Cash Holdings and Family Firms: the Role of Founders and Heirs

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Abstract

This paper examines the relationship between family control and cash holdings. Since family firms are more vulnerable to agency conflicts between family owners and minority shareholders, we investigate the implications on their cash holdings policies and value of cash. Using a sample of 763 European firms, we first document that family firms hold more cash than non-family firms, by an average 2.2% of total assets. In particular, family CEOs hold significantly more cash than professional CEOs, especially if the CEO is a heir. We then document that the marginal value of an additional euro of cash held by family firms is €0.20 lower than non-family firms. Again, this discount is entirely ascribed to family CEOs and, in particular, to heir CEOs. Our evidence suggests that agency costs associated with cash holdings peak when control is in the hands of a family heir, with implications both on the level of cash holdings and their marginal value.

Keywords: cash holdings, family firms, value of cash, corporate governance

JEL: G30, G32, G35

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1. Introduction

Family firms are characterized by peculiar agency conflicts. While concentrated ownership in the hands of families should alleviate the agency costs arising from the classic owner-manager conflict (Jensen and Meckling, 1976), those associated with the relationship between controlling and non-controlling shareholders may surge. The self-dealing tendency and autonomous decision making of family members (Chrisman et al., 2003), the desire to keep control over the firm inefficiently long from the outside shareholders' perspective (Gómez-Mejía et al., 2007), and reluctance to voluntarily disclose corporate information (Chen et al., 2008) are all factors that contribute to increase agency costs between owner-managers and outside shareholders. While these conflicts have been extensively modelled by the literature, the corporate dimensions through which they take place are far less explored. In this paper, we focus on one of the primary channels through which they may materialize, namely cash holdings. Since liquid assets can be turned into private benefits at lower cost than other assets (Myers and Rajan, 1998), cash represents an ideal setting where to test these implications. A first objective of this paper is therefore to investigate whether families manage cash differently from other types of owners. The above agency considerations generate the incentive for entrenched managers to retain cash rather than distributing it to shareholders (Jensen, 1986). We therefore expect family firms to hold more cash than other firms.

While family firms are often referred to as a homogeneous category, more complex dynamics are in place. In particular, there is increasing evidence suggesting that the extent of agency costs crucially depends on which family member is running the firm. Founders are typically characterized by a stronger socioemotional attachment to the firm, which makes them more likely to pursue the optimal shareholder-value maximizing strategy. On the other hand, heirs may have a different risk attitude, partly due to the fact that inheritance of the firm is often perceived as a birthright. As long as managerial talent is not perfectly correlated across generations, founders face the risk of leaving firm assets in the hands of managerially inadequate heirs (Caselli and Gennaioli,

2013). Alternatively, families often appoint outside professionals who, unlike internal descendants, have experienced the pressure to perform from the labor market. Whether these various agency considerations affect the ways in which different managers (founders, heirs, or outsiders) deal with corporate cash remains an open question. A second objective of this paper is therefore to shed light on how cash holdings policies vary based on whether the CEO is a family member or an outside professional. Based on the above arguments, we expect the level of cash holdings to be higher in firms run by a family CEO. In particular, we expect heir CEOs to hold more cash than founder CEOs.

These dynamics are likely to have important consequences on firm value. In the U.S., family firms tend to perform better than non-family firms (Anderson and Reeb, 2003; McConaughy et al., 1998), although this pattern strongly depends on how family firms are controlled (Villalonga and Amit, 2009) and is not generalizable to other institutional settings (see, e.g., Maury (2006) for Europe, and Claessens et al. (2000) for Asia). What seems to be a well-established evidence is that the value-enhancing effect of family firms is mainly ascribed to the active involvement of the founder, while firms run by a heir are likely to exhibit worse performance (Villalonga and Amit, 2006; Miller et al., 2007). Consistent with the evidence that heir-managed firms are often poorly run, stock markets tend to react negatively to announcements of internal succession (Pérez-González, 2006), but positively to the appointment of an outside manager (Hillier and McColgan, 2009). A third objective of this paper is to investigate the impact on firm value of the cash holdings policies adopted by family firms by distinguishing among founders, heirs, and outside CEOs. One of the channels through which heir CEOs destroy value might be a suboptimal use of cash.

Using the population of 763 non-financial firms listed in Continental Europe during the period 1997-2010 with at least $250 million in total assets at the beginning of the period, we provide an empirical answer to the following three research questions. First, do cash holdings policies of family firms differ from those of non-family firms? Second, do cash holdings policies in

family firms differ based on whether the CEO is the founder, a heir, or an outside professional? Third, what is the value placed by the market on the cash held by family vs. non-family firms? Does this value vary based on the identity of the CEO (founder, heir, or outsider)? We test the first two research questions by modeling cash holdings as a function of family control, defined as in Faccio and Lang (2002), and the identity of the CEO, plus a number of control variables. The third research question is instead tested by modeling the marginal value of corporate cash holdings as in Faulkender and Wang (2006).

