricted SEW gains, and these effects are particularly strong under a high degree of family control and influence.

Finally, our paper enlarges the growing body of finance literature examining the performance effects of cash management choices by drawing attention to how heterogeneity in owners' frames of reference shape the balance between precautionary and opportunistic motives of cash allocation choices. Despite the extensive empirical and theoretical research in finance explaining corporate cash policy choices, most of the extant studies on the topic are rooted in the free cash flow hypothesis (Jensen, 1986) with an implicit assumption of uniformity of

**Table 7**  
Relationship between cash holdings and ROA in nonfamily and family firms.

VARIABLES	(1) ROA Full sample	(2) ROA Nonfamily firms	(3) ROA Family firms	(4) ROA Interaction	(5) ROA Low-FCI	(6) ROA High-FCI	(7) ROA Interaction
<b>Explanatory</b>							
Cash holdings	0.337*** (0.000)	0.291*** (0.000)	0.349*** (0.000)	0.308*** (0.004)	0.087 (0.400)	0.748*** (0.000)	-0.176* (0.055)
Cash holdings squared	-0.642*** (0.000)	-0.574*** (0.000)	-0.650*** (0.000)	-0.792*** (0.000)	0.162 (0.203)	-1.739*** (0.000)	0.389*** (0.001)
<b>Linear moderating effects</b>							
Cash holdings*FFs				0.052 (0.662)			
Cash holdings*FCI							1.393*** (0.000)
<b>Nonlinear moderating effects</b>							
Cash holdings squared*FFs				0.152 (0.434)			
Cash holdings squared*FCI							-2.957*** (0.000)
<b>Controls</b>							
Family firms (FFs)				-0.023 (0.129)			
Family control & influence (FCI)							-0.102*** (0.000)
L.ROA	0.401*** (0.000)	0.332*** (0.000)	0.408*** (0.000)	0.395*** (0.000)	0.181*** (0.000)	0.443*** (0.000)	0.364*** (0.000)
Firm size	0.006 (0.102)	0.014** (0.028)	0.005 (0.303)	0.006 (0.119)	0.016* (0.091)	0.005 (0.410)	0.011** (0.020)
Debt	-0.013 (0.504)	0.029 (0.185)	-0.037 (0.157)	-0.013 (0.501)	-0.121*** (0.004)	0.014 (0.609)	-0.047** (0.045)
Sales growth	0.014*** (0.008)	0.002 (0.749)	0.022*** (0.001)	0.014*** (0.008)	0.001 (0.924)	0.019*** (0.006)	0.015** (0.013)
Dividend	-0.048 (0.177)	-0.053* (0.097)	-0.046 (0.384)	-0.048 (0.176)	-0.073 (0.614)	-0.047 (0.324)	-0.037 (0.438)
Cash flow	-0.001 (0.221)	-0.000 (0.402)	-0.009 (0.214)	-0.001 (0.202)	0.014 (0.141)	0.008 (0.403)	-0.002 (0.813)
Capex	0.224*** (0.000)	0.166*** (0.002)	0.192*** (0.002)	0.217*** (0.000)	0.081 (0.382)	0.069 (0.318)	0.176*** (0.001)
CEO duality	-0.009 (0.161)	0.001 (0.947)	-0.009 (0.233)	-0.008 (0.218)	0.058*** (0.001)	-0.013* (0.098)	-0.008 (0.240)
Independent directors	-0.016 (0.328)	0.001 (0.959)	-0.039 (0.118)	-0.015 (0.349)	-0.071 (0.111)	0.010 (0.706)	-0.017 (0.449)
Board size	0.002* (0.088)	0.000 (0.949)	0.004** (0.043)	0.002* (0.076)	0.004 (0.191)	0.003 (0.105)	0.003* (0.071)
Firm age	-0.013 (0.320)	-0.006 (0.743)	-0.030* (0.088)	-0.015 (0.234)	-0.010 (0.671)	-0.044** (0.027)	-0.032** (0.044)
Institutional investor	0.006 (0.317)	0.012 (0.314)	0.001 (0.871)	0.005 (0.380)	-0.002 (0.840)	-0.006 (0.368)	-0.003 (0.621)
Ownership concentration	0.038* (0.090)	0.010 (0.787)	0.036 (0.267)	0.042* (0.072)	-0.037 (0.446)	0.070* (0.051)	0.065** (0.027)
Crisis	-0.009 (0.393)	-0.015 (0.320)	-0.004 (0.783)	-0.009 (0.388)	-0.025 (0.269)	-0.011 (0.408)	-0.012 (0.319)
Constant	-0.078 (0.174)	-0.196* (0.050)	-0.013 (0.872)	-0.052 (0.373)	-0.128 (0.331)	-0.008 (0.933)	-0.048 (0.505)
Observations	1,889	477	1,412	1,889	374	1,038	1,412
R-squared	0.468	0.261	0.212	0.471	0.336	0.407	0.362
Adjusted R-squared	0.398	0.095	0.098	0.400	0.106	0.308	0.268
Number of Id	194	62	154	194	71	123	154
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes

pval in parentheses. \*\*\*, \*\* and \* indicate statistical significance at the 1 %, 5 % and 10 % levels, respectively.

shareholders' interests and influence on their firms. However, the assumption that shareholders' only interest is to maximize the return on their capital and generally to treat them as "diversified and disinterested" is in sharp contrast with the composition of firm ownership worldwide, thereby presenting a variety of distinct and identifiable owners (Federo et al., 2020). In line with emerging studies addressing the inherent limitations of the dominant free cash flow hypothesis in the context of family firms (e.g., Baixauli-Soler et al., 2021; Belda-Ruiz et al., 2021; Comino-Jurado et al., 2021), we introduce the SEW perspective as a relevant lens to explain the distinct performance outcomes of cash

accumulation in family firms. Given the ongoing debate about when and how the accumulation of cash resources can benefit firm performance (Weidemann, 2018), a behavioral approach accounting for the heterogeneity in ownership identities may constitute a critical missing piece to understand the behavioral motives behind cash management choice in both family and nonfamily firms.