Our findings can be summarized as follows. First, we document that family firms hold significantly larger amounts of cash. As documented by our multivariate analysis, the average wedge in cash reserves between family and non-family firms equals 2.2% of total assets, holding all other variables constant. Second, we find that this result is driven by firms run by a family CEO, who hold significantly larger amounts of cash than those managed by a non-family CEOs. In particular, heirs tend to stockpile cash. Compared to non-family firms, we find that family firms with a heir CEO hold on average 4.5% more cash (in percentage of total assets), with this difference decreasing to 1.9% in presence of a founder CEO, and to 1.7% with an outside CEO. The evidence so far is consistent with an agency-based explanation of larger cash holdings in family firms. Third, we find that the marginal value of cash is lower for family firms and, again, this evidence is driven by firms run by a heir. An additional euro of cash held by family firms is valued on average €0.20 less than the same euro held by non-family firms, and this gap widens to €0.29 in presence of a heir CEO. Thus, the market heavily discounts the value of cash held by a heir CEO.

The contribution of this paper is two-fold. First, we shed light on the role played by family control on cash holdings policies. While a great deal of attention has been devoted to the determinants of cash holdings and the existence of an optimal level, only few papers have focused on the association between cash holdings and family control. Although family firms represent a significant and common occurrence worldwide, the evidence documented so far is limited to

specific institutional settings, such as the United Kingdom (Ozkan and Ozkan, 2004) or Taiwan (Kuan et al., 2011). We contribute to this literature using an international sample of family firms, by considering heterogeneity based on the identity of the CEO and by examining the consequences on firm value. Second, we focus on corporate governance mechanisms within family firms, and add to the debate on internal vs. external succession. Specifically, we document that family firms that hire an outside CEO are able to increase shareholders' wealth through improved cash holdings policies. While a number of studies have documented that the performance of family firms gets worse after internal succession (e.g., Villalonga and Amit, 2006), the channels through which heirs destroy shareholders' value remains relatively unexplained. We contribute to this literature by documenting that part of the above evidence can be ascribed to suboptimal cash holdings policies by heir CEOs.

The rest of the paper is organized as follows. Section 2 reviews the related literature. Section 3 describes the sample, data and methodology used in the paper. Section 4 presents the empirical results. Section 6 concludes.

2. Related literature and hypotheses

As pointed out by Bates et al. (2009), the literature identifies four main different motives for firms to hold cash. First, the transaction motive is based on the fact that a firm incurs transaction costs associated with converting a noncash financial asset into cash and uses cash for payment (Miller and Orr, 1966). Second, the tax motive implies that firms that would incur tax payments when repatriating foreign earnings hold larger amounts of cash (Foley et al., 2007). Third, the precautionary motive posits that cash is held in order to better cope with unanticipated adverse contingencies (Opler et al., 1999). Fourth, the agency motive is based on the desire of entrenched managers to retain cash rather than increasing payouts to shareholders (Jensen, 1986).

The latter motive is likely to play an important role among family controlled firms, which may result in family owners dealing with cash differently from other owners. However, while the association between corporate governance mechanisms and cash holdings has been extensively studied (see, e.g., Dittmar et al., 2003; Harford et al., 2008), the effect of family ownership and control on cash holdings has not received much attention by the literature. Exceptions are Ozkan and Ozkan (2004) and Kuan et al. (2011), who find that family firms tend to hold more cash than non-family firms in the U.K. and Taiwan, respectively. Agency theory is based on the idea that the separation between ownership and control generates costs that could be avoided if ownership and management were combined (Jensen and Meckling, 1976). According to this view, family-controlled firms should be less exposed to such costs, given that members of the same family, who are typically altruistic toward each other due to kinship relationships, are often both owners and managers of the firm. However, family firms may suffer from severe costs arising from different agency relationships, most notably the one between family members and outside shareholders. Family firms are influenced by a private, autonomous, and self-dealing tendency when taking corporate decisions, which makes them particularly predisposed to internal frictions (La Porta et al., 1999). Furthermore, in addition to firm value maximization, they are also likely to pursue non-economic goals, such as preserving family harmony or improving their social status (Chrisman et al., 2012).

2.1 Cash holdings

We now discuss the effect that the presence of agency conflicts between family owner-managers and outside shareholders exerts on cash holdings policies. This agency conflict implies that family members derive greater benefits by holding cash in the firm rather than paying it out to shareholders. Since they have almost complete control and discretion over the use of corporate cash, the incentive to implement alternative uses, such as distributing part of it to minority shareholders, is weak (Faccio et al., 2001). Since families are typically characterized by longer investment

horizons and are not solely concerned with maximizing firm profits, they may try to safeguard the reputation of the family behind the firm by keeping a larger base of assets in place in the form of cash holdings. We therefore hypothesize that family firms hold more cash than non-family firms.

Corporate decisions undertaken by family CEOs can be sensibly different from those conducted by outside CEOs, even in the same family firm context (Amore et al., 2011). Specifically, family CEOs are likely to fully reflect the above discussed agency conflicts between family members and other shareholders. On the other hand, these conflicts are likely to be partly alleviated if the CEO is a professional, non-family manager. While it is true that family owners may force outside managers to adopt policies that fit their personal interests rather than those of minority shareholders, the orientation towards non-economic goals and the altruism towards other family members is inevitably less pronounced. In other words, while the incentives of a family CEO are fully aligned with the economic and non-economic goals of family owners, the incentives of a professional CEO can, at least partly, deviate from those of the controlling family. As a consequence, we hypothesize that, within family firms, those run by a family CEO hold more cash than those run by an outside CEO.

Internal succession is a crucial issue for family firms, since firms run by a heir are likely to become much more vulnerable to agency problems. In terms of cash holdings, the incentive to hold larger amounts of cash in the firm may become even stronger for family heirs, given their different attitudes compared to those of the founder. While founders typically have a stronger identification with the firm, which pushes them to pursue strategies aimed at increasing its market value, heirs may see inheritance of the firm as a birthright, thereby decreasing their economic and socio-emotional attachment to the firm. As a consequence, heirs are often found to passively manage the firm without effectively screening the set of feasible investment opportunities, resulting in a larger amount of cash held in the firm due to growth options left unexploited. Therefore, within family firms, we expect firms run by a heir CEO to hold more cash than firms run by a founder CEO.

To summarize, we formulate the following hypotheses about the relationship between family control and cash holdings:

H1a) Family firms hold more cash than non-family firms.

H1b) Among family firms, those managed by a family CEO hold more cash than those managed by a professional CEO.

H1c) Among family firms managed by a family CEO, those managed by a heir CEO hold more cash than those managed by a founder CEO.

2.2 Marginal value of cash

We now turn to the discussion of the implications of the above agency considerations on firm value. In our study, we are interested in the value that shareholders place on an additional euro of cash holding. Previous studies document that this value varies according to corporate governance practices and the degree of investor protection of the institutional setting in which a firm operates (Pinkowitz et al., 2006; Kalcheva and Lins, 2007; Dittmar and Mahrt-Smith, 2007; Schauten et al., 2013). This value is also likely to decrease in presence of greater agency costs within the firm. Given that families are more likely to pursue objectives that may, at least partly, deviate from the maximization of shareholder wealth, this may reflect in a lower marginal value of cash. In other words, the cash policy of family firms may not be exclusively oriented to enhance firm value, but may also be functional to the family's non-economic goals, such as the desire to keep control over the firm, or the preservation of harmony among family members. Using cash for these purposes is inefficient from the outside shareholders' perspective. We therefore hypothesize that the marginal value of cash of family firms is lower than that of non-family firms.

Since, for the above arguments, agency conflicts are likely to be more pronounced in family firms run by a family CEO than in those run by a professional CEO, we develop analogous theoretical implications on the marginal value of cash based on CEO identity. The literature reports

lower average rates of return and stock market valuations for family firms in which the founder steps down and passes control to a heir, compared to family firms hiring an outside professional (e.g., Pérez-González, 2006; Bertrand et al., 2008; Cucculelli and Micucci, 2008). In particular, professional CEOs tend to feel more accountable to shareholders than family CEOs, and are more likely to favor shareholder value maximization over non-economic goals. They also tend to see their roles as bringing about change in the business, even by challenging potentially inefficient organizational and strategic practices established by previous family managers (Mullins and Schoar, 2016). Then, we hypothesize that, within family firms, those managed by a family CEO are associated with a lower marginal value of cash than those managed by an outside CEO.

Once a family heir is appointed as CEO, altruism and family orientation may collapse, with children often being more likely to shrink than work (Bergstrom, 1989). This should reflect in the marginal value recognized by the market to the amount of cash held by founder and heir CEOs. Internal succession indeed challenges some positive aspects associated with the direct involvement of the founder in the firm, such as longer investment horizons and reputational concerns. This is often caused by the fact that family members do not impartially evaluate their offsprings' quality, with the risk of promoting them over more skilled outsiders. Furthermore, since founders are quite successful by definition, their heirs' ability to learn about their own quality is impaired (Pinheiro and Yung, 2015). This may translate in suboptimal, non-value maximizing cash holdings policies. We therefore hypothesize that, within family firms, the marginal value of cash of firms run by a heir CEO is lower than that of firms run by a founder CEO.

To summarize, we formulate the following hypotheses about the relationship between family control and the marginal value of cash holdings:

H2a) Family firms have a lower marginal value of cash than non-family firms.

H2b) Among family firms, those managed by a family CEO have a lower marginal value of cash than those managed by a professional CEO.

H2c) Among family firms managed by a family CEO, those managed by a heir CEO have a lower marginal value of cash than those managed by a founder CEO.

3. Sample and data

We use the population of 763 Continental European non-financial listed companies with a cut-off of $250 million in terms of total assets at the beginning of the sample period. The main data source is Worldscope. For ownership data, we start by employing ownership information from the Worldscope and Orbis databases and from stock market information repositories supplied by private publishers and regulators. Then, we integrate these sources with information disclosed in annual reports and in the investor relations sections of corporate websites, coupled with information reported in the financial press[2].