## 7.2. Implications for practice

Given the current economic conditions, we believe that our findings

could be of practical interest to both family and nonfamily shareholders. In particular, our results show that the accumulation of cash holdings could create value in listed family firms and that this value is maximized under conditions of high firm vulnerability and when the opportunities for family opportunism are restricted. We thus recommend twofold attention when designing governance in family firms. First, we highlight the need to protect family members from themselves, which could be related to the actual size and composition of the nuclear family. For instance, the presence of more family branches or multiple family leaders can amplify the likelihood of inefficient cash allocation choices. Second, we underscore the need to protect nonfamily shareholders from family members and balance the goals and incentives of different groups of investors to maximize firm value. In both situations, strengthening the board monitoring function by separating the CEO and board chair positions can serve as a corporate governance mechanism that effectively limits family opportunism. Thus, having a better knowledge of shareholders' behaviors can help in a more effective, tailored, and transparent governance design. Such a design should rely on the assumption that nonfamily shareholders should and could take significant advantage of family control, especially if the family has a considerable degree of control and influence over the business and when governance is constructed to avoid excessive concentration of power in the hands of a CEO serving as a chair of the board. Under these circumstances, increasing cash holdings will turn into an increase in firm value, financial flexibility, and a balance between control and opportunism. Our results could also have considerable implications for unlisted family firms, where the absence of minority nonfamily investors potentially amplifies the trade-offs between the advantages and disadvantages of increased cash holdings. In those cases, an effective governance design promises to be even more crucial to avoid inefficient cash allocations or even abuses.

Furthermore, the arguments provided in this article could help investors assess the underlying motives behind firms' cash holding policies. This becomes especially important in light of increased hedge fund investor activism as corporate cash policies constitute one of the most frequent targets of activists' campaigns (Coffee & Palia, 2016). For example, cash buybacks and increased dividends are two of the most frequent demands among activist investors (Loop, 2016), with the central argument that such policies help to discipline management and ultimately maximize shareholder capital. However, our study suggests that this rationale may not fully apply to the context of listed family firms, which have long resisted this trend by holding greater cash reserves than nonfamily firms. We thus encourage investors to carefully consider firm ownership structure when assessing corporate cash policies.

### 7.3. Limitations and future research

Our paper is not without limitations. First, our findings should be interpreted with caution as the data do not allow us to measure SEW directly and model it as an interpretive proxy of a single dimension of SEW, namely, family control and influence. For family firms' cash allocation choices, by disregarding alternative explanations, such as greater growth orientation (Miller, Le Breton-Miller, & Lester, 2011) or the pursuit of a long-term investment strategy (Lumpkin & Brigham, 2011), future studies could instead test our theory by employing direct multidimensional SEW measures that have been developed and validated in family business research (see, for example, Berrone et al., 2012; Debicki, Kellermanns, Chrisman, Pearson, & Spencer, 2016; Hauck, Suess-Reyes, Beck, Prüggl, & Frank, 2016).

Second, in line with the board governance literature (Johanson & Østergren, 2010), our study assumes that it is plausible for independent directors and boards with the board chair and CEO roles separated to exercise more vigilant monitoring. However, some studies have contested this assumption by questioning the effectiveness of independent directors in monitoring and protecting shareholder wealth (Boivie, Bednar, Aguilera, & Andrus, 2016). We thus encourage future studies to

employ direct measures of board task performance to better capture board processes and behaviors and therefore provide a more fine-grained understanding of board influence on family firm outcomes (c.f. Arzubiaga, Kotlar, De Massis, Maseda, & Iturralde, 2018; Kanadli, Torchia, Gabaldon, & Calabrò, 2020). Whereas this approach has been mostly applied in the context of private family firms (Zattoni, Gnan, & Huse, 2015), it can also be potentially useful for studying the impact of board monitoring in listed family firms.

Third, this study explored the effects of family ownership on a single-country sample. While the Italian context is particularly suitable for our study, future research could empirically examine the applicability of our conceptual model to other institutional contexts. Fourth, due to data limitations, our empirical analyses do not account for firms' business group affiliation, which has been found to affect both performance and cash holdings (Cai, Zeng, Lee, & Ozkan, 2016; Lensink & Van der Molen, 2010). Considering how business group affiliation influences cash management decisions in family firms and the implications of these affiliations for firm value can nuance a further understanding of the contextual determinants of cash management mixed gambles and therefore constitute an interesting and relevant avenue for future research. Furthermore, our research design does not distinguish between family firms and lone founders that present distinct social contexts of ownership (Miller et al., 2011) and may entail differences in cash allocation strategies. In addition, like most studies on governance and cash policies, our empirical findings may be subject to endogeneity issues. Because it is difficult to find appropriate instrumental variables that are useful to address endogeneity problems in the literature, we are aware that we cannot wholly eliminate concerns about causality effects and unobservable omitted variables (Miller, Le Breton-Miller, Amore, Minichilli, & Corbetta, 2017). Finally, we do not account for potential interdependencies between cash allocation choices and external financing decisions. Recent research has suggested that cash management choices comprise part of the overall financing strategy of the firm and thus are interrelated with debt-management choices (Brick & Liao, 2017).

Our findings also open up several additional opportunities for future research. One natural step forward could be an investigation of the dynamics between family owners and other significant shareholders. Previous literature shows that controlling shareholders such as corporations, institutional owners, and the state differ considerably in their incentives and influence on their firms (Cannella, Jones, & Withers, 2015; Collin et al., 2017; Federo et al., 2020). Thus, future studies could extend our theory by considering the constellation of multiple owners and their heterogeneous preferences in explaining the performance effects of cash management choices. Another interesting avenue could be to further probe the boundary conditions of the SEW perspective by distinguishing between different types of family control arrangements such as family-managed vs. family-owned firms (Tsao et al., 2020) or weak/strong family-owned firms (Alessandri et al., 2018); relatedly, our findings indicate that older firms have lower firm value than younger firms, which suggests that the balance between restricted and extended SEW may differ between successor control vs. founder-controlled family firms. Thus, future studies could investigate how different types of family firms differ in their preferences for restricted and extended SEW, ultimately shaping the performance effects of cash holdings. Finally, cash management choices are unlikely to be made in silos with other strategic decisions and are embedded in the firm context. We thus encourage future studies to nuance our theory further by examining the performance effects of cash allocation choices in family firms with different levels of debt financing and focusing more on the overall financial structure of the company and its competitive environment. This will be particularly relevant in the post-pandemic recovery that firms will need to experience and to absorb and restructure financing choices that firms have been forced to undertake (Amore, Quarato, & Pelucco, 2021). In this respect, we continue to believe that behavioral theories can have much to say compared to traditional agency

arguments in both listed and private firms. While cash management choices can indeed be more pronounced in listed firms, private companies promise to have additional specific issues related to the more restricted ownership base and the less articulated governance structure.