We identify the three largest shareholders and obtain information about voting and cash flow rights for each position following the methodology implemented by Faccio and Lang (2002). We choose to consider as family controlled any company in which a family or an individual is the largest ultimate owner (in terms of voting rights) at the 10% threshold, consistent with a number of studies dealing with ownership structure (e.g., Dahya et al., 2008; La Porta et al., 1999). We then identify the CEO of the company as founder, heir or professional based on information reported in annual reports.

[INSERT TABLE 1 ABOUT HERE]

[2] Our dataset is an extension to 2010 of the sample employed by Caprio et al. (2011).

Table 1 reports the sample composition by country and family status. Family firms represent 55.6% of total observation, with France and Germany being the largest markets with 21.1% and 18.9% of the observations. The largest presence of family firms is found in Italy (79.2%), while the lowest in the Netherlands (28.6%).

[INSERT TABLE 2 ABOUT HERE]

Table 2 shows descriptive statistics and univariate tests. In Panel A, we distinguish family and non-family firms. In Panel B, we focus on family firms and distinguish those with a family CEO from those with an outside CEO. In Panel C, we focus on firms with a family CEO and distinguish to which generation the CEO belongs, i.e. whether he is the founder or a heir. Panel A reveals that cash holdings, defined as the ratio between cash and cash equivalents over total assets, is significantly higher for family firms. This preliminary evidence is in line with previous studies (Caprio et al., 2011) and consistent with an agency-based explanation of cash holdings in family firms. Family firms are also significantly smaller than non-family firms in terms of total assets, and show higher levels of leverage. Panel B seems to indicate that it makes a difference in many aspects whether family firms are managed by a family or outside CEO. Family managers run companies that are significantly smaller and more levered, and are associated with higher levels of cash holdings and capital expenditure. In Panel C, among family firms managed by a family CEO, we find that the presence of the founder is associated with significantly smaller amounts of cash held in the firm, and higher capital expenditure. The evidence on capital expenditure could be partly explained by the life cycle of the company, that requires more investments in the early stages when the founder is still actively involved in the company. Stock return volatility is higher when the founder is running the company, while heirs tend to hold more cash. The combination of these

results suggests that the precautionary motive is not a primary explanation of the levels of cash holdings in family firms.

4. Results

5.1 Cash holdings

We first present our empirical results on cash holdings. Table 3 reports the results of the multivariate regression on cash holdings. The level of detail increases with the different model specifications as follows. In Model 1, we include the family dummy as explanatory variable, in order to test whether family controlled firms hold significantly different amounts of cash than non-family firms. In Model 2, we distinguish family firms by including two binary variables indicating the nature of the CEO, i.e. whether family member or outside professional. In Model 3, we split family CEOs according to their generation, and therefore include two binary variables indicating the presence of a founder CEO or a heir CEO.

[INSERT TABLE 3 ABOUT HERE]

The coefficient of the family dummy is positive and statistically significant in Model 1, documenting that family firms hold on average more cash than non-family firms. This evidence is consistent with prior studies based on different institutional settings (Ozkan and Ozkan, 2004; Kuan et al., 2011). The magnitude of the coefficient suggests an economically relevant difference, with family firms holding on average an additional amount of cash equal to 2.22% of total assets. This is consistent with our hypothesis H1a predicting that the incentive to hold cash is greater in family firms, given the agency costs arising from the limited monitoring capability of family owner-managers by minority shareholders.

In Model 2, the coefficients of the non-family CEO and family CEO dummy variables are both positive and significant, suggesting that both types of CEO contribute to the aggregate evidence that family firms hold more cash. However, the coefficient of the family CEO variable is much larger than that of the non-family CEO. In particular, the presence of a family CEO is associated with an average 3.76% larger amount of cash holdings than non-family firms (in percentage of total assets), while this difference decreases to 1.63% in presence of an outside CEO. In unreported tests, we find that the two coefficients are statistically different at the 1% level. Thus, among family firms, those managed by a family CEO hold significantly more cash than those managed by a non-family CEO, in line with hypothesis H1b. This is consistent with the view that family owners exert a certain influence on non-family CEOs (that are found to retain more cash than non-family), but the incentive to hold cash due to agency considerations is exacerbated if a member of the controlling family is also CEO of the firm. Model 3 reports that the coefficients of the founder/heir CEO variables. We find that positive effect of family CEOs on cash holdings is almost entirely ascribed to heir CEOs. Again, the magnitude reveals a sizeable difference, with heir CEOs holding 4.45% more cash than non-family firms, while this difference decreases to a weakly significant 1.9% in presence of a founder CEO. This is consistent with hypothesis H1c, based on the idea that the incentive to hold cash due to agency issues becomes even more pronounced if a heir is managing the firm.