#### 7.4. Conclusion

In concluding, our study has sought to provide a theoretical underpinning of how and why family firms differ in their management strategies and the implications of these choices for firm outcomes. In business research and practice, cash management is a relevant and controversial issue that has seldom been examined through the lens of ownership. We hope that our study will prompt further research and debate that can advance our understanding of the distinct identity of family owners in this critical strategic domain.

#### Author Statement

Domenico Rocco Cambrea: Data collection, Methodology, Analyses & Results, Review & Editing.

Yuliya Ponomareva: Writing - Original Draft, Theory building, Conceptualization, Review & Editing.

Daniel Pittino: Writing - Review & Editing, Project administration.

Alessandro Minichilli: Review & Editing.

#### Acknowledgments

We are very grateful to the editor-in-chief Torsten Pieper, the associate editor Mathew Hughes and two anonymous reviewers for their constructive challenges and helpful comments during the review process. We also thank Sven-Olof Collin, Vanessa Diaz-Moriana, Eleunthia Ellinger, Miguel Ángel García Cestona and Ryan Federo for their insightful advice and suggestions. Yuliya Ponomareva gratefully acknowledges financial support from the Ministry of Science and Innovation, State Research Agency (Project reference number PID2020-115018RB-C32).

#### References

- Alesina, A., & Giuliano, P. (2014). Family ties. *Handbook of economic growth* (pp. 177–215). <https://doi.org/10.1016/B978-0-444-53538-2.00004-6>
- Alessandri, T. M., Cerrato, D., & Eddleston, K. A. (2018). The mixed gamble of internationalization in family and nonfamily firms: The moderating role of organizational slack. *Global Strategy Journal*, 8(1), 46–72. <https://doi.org/10.1002/gsj.1201>
- Amess, K., Banerji, S., & Lampousis, A. (2015). Corporate cash holdings: Causes and consequences. *International Review of Financial Analysis*, 42, 421–433. <https://doi.org/10.1016/j.irfa.2015.09.007>
- Amore, M. D., Quarato, F., & Pelucco, V. (2021). *Family ownership during the covid-19 pandemic*. Available at SSRN 3773430.
- Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *The Journal of Finance*, 58(3), 1301–1328. <https://doi.org/10.1111/1540-6261.00567>
- Anderson, R. C., & Reeb, D. M. (2004). Board composition: Balancing family influence in S&P 500 firms. June. *Administrative science quarterly*. <https://doi.org/10.2307/4131472>
- Andres, C. (2008). Large shareholders and firm performance - an empirical examination of founding-family ownership. *Journal of Corporate Finance*, 15(14), 431–445. <https://doi.org/10.1016/j.jcorp>
- Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies*, 58(2), 277. <https://doi.org/10.2307/2297968>
- Arzubiaga, U., Kotlar, J., De Massis, A., Maseda, A., & Iturralde, T. (2018). Entrepreneurial orientation and innovation in family SMEs: Unveiling the (actual) impact of the Board of Directors. *Journal of Business Venturing*, 33(4), 455–469. <https://doi.org/10.1016/j.jbusvent.2018.03.002>
- Attig, N., El Ghoul, S., Guedhami, O., & Rizeanu, S. (2013). The governance role of multiple large shareholders: Evidence from the valuation of cash holdings. *Journal of Management and Governance*, 17(2), 419–451. <https://doi.org/10.1007/s10997-011-9184-3>
- Baixaui-Soler, J. S., Belda-Ruiz, M., & Sánchez-Marín, G. (2021). Socioemotional wealth and financial decisions in private family SMEs. *Journal of Business Research*, 123, 657–668. <https://doi.org/10.1016/j.jbusres.2020.10.022>
- Bammens, Y., Voordeckers, W., & Van Gils, A. (2011). Boards of directors in family businesses: A literature review and research agenda. *International Journal of Management Reviews*, 13(2), 134–152. <https://doi.org/10.1111/j.1468-2370.2010.00289.x>
- Bates, T. W., Kahle, K. M., & Stulz, R. M. (2009). Why do U.S. firms hold so much more cash than they used to? *The Journal of Finance*, 64(5), 1985–2021. <https://doi.org/10.1111/j.1540-6261.2009.01492.x>
- Bauweraerts, J., Diaz-Moriana, V., & Arzubiaga, U. (2020). A mixed gamble approach of the impact of family management on firm's growth: A longitudinal analysis. *European Management Review*. <https://doi.org/10.1111/emre.12359>
- Bauweraerts, J., Vandernoot, J., & Buchet, A. (2020). Family firm heterogeneity and tax aggressiveness: A mixed gamble approach. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 37(2), 149–163. <https://doi.org/10.1002/cjas.1528>
- Belda-Ruiz, M., Sánchez-Marín, G., & Baixauli-Soler, J. S. (2021). Influence of family-centered goals on dividend policy in family firms: A socioemotional wealth approach. *International Entrepreneurship and Management Journal*, 1–24. <https://doi.org/10.1007/s11365-021-00741-x>
- Belghitar, Y., & Khan, J. (2013). Governance mechanisms, investment opportunity set and SMEs cash holdings. *Small Business Economics*, 40, 59–72. <https://doi.org/10.1007/s11187-011-9366-z>
- Belkhir, M., Boubaker, S., & Derouiche, I. (2014). Control–ownership wedge, board of directors, and the value of excess cash. *Economic Modelling*, 39, 110–122. <https://doi.org/10.1016/j.econmod.2014.02.026>
- Berrone, P., Cruz, C., & Gómez-Mejía, L. R. (2012). Socioemotional wealth in family firms: Theoretical dimensions, assessment approaches, and agenda for future research. *Family Business Review*. <https://doi.org/10.1177/0894486511435355>
- Berrone, P., Cruz, C., Gómez-Mejía, L. R., & Larrazza-Kintana, M. (2010). Socioemotional wealth and corporate responses to institutional pressures: do family-controlled firms pollute less? *Administrative Science Quarterly*, 55(1), 82–113. <https://doi.org/10.2189/asqu.2010.55.1.82>
- Bertrand, M., & Schoar, A. (2006). The role of family in family firms. *The Journal of Economic Perspectives*, 20(2), 73–96. <https://doi.org/10.2307/30033651>
- Bettinelli, C. (2011). Boards of directors in family firms: An exploratory study of structure and group process. *Family Business Review*, 24(2), 151–169. <https://doi.org/10.1177/0894486511402196>
- Bianco, M., Ciavarella, A., & Signoretti, R. (2015). Women on corporate boards in Italy: The role of family connections. *Corporate Governance an International Review*, 23(2), 129–144. <https://doi.org/10.1111/corg.12097>
- Bigelli, M., & Sánchez-Vidal, J. (2012). Cash holdings in private firms. *Journal of Banking & Finance*, 36(1), 26–35. <https://doi.org/10.1016/j.jbankfin.2011.06.004>
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115–143. [https://doi.org/10.1016/S0304-4076\(98\)00009-8](https://doi.org/10.1016/S0304-4076(98)00009-8)
- Boivie, S., Bednar, M. K., Aguilera, R. V., & Andrus, J. (2016). Are boards designed to fail? The implausibility of effective board monitoring. *Academy of Management Annals*, 10(1), 319–407. <https://doi.org/10.5465/19416520.2016.1120957>
- Boubaker, S., Derouiche, I., & Nguyen, D. K. (2015). Does the board of directors affect cash holdings? A study of French listed firms. *Journal of Management and Governance*, 19(2), 341–370. <https://doi.org/10.1007/s10997-013-9261-x>
- Boubakri, N., & Ghouma, H. (2010). Control/ownership structure, creditor rights protection, and the cost of debt financing: International evidence. *Journal of Banking & Finance*, 34(10), 2481–2499. <https://doi.org/10.1016/j.jbankfin.2010.04.006>
- Bourgeois, L. J. (1981). On the measurement of organizational slack. *The Academy of Management Review*, 6(1), 29–39. <https://doi.org/10.5465/amr.1981.4287985>
- Brick, I. E., & Liao, R. C. (2017). The joint determinants of cash holdings and debt maturity: The case for financial constraints. *Review of Quantitative Finance and Accounting*, 48(3), 597–641.
- Brisker, E. R., Çolak, G., & Peterson, D. R. (2013). Changes in cash holdings around the S&P 500 additions. *Journal of Banking & Finance*, 37(5), 1787–1807. <https://doi.org/10.1016/j.jbankfin.2013.01.021>
- Bromiley, P. (2010). Looking at prospect theory. *Strategic Management Journal*, 31(12), 1357–1370. <https://doi.org/10.1002/smj.885>
- Brown, J. R., & Petersen, B. C. (2011). Cash holdings and R&D smoothing. *Journal of Corporate Finance*, 17(3), 694–709. <https://doi.org/10.1016/j.jcorpfin.2010.01.003>
- Burgess, K. (2020). *Prudent Primark owner is right to keep hold of cash*. Financial Times. November 3rd.
- Cai, W., Zeng, C. C., Lee, E., & Ozkan, N. (2016). Do business groups affect corporate cash holdings? Evidence from a transition economy. *China Journal of Accounting Research*, 9(1), 1–24. <https://doi.org/10.1016/j.cjar.2015.10.002>
- Calabrò, A., Minichilli, A., Amore, M. D., & Brogi, M. (2018). The courage to choose! Primogeniture and leadership succession in family firms. *Strategic Management Journal*, 39(7), 2014–2035. <https://doi.org/10.1002/smj.2760>
- Cambrea, D. R., Calabrò, A., La Rocca, M., & Paolone, F. (2021). The impact of boards of directors' characteristics on cash holdings in uncertain times. *Journal of Management and Governance*, 1–33. <https://doi.org/10.1007/s10997-020-09557-3>
- Cannella, A. A., Jones, C. D., & Withers, M. C. (2015). Family- versus lone-founder-controlled public corporations: Social identity theory and boards of directors. *The Academy of Management Journal*, 58(2), 436–459. <https://doi.org/10.5465/amj.2012.0045>
- Cater, J., & Schwab, A. (2008). Turnaround strategies in established small family firms. *Family Business Review*, 21(1), 31–50. <https://doi.org/10.1111/j.1741-6248.2007.00113.x>
- Cennamo, C., Berrone, P., Cruz, C., & Gómez-Mejía, L. R. (2012). Socioemotional wealth and proactive stakeholder engagement: Why family-controlled firms care more

- about their stakeholders. *Entrepreneurship Theory and Practice*, 36(6), 1153–1173. <https://doi.org/10.1111/j.1540-6520.2012.00543.x>
- Chirico, F., Gómez-Mejía, L. R., Hellerstedt, K., Withers, M., & Nordqvist, M. (2020). To merge, sell, or liquidate? Socioemotional wealth, family control, and the choice of business exit. *Journal of Management*, 46(8), 1342–1379. <https://doi.org/10.1177/0149206318818723>
- Cho, J., Miller, D., & Lee, J. (2018). Too much of a good thing: Family involvement and the survival of listed Korean firms. *Journal of Family Business Strategy*, 9(4), 223–237. <https://doi.org/10.1016/j.jfbs.2018.10.001>
- Chrisman, J. J., Chua, J. H., & Sharma, P. (2003). Current trends and future directions in family business management studies: Toward a theory of the family firm. *Coleman White Paper Series*.
- Chua, J. H., Chrisman, J. J., & De Massis, A. (2015). A closer look at socioemotional wealth: Its flows, stocks, and prospects for moving forward. *Entrepreneurship Theory and Practice*, 39(2), 173–182. <https://doi.org/10.1111/etap.12155>
- Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice*, 23(4), 19–39. <https://doi.org/10.1177/104225879902300402>
- Coffee, J. C., Jr, & Palia, D. (2016). The wolf at the door: The impact of hedge fund activism on corporate governance. *Annals of Corporate Governance*, 1(1), 1–94. <https://doi.org/10.1561/109.000000003>
- Collin, S.-O. Y., Ponomareva, Y., Ottosson, S., & Sundberg, N. (2017). Governance strategy and costs: Board compensation in Sweden. *Journal of Management and Governance*, 21(3), 685–713. <https://doi.org/10.1007/s10997-016-9359-z>
- Comino-Jurado, M., Sánchez-Andújar, S., & Parrado-Martínez, P. (2021). Reassessing debt-financing decisions in family firms: Family involvement on the board of directors and generational stage. *Journal of Business Research*, 135, 426–435. <https://doi.org/10.1016/j.jbusres.2021.06.060>
- Corbetta, G., & Salvato, C. A. (2004). The board of directors in family firms: one size fits all? *Family Business Review*, 17(2), 119–134. <https://doi.org/10.1111/j.1741-6248.2004.00008.x>
- Craig, J. B., & Newbert, S. L. (2020). Reconsidering socioemotional wealth: A Smithian-inspired socio-economic theory of decision-making in the family firm. *Journal of Family Business Strategy*, 11(4). <https://doi.org/10.1016/j.jfbs.2020.100353>, 100353.
- Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm*. Englewood Cliffs: NY: Prentice Hall.
- D'Aurizio, L., Oliviero, T., & Romano, L. (2015). Family firms, soft information and bank lending in a financial crisis. *Journal of Corporate Finance*, 33, 279–292. <https://doi.org/10.1016/j.jcorpfin.2015.01.002>
- Daspit, J. J., Chrisman, J. J., Ashton, T., & Evangelopoulos, N. (2021). Family firm heterogeneity: A definition, common themes, scholarly progress, and directions forward. *Family Business Review*. <https://doi.org/10.1177/08944865211008350>
- Deb, P., David, P., & O'Brien, J. (2017). When is cash good or bad for firm performance? *Strategic Management Journal*, 38(2), 436–454. <https://doi.org/10.1002/smj>
- Debicki, B. J., Kellermanns, F. W., Chrisman, J. J., Pearson, A. W., & Spencer, B. A. (2016). Development of a socioemotional wealth importance (SEWI) scale for family firm research. *Journal of Family Business Strategy*, 7(1), 47–57. <https://doi.org/10.1016/j.jfbs.2016.01.002>
- Deman, R., Jorissen, A., & Laveren, E. (2018). Board monitoring in a privately held firm: When does CEO duality matter? The moderating effect of ownership. *Journal of Small Business Management*, 56(2), 229–250. <https://doi.org/10.1111/jsbm.12251>
- Desender, K. A., Aguilera, R. V., Crespi, R., & García-cestona, M. (2013). When does ownership matter? Board characteristics and behavior. *Strategic Management Journal*, 34(7), 823–842. <https://doi.org/10.1002/smj.2046>
- Dibrell, C., & Memili, E. (2019). A brief history and a look to the future of family business heterogeneity: An introduction. *The palgrave handbook of heterogeneity among family firms* (pp. 1–15). Cham: Springer International Publishing. [https://doi.org/10.1007/978-3-319-77676-7\\_1](https://doi.org/10.1007/978-3-319-77676-7_1)
- Dittmar, A., & Mahrt-Smith, J. (2007). Corporate governance and the value of cash holdings. *Journal of Financial Economics*, 83(3), 599–634. <https://doi.org/10.1016/j.jfineco.2005.12.006>
- Dou, J., Wang, N., Su, E., Fang, H., & Memili, E. (2020). Goal complexity in family firm diversification: Evidence from China. *Journal of Family Business Strategy*, 11(1), 100310. <https://doi.org/10.1016/j.jfbs.2019.100310>
- Dow, S., & McGuire, J. (2016). Family matters?: A cross-national analysis of the performance implications of family ownership. *Corporate Governance an International Review*, 24(6), 584–598. <https://doi.org/10.1111/corg.12155>
- Durán, R. F., Lozano, M. B., & Yaman, S. (2016). Is family control relevant for corporate cash holding policy? *Journal of Business Finance & Accounting*, 43(9–10), 1325–1360. <https://doi.org/10.1111/jbfa.12222>
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control separation of ownership and control. *The Journal of Law & Economics*, 26(2), 301–325. <https://doi.org/10.1086/467037>
- Federo, R., Ponomareva, Y., Aguilera, R. V., Saz-Carranza, A., & Losada, C. (2020). Bringing owners back on board: A review of the role of ownership type in board governance. *Corporate Governance: An International Review*, 28(6), 348–371. <https://doi.org/10.1111/corg.12346>
- Fernando, G. D., Schneible, R. A., & Suh, S. (2014). Family firms and institutional investors. *Family Business Review*, 27(4), 328–345. <https://doi.org/10.1177/0894486513481474>
- George, G. (2005). Slack resources and the performance of privately held firms. *The Academy of Management Journal*, 48(4), 661–676. <https://doi.org/10.5465/amj.2005.17843944>