The effects associated with our control variables are all in line with previous literature on cash holdings. For instance, higher levels of leverage require cash in order to serve the debt, while dividend payout represents a use of cash, which justifies the negative coefficient of the two variables. Cash flow and stock return volatility are instead positively associated with cash holdings. Obviously, the higher the amount of cash generated by the company, the higher the cash holdings. The precautionary explanation can arguably motivate the evidence on volatility, since the riskier the company, the higher the cash held to better cope with possible adverse and unexpected shocks.

5.2 Marginal value of cash

We now turn to the analysis of the value of cash, where we adopt the same model used by Faulkender and Wang (2006). Table 4 reports some descriptive statistics and univariate tests of the variables employed in the multivariate analysis. Panel A reveals that family firms exhibit superior excess returns, defined as the firm's stock return from the end of fiscal year *t-1* to the end of fiscal year *t* minus the return over the same period of the main equity index of the stock exchange where the company is listed, compared to non-family firms. Family firms also show significantly higher levels of lagged cash, consistent with our previous analysis, and net financing. In Panel B, statistical differences are less frequent, with lagged cash being larger among family firms managed by a family CEO compared to those managed by an outsider, again consistent with our previous results.

[INSERT TABLE 4 ABOUT HERE]

Table 5 reports the results of the multivariate regression aimed at determining the marginal value of cash. As in Faulkender and Wang (2006), the dependent variable is excess return, and the independent variables are firm-specific factors that control for sources of value other than cash that may be correlated with cash holdings. Firm-specific factors (except leverage) are divided by lagged market capitalization, enabling us to interpret the estimated coefficients as the monetary change in value for a one-euro change in the corresponding independent variable.

In Model 1, the coefficient of the interaction term between the variation in cash and the family dummy is negative and significant, revealing that a one-euro increase in cash has a significantly lower marginal value for family firms compared to non-family firms. The magnitude of the coefficient documents a considerable economic impact, with an additional euro held by family firms being valued €0.2037 less than the same euro held by family firms, on average. This is

consistent with hypothesis H2a, based on the idea that the market places a lower value on an increase in cash holdings if the firm is family controlled, given the severe agency conflicts associated with the accumulation of cash.

Model 2 reveals that the negative effect associated with family firms is entirely driven by those managed by a family CEO, consistent with hypothesis H2b. The coefficient of the interaction term between the variation in cash and the family CEO dummy is indeed negative and significant, while the interaction term with the non-family CEO dummy is not significant. This suggests that the market does not discount an additional euro held by family firms run by an outside CEO, while it attributes a lower marginal value of cash if the CEO is a family member. The magnitude of the coefficient documents that the market places an average discount of €0.2658 on a one-euro increase in cash held by family CEOs compared to non-family firms.

In Model 3, we further split family firms according to the generation of the family CEO, and find that the negative effect associated with the presence of a family CEO is entirely ascribed to heirs, consistent with hypothesis H2c. The coefficient of the interaction term between the variation in cash and the heir CEO dummy is indeed negative and significant, while the interaction term with the founder CEO dummy is not significant. This suggests that the market recognizes a lower marginal value of cash only to a particular category of family firms, i.e. those run by a heir CEO. The average magnitude of this discount, as shown by the coefficient of the interaction term between the variation in cash and the heir CEO dummy, amounts to €0.2897 compared to non-family firms.

Overall, we find that the market places a lower marginal value on cash held by family firms, with this effect being entirely driven by family CEOs and, in particular, by heir CEOs. These results are consistent with the idea that the market penalizes additional amounts of cash held by family firms only in those situations in which the agency conflicts that can be triggered by holding more cash in the firm are potentially more detrimental. Heirs have characteristics and attitudes that make them less committed than founders in pursuing the value maximization for shareholders, thereby

increasing their incentive to use cash in order to extract private benefits. Furthermore, they are likely to suffer from managerial inadequacy, and the greater availability of cash may increase the likelihood of its value-destroying use.

[INSERT TABLE 5 ABOUT HERE]

5. Robustness tests

In this section, we repeat our cash holdings and value of cash regressions with different definitions of the dependent variables. Since the cash to total assets ratio is not the only cash holdings measure used by the literature, Table 6 reports the results of the cash holding regressions where the dependent variable is obtained by scaling cash holdings on net assets instead of total assets (Models 1-3), and by computing the log of the cash holdings to net assets ratio (Model 4-6). Results show that our evidence is robust to different definitions of cash holdings, with family firms holding significantly more cash than non-family firms, and this effect being primarily driven by heir CEOs.

[INSERT TABLE 6 ABOUT HERE]

We then change the definition of the dependent variable of the regressions used to estimate the marginal value of cash, by employing the firm's raw return instead of excess return. Raw returns are computed as the difference of market cap at time t minus the market cap at time (t-1) divided by market cap at time (t-1). Again, we find that our evidence is robust to this different definition of the

dependent variable. The marginal value of cash is significantly lower among family firms, an effect that is (almost) entirely driven by family CEOs and, in particular, by heir CEOs.