- Goel, S., Voordeckers, W., van Gils, A., & van den Heuvel, J. (2013). CEO's empathy and salience of socioemotional wealth in family SMEs – The moderating role of external directors. *Entrepreneurship and Regional Development*, 25(3–4), 111–134. <https://doi.org/10.1080/08985626.2012.710262>
- Gómez-Mejía, L. R., Campbell, J. T., Martin, G., Hoskisson, R. E., Makri, M., & Sirmon, D. G. (2014). Socioemotional wealth as a mixed gamble: Revisiting family firm R&D investments with the behavioral agency model. *Entrepreneurship Theory and Practice*, 38(6), 1351–1374. <https://doi.org/10.1111/etap.12083>
- Gómez-Mejía, L. R., Cruz, C., Berrone, P., & DeCastro, J. (2011). The bind that ties: Socioemotional wealth preservation in family firms. *The Academy of Management Annals*, 5(1), 653–707. <https://doi.org/10.5465/19416520.2011.593320>
- Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J. L., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative Science Quarterly*, 52(1), 106–137. <https://doi.org/10.2189/asqu.52.1.106>
- Gómez-Mejía, L. R., Makri, M., & Kintana, M. L. (2010). Diversification decisions in family-controlled firms. *Journal of Management Studies*, 47(2), 223–252. <https://doi.org/10.1111/j.1467-6486.2009.00889.x>
- Gómez-Mejía, L. R., Neacsu, I., & Martin, G. (2019). CEO risk-taking and socioemotional wealth: The behavioral agency model, family control, and CEO option wealth. *Journal of Management*, 45(4), 1713–1738. <https://doi.org/10.1177/0149206317723711>
- Gómez-Mejía, L. R., Núñez-Nickel, M., & Gutierrez, I. (2001). The role of family ties in agency contracts. *The Academy of Management Journal*, 44(1), 81–95. <https://doi.org/10.2307/3069338>
- Gómez-Mejía, L. R., Patel, P. C., & Zellweger, T. M. (2018). In the horns of the dilemma: Socioemotional wealth, financial wealth, and acquisitions in family firms. *Journal of Management*, 44(4), 1369–1397. <https://doi.org/10.1177/0149206315614375>
- Granger, C. W. J. (1969). Investigating causal relations by econometric models and cross-spectral methods. *Econometrica*, 37(3), 424. <https://doi.org/10.2307/1912791>
- Haans, R. F. J., Pieters, C., & He, Z.-L. (2016). Thinking about U: Theorizing and testing U- and inverted U-shaped relationships in strategy research. *Strategic Management Journal*, 37(7), 1177–1195. <https://doi.org/10.1002/smj.2399>
- Hambrick, D. C., & Snow, C. C. (1977). A contextual model of strategic decision making in organizations. *Academy of Management Proceedings*, 1977(1), 109–112. <https://doi.org/10.5465/ambpp.1977.4977040>
- Harford, J., Mansi, S. A., & Maxwell, W. F. (2008). Corporate governance and firm cash holdings in the US. *Journal of Financial Economics*, 87(3), 535–555. <https://doi.org/10.1016/j.jfineco.2007.04.002>
- Hauck, J., Suess-Reyes, J., Beck, S., Prügl, R., & Frank, H. (2016). Measuring socioemotional wealth in family-owned and-managed firms: A validation and short form of the FIBER Scale. *Journal of Family Business Strategy*, 7(3), 133–148. <https://doi.org/10.1016/j.jfbs.2016.08.001>
- Huang, A. G. (2009). The cross section of cashflow volatility and expected stock returns. *Journal of Empirical Finance*, 16(3), 409–429. <https://doi.org/10.1016/j.jempfin.2009.01.001>
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review*, 76(2), 323–329. <http://www.jstor.org/stable/1818789>.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Jiang, D. S., Kellermanns, F. W., Munyon, T. P., & Morris, M. L. (2018). More than meets the eye: A review and future directions for the social psychology of socioemotional wealth. *Family Business Review*, 31(1), 125–157. <https://doi.org/10.1177/0894486517736959>
- Jiang, F., Ma, Y., & Shi, B. (2017). Stock liquidity and dividend payouts. *Journal of Corporate Finance*, 42, 295–314. <https://doi.org/10.1016/j.jcorpfin.2016.12.005>
- Johanson, D., & Östergren, K. (2010). The movement toward independent directors on boards: A comparative analysis of Sweden and the UK. *Corporate Governance: An International Review*, 18(6), 527–539. <https://doi.org/10.1111/j.1467-8683.2010.00813.x>
- Kabbach de Castro, L. R., Aguilera, R. V., & Crespi-Cladera, R. (2017). Family firms and compliance: Reconciling the conflicting predictions within the socioemotional wealth perspective. *Family Business Review*, 30(2), 137–159. <https://doi.org/10.1177/0894486516685239>
- Kanadli, S. B., Torchia, M., Gabaldon, P., & Calabrò, A. (2020). Effects of task conflict on board task performance in family firms: The importance of board openness. *Journal of Family Business Strategy*, 11(2), Article 100350. <https://doi.org/10.1016/j.jfbs.2020.100350>
- Kellermanns, F. W., Eddleston, K. A., & Zellweger, T. M. (2012). Extending the socioemotional wealth perspective: A look at the dark side. *Entrepreneurship Theory and Practice*, 36(6), 1175–1182. <https://doi.org/10.1111/j.1540-6520.2012.00544.x>
- Kim, C., & Bettis, R. A. (2014). Cash is surprisingly valuable as a strategic asset. *Strategic Management Journal*, 35(35), 2053–2063. <https://doi.org/10.1002/smj>
- Kim, H., Kim, H., & Lee, P. M. (2008). Ownership structure and the relationship between financial slack and R&D investments: Evidence from Korean firms. *Organization Science*, 19(3), 404–418. <https://doi.org/10.1287/orsc.1080.0360>
- Kotlar, J., Signori, A., De Massis, A., & Vismara, S. (2018). Financial wealth, socioemotional wealth, and IPO underpricing in family firms: A two-stage gamble model. *The Academy of Management Journal*, 61(3), 1073–1099. <https://doi.org/10.5465/amj.2016.0256>
- Kuan, T.-H., Li, C.-S., & Liu, C.-C. (2012). Corporate governance and cash holdings: A quantile regression approach. *International Review of Economics & Finance*, 24, 303–314. <https://doi.org/10.1016/j.iref.2012.04.006>
- La Rocca, M., & Cambrea, D. R. (2019). The effect of cash holdings on firm performance in large Italian companies. *Journal of International Financial Management and Accounting*, 30(1), 30–59. <https://doi.org/10.1111/jifm.12090>