[INSERT TABLE 7 ABOUT HERE]

6. Conclusions

This paper investigates whether family firms adopt different cash holdings policies from other firms, and whether these policies are appreciated or penalized by the market in terms of marginal value of cash. In particular, we provide a detailed picture of the degree of family control by distinguishing the identity of the CEO, i.e. whether family members or professional and, if family members, founder or heirs. We find that family firms hold significantly more cash than non-family firms, on average. In particular, family CEOs hold more cash than outside CEOs, and heirs in turn hold more cash than founders. Such a greater accumulation of cash in family firms is not appreciated by the market, since the value that shareholders place on an additional euro of cash is lower than in the case of non-family firms. In particular, we document that this evidence is fully explained by family CEOs and, more specifically, by heir CEOs. Thus, the market tends to penalize excessive cash holdings when family firms are managed by heirs.

Our first contribution is to document the relationship between family control and cash holdings. While a great deal of attention has been devoted to the determinants of cash holdings and the existence of an optimal level, only few papers from specific institutional settings have focused on the association between cash holdings and family control. By considering heterogeneity across family firms based on the identity of the CEO, we clarify that the difference in cash holdings policy and the discount in the marginal value of cash is mainly ascribed to family CEOs and, more specifically, to heirs. By doing so, we add to the debate on the professionalization of family firms.

Specifically, we shed light on the channels that explain the evidence that the performance of family firms gets worse after internal succession.

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Table 1. Sample composition. Country distribution of the sample and percentage of family-controlled firms. Other countries include Belgium, Denmark, Finland, and Luxembourg.

	All firms		Family firms	
	No.	%	No.	%
France	161	21.1	104	64.6
Germany	144	18.9	74	51.4
The Netherlands	77	10.1	22	28.6
Italy	72	9.4	57	79.2
Switzerland	72	9.4	41	56.9
Sweden	64	8.4	38	59.4
Spain	46	6.0	23	50.0
Norway	40	5.2	26	65.0
Others	87	11.4	39	44.8
No. firms	763	100.0	424	55.6

Table 2. Descriptive statistics. Cash holding is the ratio between cash and cash equivalents and net assets. Book to market is the firm's ratio between book value of equity and market value of equity. Total assets are in euro billions (inflation-adjusted). Cash flow is the net cash flow from operating activities scaled by total assets. Net working capital is the difference between current assets and current liabilities (accounts payable) scaled by total assets. Capex is the firm's capital expenditure scaled by total assets. Leverage is total debt over total assets. Stock return volatility is the standard deviation of monthly stock returns over the most recent two years (including the current fiscal year). Payout ratio is the amount of cash dividend scaled by earnings. ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively, of the t-test for the difference in means (t-test) and medians (Wilcoxon-Mann-Whitney test) between the two groups of each panel.

	All firms (7,929 obs.)		Family (4,614 obs.)		Non-family (3,315 obs.)	
Panel A. All firms	*mean*	*median*	*mean*	*median*	*mean*	*median*
Cash holding (%)	11.0	8.1	11.9	8.9	9.8***	6.9***
Book to market	1.9	1.3	2.0	1.3	1.7	1.3
Total Assets (€b)	7.2	1.4	5.0	1.2	10.3***	1.8***
Cash flow (%)	8.1	7.9	8.1	7.8	8.0	8.1
Net working capital (%)	2.7	2.4	2.0	1.7	3.8***	3.7***
Capex (%)	5.8	4.6	5.9	4.5	5.7	4.8**
Leverage (%)	25.6	24.9	26.3	25.7	24.7***	24.0***
Stock return volatility (%)	9.3	9.0	9.2	9.0	9.5***	9.0
Payout ratio (%)	39.3	31.5	39.1	30.6	39.7	33.4
	Family CEO (1,554 obs.)		Non-family CEO (3,060 obs.)		Difference Fam. - Non Fam.	
Panel B. Family firms	*mean*	*median*	*mean*	*median*	*mean*	*median*
Cash holding (%)	12.8	9.5	11.5	8.4	1.4***	1.1***
Book to market	2.2	1.4	1.9	1.3	0.3***	0.1***
Total Assets (€b)	4.1	1.0	5.5	1.3	-1.4***	-0.3***
Cash flow (%)	8.0	7.6	8.2	7.9	-0.2	-0.2
Net working capital (%)	1.9	1.7	2.0	1.7	-0.1	0.0
Capex (%)	6.5	4.6	5.7	4.5	0.9***	0.2***
Leverage (%)	28.4	28.7	25.2	24.4	3.2***	4.3***
Stock return volatility (%)	9.5	9.1	9.1	9.0	0.4***	0.2**
Payout ratio (%)	37.2	28.4	40.0	31.6	-2.9***	-3.2***
	Founder CEO (372 obs.)		Heir CEO (1,182 obs.)		Difference Founder - Heir	
Panel C. Family CEO	*mean*	*median*	*mean*	*median*	*mean*	*median*
Cash holding (%)	11.5	8.6	13.2	9.8	-1.8***	-1.1***
Book to market	2.0	1.3	2.3	1.5	-0.3	-0.2*
Total Assets (€b)	5.9	0.9	3.6	1.1	2.3**	-0.2
Cash flow (%)	8.2	7.4	7.9	7.8	0.3	-0.5
Net working capital (%)	1.1	2.8	2.1	1.2	-1.0	1.6
Capex (%)	5.5	4.2	6.8	4.8	-1.4***	-0.6**
Leverage (%)	29.5	31.3	28.1	28.0	1.4	3.4**
Stock return volatility (%)	10.2	9.6	9.2	9.0	1.0***	0.6***
Payout ratio (%)	35.4	26.9	37.7	29.1	-2.3	-2.2*

Table 3. Regressions on cash holdings. The dependent variable is cash and cash equivalents divided by total assets. Family is equal to 1 if the firm is a family firm. (Non-)Family CEO is equal to 1 if the CEO of a family firm is (not) a family member. Family founder CEO is equal to 1 if the CEO is the founder. Family heir CEO is equal to 1 if the CEO is a family heir. Book to market is the firm's ratio between book value of equity and market value of equity. Firm size is the log of total assets. Net working capital is the difference between current assets and current liabilities (accounts payable) scaled by total assets. Capex is the firm's capital expenditure scaled by total assets. Leverage is total debt over total assets. Stock return volatility is the standard deviation of monthly stock returns over the most recent two years (including the current fiscal year). Payout ratio is the amount of cash dividend scaled by earnings. Standard errors (in brackets) are clustered by firm. Year, country, and industry fixed effects are included. ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.

	(1)	(2)	(3)
Family	0.0222***		
	[0.0051]		
Non-family CEO		0.0163***	0.0165***
		[0.0053]	[0.0053]
Family CEO		0.0376***	
		[0.0082]	
Family founder CEO			0.0190*
			[0.0108]
Family heir CEO			0.0445***
			[0.0098]
Book to market	-0.0023**	-0.0023**	-0.0023**
	[0.0010]	[0.0010]	[0.0010]
Firm size	-0.0006	-0.0001	-0.0001
	[0.0020]	[0.0020]	[0.0020]
Cash flow	0.1474***	0.1453***	0.1476***
	[0.0461]	[0.0460]	[0.0459]
Net working capital	-0.1682***	-0.1713***	-0.1722***
	[0.0191]	[0.0189]	[0.0190]
Capex	-0.2517***	-0.2581***	-0.2621***
	[0.0491]	[0.0495]	[0.0492]
Leverage	-0.2220***	-0.2265***	-0.2253***
	[0.0205]	[0.0206]	[0.0204]
Stock return volatility	0.2273***	0.2261***	0.2388***
	[0.0880]	[0.0869]	[0.0880]
Dividend payout	-0.0156***	-0.0153***	-0.0151***
	[0.0052]	[0.0052]	[0.0052]
Constant	0.1332***	0.1323***	0.1301***
	[0.0355]	[0.0347]	[0.0343]
Adjusted R-squared	0.2495	0.2548	0.2570
Observations	6,200	6,200	6,200

Table 4. Value of cash: descriptive statistics. Sample of 7,929 firm-year observations from 1997 to 2010. Excess stock return is the firm's stock return from the end of fiscal year *t-1* to the end of fiscal year *t*, minus the return over the same period of the main equity index of the stock exchange where the company is listed. Δ is the notation for the 1-year change from the end of fiscal year *t-1* to the end of fiscal year *t*. Cash is the sum of cash and cash equivalents. Earnings is earnings before extraordinary items. Net Assets is total assets minus cash. R&D expenses are set equal to zero if missing. Interest expenses is the amount of interest expense on debt. Dividends is the amount of cash dividends distributed. Lagged cash is cash at the end of fiscal year *t-1*. Net Financing is the change in equity minus repurchases plus the change in financial debt. Independent variables are scaled by the firm's lagged market value of equity***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively, of the t-test for the difference in means (t-test) and medians (Wilcoxon-Mann-Whitney test) between the two groups of each panel.