- Laffranchini, G., & Braun, M. (2014). Slack in family firms: evidence from Italy (2006–2010). *Journal of Family Business Management*, 4(2), 171–193. <https://doi.org/10.1108/JFBM-04-2013-0011>
- Laffranchini, G., Hadjimarcou, J. S., & Kim, S. H. (2020). The impact of socioemotional wealth on decline-stemming strategies of family firms. *Entrepreneurship Theory and Practice*, 44(2), 185–210. <https://doi.org/10.1177/1042258718784755>
- Le Breton-Miller, I., & Miller, D. (2013). Socioemotional wealth across the family firm life cycle: A commentary on “Family business survival and the role of boards”. *Entrepreneurship Theory and Practice*, 37(6), 1391–1397. <https://doi.org/10.1111/etap.12072>
- Lensink, R., & Van der Molen, R. (2010). Does group affiliation increase firm value for diversified groups?: New evidence from Indian companies. *Journal of Empirical Finance*, 17(3), 332–344. <https://doi.org/10.1016/j.jempfin.2009.11.003>
- Lepore, L., Paolone, F., & Cambrea, D. R. (2018). Ownership structure, investors’ protection and corporate valuation: The effect of judicial system efficiency in family and non-family firms. *Journal of Management and Governance*. <https://doi.org/10.1007/s10997-018-9405-0>
- Li, X., & Luo, D. (2020). Increase in cash holdings of US firms: The role of healthcare and technology industries. *Journal of Business Research*, 118, 286–298. <https://doi.org/10.1016/j.jbusres.2020.06.034>
- Lind, J. T., & Mehlum, H. (2010). With or without U? The appropriate test for a U-Shaped relationship. *Oxford Bulletin of Economics and Statistics*, 72(1), 109–118. <https://doi.org/10.1111/j.1468-0084.2009.00569.x>
- Liu, Q., Luo, T., & Tian, G. G. (2015). Family control and corporate cash holdings: Evidence from China. *Journal of Corporate Finance*, 31, 220–245. <https://doi.org/10.1016/j.jcorpfin.2015.02.007>
- Loop, P. (2016). *Activist investors, cash, and capital allocation*, Harvard Law School Forum on corporate governance. March 24th.
- Lozano, M. B., & Durán, R. F. (2017). Family control and adjustment to the optimal level of cash holding. *European Journal of Finance*, 23(3), 266–295. <https://doi.org/10.1080/1351847X.2016.1168748>
- Lumpkin, G. T., & Brigham, K. H. (2011). Long-term orientation and intertemporal choice in family firms. *Entrepreneurship Theory and Practice*, 35(6), 1149–1169. <https://doi.org/10.1111/j.1540-6520.2011.00495.x>
- Madison, K., Holt, D. T., Kellermanns, F. W., & Ranft, A. L. (2016). Viewing family firm behavior and governance through the lens of agency and stewardship theories. *Family Business Review*, 29(1), 65–93. <https://doi.org/10.1177/0894486515594292>
- Mancinelli, L., & Ozkan, A. (2006). Ownership structure and dividend policy: Evidence from Italian firms. *European Journal of Finance*, 12(03), 265–282. <https://doi.org/10.1080/13518470500249365>
- Martínez-Sola, C., García-Teruel, P. J., & Martínez-Solano, P. (2013). Corporate cash holding and firm value. *Applied Economics*, 45(2), 161–170. <https://doi.org/10.1080/00036846.2011.595696>
- Michiels, A., & Molloy, V. (2017). Financing decisions in family businesses: A review and suggestions for developing the field. *Family Business Review*, 30(4), 369–399. <https://doi.org/10.1177/0894486517736958>
- Miller, D., & Le Breton-Miller, I. (2014). Deconstructing socioemotional wealth. *Entrepreneurship Theory and Practice*, 38(4), 713–720. <https://doi.org/10.1111/etap.12111>
- Miller, D., & Le Breton-Miller, I. (2021). Family firms: A breed of extremes? *Entrepreneurship Theory and Practice*, 45(4), 663–681. <https://doi.org/10.1177/1042258720964186>
- Miller, D., Amore, M. D., Le Breton-Miller, I., Minichilli, A., & Quarato, F. (2018). Strategic distinctiveness in family firms: Firm institutional heterogeneity and configurational multidimensionality. *Journal of Family Business Strategy*, 9(1), 16–26. <https://doi.org/10.1016/j.jfbs.2018.01.004>
- Miller, D., Le Breton-Miller, I., Amore, M. D., Minichilli, A., & Corbetta, G. (2017). Institutional logics, family firm governance and performance. *Journal of Business Venturing*, 32(6), 674–693. <https://doi.org/10.1016/j.jbusvent.2017.08.001>
- Miller, D., Le Breton-Miller, I., & Lester, R. H. (2011). Family and lone founder ownership and strategic behaviour: Social context, identity, and institutional logics. *Journal of Management Studies*, 48(1), 1–25. <https://doi.org/10.1111/j.1467-6486.2009.00896.x>
- Miller, D., Minichilli, A., & Corbetta, G. (2013). Is family leadership always beneficial? *Strategic Management Journal*, 34(5), 553–571. <https://doi.org/10.1002/smj.2024>
- Miller, D., Steier, L., & Le Breton-Miller, I. (2003). Lost in time: Intergenerational succession, change, and failure in family business. *Journal of Business Venturing*, 18(4), 513–531. [https://doi.org/10.1016/S0883-9026\(03\)00058-2](https://doi.org/10.1016/S0883-9026(03)00058-2)
- Minichilli, A., Brogi, M., & Calabrò, A. (2016). Weathering the storm: Family ownership, governance, and performance through the financial and economic crisis. *Corporate Governance an International Review*, 24(6), 552–568. <https://doi.org/10.1111/corg.12125>
- Mortal, S., Nanda, V., & Reisel, N. (2020). Why do private firms hold less cash than public firms? International evidence on cash holdings and borrowing costs. *Journal of Banking & Finance*, 113, 105722. <https://doi.org/10.1016/j.jbankfin.2019.105722>
- Naldi, L., Nordqvist, M., Sjöberg, K., & Wiklund, J. (2007). Entrepreneurial orientation, risk taking, and performance in family firms. *Family Business Review*, 20(1), 33–47. <https://doi.org/10.1111/j.1741-6248.2007.00082.x>
- Nason, R. S., & Patel, P. C. (2016). Is cash king? Market performance and cash during a recession. *Journal of Business Research*, 69(10), 4242–4248. <https://doi.org/10.1016/j.jbusres.2016.03.001>
- Nason, R. S., Carney, M., Le Breton-Miller, I., & Miller, D. (2019). Who cares about socioemotional wealth? SEW and rentier perspectives on the one percent wealthiest business households. *Journal of Family Business Strategy*, 10(2), 144–158. <https://doi.org/10.1016/j.jfbs.2019.04.002>
- Nordqvist, M. (2012). Understanding strategy processes in family firms: Exploring the roles of actors and arenas. *International Small Business Journal*, 30(1), 24–40. <https://doi.org/10.1177/0266242611407413>
- O'Brien, J. P. (2003). The capital structure implications of pursuing a strategy of innovation. *Strategic Management Journal*, 24(5), 415–431. <https://doi.org/10.1002/smj.308>
- O'Brien, J. P., & Folta, T. B. (2009). A transaction cost perspective on why, how and when cash impacts firm performance. *Managerial and Decision Economics*, 30, 465–479. <https://doi.org/10.1002/mde>
- Ozkan, A., & Ozkan, M. (2004). Corporate cash holdings: An empirical investigation of UK companies. *Journal of Banking & Finance*, 28(9), 2103–2134. <https://doi.org/10.1016/j.jbankfin.2003.08.003>
- Pagano, M., & Volpin, P. F. (2005). The political economy of corporate governance. *American Economic Review*, 95(4), 1005–1030. <https://doi.org/10.1257/0002828054825646>
- Patel, P. C., & Chrisman, J. J. (2014). Risk abatement as a strategy for R&D investments in family firms. *Strategic Management Journal*, 35(4), 617–627. <https://doi.org/10.1002/smj.2119>
- Pinkowitz, L., Stulz, R. M., & Williamson, R. (2006). Does the contribution of corporate cash holdings and dividends to firm value depend on governance? A cross-country analysis. *The Journal of Finance*, 61(6), 2725–2751. <https://doi.org/10.1111/j.1540-6261.2006.01003.x>
- Platikanova, P. (2016). S&P 500 index addition, liquidity management and Tobin’s Q. *Accounting and Finance*, 56(2), 479–508. <https://doi.org/10.1111/acfi.12105>
- Powell, J. (2019). *How much does Tesla have in the bank?* Financial Times. March 5th.
- Prencipe, A., Bar-Yosef, S., Mazzola, P., & Pozza, L. (2011). Income smoothing in family-controlled companies: Evidence from Italy. *Corporate Governance an International Review*, 19(6), 529–546. <https://doi.org/10.1111/j.1467-8683.2011.00856.x>
- Roberts, J., McNulty, T., & Stiles, P. (2005). Beyond agency conceptions of the work of the non-executive director: Creating accountability in the boardroom. *British Journal of Management*, 16(s1), S5–S26. <https://doi.org/10.1111/j.1467-8551.2005.00444.x>
- Sasabuchi, S. (1980). A test of a multivariate normal mean with composite hypotheses determined by linear inequalities. *Biometrika*, 67(2), 429–439. <https://doi.org/10.1093/biomet/67.2.429>
- Schroth, E., & Szalay, D. (2010). Cash breeds success: The role of financing constraints in patent races. *Review of Finance*, 14(1), 73–118. <https://doi.org/10.1093/rof/rfp020>
- Schulze, W. (2016). Socio-emotional wealth and family: Revisiting the connection. *Management Research*, 14(3), 288–297.
- Schulze, W. S., & Kellermanns, F. W. (2015). Reifying socioemotional wealth. *Entrepreneurship Theory and Practice*, 39(3), 447–459. <https://doi.org/10.1111/etap.12159>
- Schulze, W. S., Lubatkin, M. H., Dino, R. N., & Buchholtz, A. K. (2001). Agency relationships in family firms: Theory and evidence. *Organization Science*, 12(2), 99–116.
- Stacchini, M., & Degasperi, P. (2015). Trust, family businesses and financial intermediation. *Journal of Corporate Finance*, 33, 293–316. <https://doi.org/10.1016/j.jcorpfin.2015.01.006>
- Steier, L. (2003). Variants of agency contracts in family-financed ventures as a continuum of familial altruistic and market rationalities. *Journal of Business Venturing*, 18(5), 597–618. [https://doi.org/10.1016/S0883-9026\(03\)00012-0](https://doi.org/10.1016/S0883-9026(03)00012-0)
- Swab, R. G., Sherlock, C., Markin, E., & Dibrell, C. (2020). “SEW” what do we know and where do we go? A review of socioemotional wealth and a way forward. *Family Business Review*, 33(4), 424–445. <https://doi.org/10.1177/0894486520961938>
- Tanaka, T. (2014). Corporate governance and the cost of public debt financing: Evidence from Japan. *Journal of the Japanese and International Economies*, 34, 315–335. <https://doi.org/10.1016/j.jjie.2014.03.002>
- Thomsen, S., & Pedersen, T. (2000). Ownership structure and economic performance in the largest European companies. *Strategic Management Journal*, 21(6), 689–705. [https://doi.org/10.1002/\(SICI\)1097-0266\(200006\)21:6<689::AID-SMJ115>3.0.CO;2-Y](https://doi.org/10.1002/(SICI)1097-0266(200006)21:6<689::AID-SMJ115>3.0.CO;2-Y)
- Tsao, C. W., Le Breton-Miller, I., Miller, D., & Chen, S. J. (2020). Firing managers: The benefits of family ownership and costs of family management. *Journal of Family Business Strategy*, Article 100411. <https://doi.org/10.1016/j.jfbs.2020.100411>
- Ullah, S., Akhtar, P., & Zaefarian, G. (2018). Dealing with endogeneity bias: The generalized method of moments (GMM) for panel data. *Industrial Marketing Management*, 71, 69–78. <https://doi.org/10.1016/j.indmarman.2017.11.010>
- van Essen, M., Engelen, P. J., & Carney, M. (2013). Does “good” corporate governance help in a crisis? The impact of country- and firm-level governance mechanisms in the European financial crisis. *Corporate Governance an International Review*, 21(3), 201–224. <https://doi.org/10.1111/corg.12010>
- Visintin, F., Pittino, D., & Minichilli, A. (2017). Financial performance and non-family CEO turnover in private family firms under different conditions of ownership and governance. *Corporate Governance an International Review*, 25(5), 312–337. <https://doi.org/10.1111/corg.12201>
- Volpin, P. F. (2002). Governance with poor investor protection: Evidence from top executive turnover. *Journal of Financial Economics*, 64, 61–90. <https://doi.org/10.2139/ssrn.262789>
- Weidemann, J. F. (2018). A state-of-the-art review of corporate cash holding research. *Journal of Business Economics*, 88(6), 765–797. <https://doi.org/10.1007/s11573-017-0882-4>
- Wiseman, R. M., & Gómez-Mejía, L. R. (1998). A behavioral agency model of managerial risk taking. *The Academy of Management Review*, 23(1), 133–153. <https://doi.org/10.5465/amr.1998.192967>
- Wu, W., Yang, Y., & Zhou, S. (2017). Multinational firms and cash holdings: Evidence from China. *Finance Research Letters*, 20, 184–191. <https://doi.org/10.1016/j.frl.2016.09.024>

- Young, M. N., Peng, M. W., Ahlstrom, D., Bruton, G. D., & Jiang, Y. (2008). Corporate governance in emerging economies: A review of the principal-Principal perspective. *Journal of Management Studies*, 45(1), 196–220. <https://doi.org/10.1111/j.1467-6486.2007.00752.x>
- Zata Poutziouris, P. (2001). The views of family companies on venture capital: Empirical evidence from the UK small to medium-size enterprising economy. *Family Business Review*, 14(3), 277–291. <https://doi.org/10.1111/j.1741-6248.2001.00277.x>
- Zattoni, A., Gnan, L., & Huse, M. (2015). Does family involvement influence firm performance? Exploring the mediating effects of board processes and tasks. *Journal of Management*, 41(4), 1214–1243. <https://doi.org/10.1177/0149206312463936>
- Zellweger, T. M., Kellermanns, F. W., Chrisman, J. J., & Chua, J. H. (2012). Family control and family firm valuation by family CEOs: The importance of intentions for transgenerational control. *Organization Science*, 23(3), 851–868. <https://doi.org/10.1287/orsc.1110.0665>
- Zellweger, T. M., Nason, R. S., Nordqvist, M., & Brush, C. G. (2013). Why do family firms strive for nonfinancial goals? An organizational identity perspective. *Entrepreneurship Theory and Practice*, 37(2), 229–248. <https://doi.org/10.1111/j.1540-6520.2011.00466.x>