	All firms (7,929 obs.)		Family (4,614 obs.)		Non-family (3,315 obs.)	
Panel A. All firms	*mean*	*median*	*mean*	*median*	*mean*	*median*
Excess return	0.0164	-0.0142	0.0314	-0.0027	-0.0035***	-0.0332***
ΔCash	0.0143	0.0035	0.0152	0.0050	0.0131	0.0017**
ΔEarnings	0.0335	0.0064	0.0236	0.0064	0.0474	0.0062
ΔNet Assets	0.0450	0.0421	0.0610	0.0443	0.0225	0.0401**
ΔR&D expenses	0.0005	0.0000	0.0012	0.0000	-0.0005	0.0000
ΔInterest expenses	-0.0020	0.0000	-0.0016	0.0000	-0.0026	0.0001
ΔDividends	-0.0019	0.0009	-0.0022	0.0009	-0.0016	0.0009
Lagged Cash	0.2806	0.1346	0.3263	0.1538	0.2168***	0.1137***
Net Financing	0.8738	0.2559	0.9770	0.2600	0.7297***	0.2502**
	Family CEO (1,554 obs.)		Non-family CEO (3,060 obs.)		Difference Fam. - Non Fam.	
Panel B. Family firms	*mean*	*median*	*mean*	*median*	*mean*	*median*
Excess return	0.0455	-0.0077	0.0245	-0.0015	0.0211	-0.0063
ΔCash	0.0231	0.0071	0.0112	0.0038	0.0120	0.0033*
ΔEarnings	0.0239	0.0069	0.0235	0.0063	0.0004	0.0006
ΔNet Assets	0.0701	0.0573	0.0565	0.0402	0.0137	0.0171**
ΔR&D expenses	0.0027	0.0000	0.0004	0.0000	0.0023	0.0000
ΔInterest expenses	-0.0019	0.0001	-0.0015	0.0000	-0.0004	0.0001
ΔDividends	0.0009	0.0008	-0.0037	0.0010	0.0046*	-0.0001
Lagged Cash	0.4326	0.1806	0.2730	0.1434	0.1596***	0.0372***
Net Financing	0.8882	0.2127	1.0218	0.2941	-0.1336	-0.0814**
	Founder CEO (372 obs.)		Heir CEO (1,182 obs.)		Difference Founder - Heir	
Panel C. Family CEO	*mean*	*median*	*mean*	*median*	*mean*	*median*
Excess return	0.0651	-0.0437	0.0392	0.0048	0.0259	-0.0485
ΔCash	0.0437	0.0068	0.0173	0.0071	0.0264	-0.0004
ΔEarnings	0.0423	0.0079	0.0186	0.0066	0.0237	0.0014
ΔNet Assets	0.2707	0.0630	0.0130	0.0535	0.2577*	0.0094
ΔR&D expenses	0.0022	0.0000	0.0029	0.0000	-0.0007	0.0000
ΔInterest expenses	0.0069	0.0010	-0.0044	-0.0001	0.0113	0.0010**
ΔDividends	0.0032	0.0004	0.0002	0.0009	0.0030	-0.0005
Lagged Cash	0.2917	0.1217	0.4728	0.1951	-0.1811*	-0.0735***
Net Financing	0.7991	0.1562	0.9135	0.2297	-0.1144	-0.0735**

Table 5. Value of cash: regressions on excess returns. The dependent variable is excess stock return, defined as the firm's stock return from the end of fiscal year *t-1* to the end of fiscal year *t*, minus the return over the same period of the main equity index of the stock exchange where the company is listed. Family is equal to 1 if the firm is a family firm. (Non-)Family CEO is equal to 1 if the CEO of a family firm is (not) a family member. Family founder CEO is equal to 1 if the CEO is the founder. Family heir CEO is equal to 1 if the CEO is a family heir. Δ is the notation for the 1-year change from the end of fiscal year *t-1* to the end of fiscal year *t*. Cash is the sum of cash and cash equivalents. Earnings is earnings before extraordinary items. Net Assets is total assets minus cash. R&D expenses are set equal to zero if missing. Interest expenses is the amount of interest expense on debt. Dividends is the amount of cash dividends distributed. Lagged cash is cash at the end of fiscal year *t-1*. Net Financing is the change in equity minus repurchases plus the change in financial debt. Independent variables are scaled by the firm's lagged market value of equity, except book to market, firm size (log of total assets), leverage, and repurchase (defined as repurchase/(repurchase+dividends)). Standard errors (in brackets) are clustered by firm. Year and industry fixed effects are included. ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.

	(1)	(2)	(3)
ΔCash * Family	-0.2037**		
	[0.0796]		
ΔCash * Non-family CEO		-0.1093	-0.1098
		[0.0765]	[0.0763]
ΔCash * Family CEO		-0.2658***	
		[0.0755]	
ΔCash * Family founder CEO			-0.0551
			[0.1485]
ΔCash * Family heir CEO			-0.2897***
			[0.0671]
Family	0.0270***		
	[0.0092]		
Non-family CEO		0.0180*	0.0179*
		[0.0100]	[0.0100]
Family CEO		0.0448***	
		[0.0126]	
Family founder CEO			0.0414**
			[0.0185]
Family heir CEO			0.0433***
			[0.0144]
ΔCash	0.2206***	0.2228***	0.2235***
	[0.0618]	[0.0617]	[0.0615]
ΔEarnings	-0.0087	-0.0089	-0.0093
	[0.0131]	[0.0131]	[0.0128]
ΔNet Assets	0.0532***	0.0541***	0.0539***
	[0.0078]	[0.0077]	[0.0078]
ΔR&D expenses	-0.0069	-0.0014	-0.0013
	[0.0530]	[0.0535]	[0.0536]
ΔInterest expenses	-0.0701	-0.0515	-0.0469
	[0.1433]	[0.1365]	[0.1329]
ΔDividends	0.2907***	0.2948***	0.2840***
	[0.1000]	[0.1004]	[0.0943]
Lagged Cash	0.0998***	0.1047***	0.1041***
	[0.0207]	[0.0198]	[0.0200]
Net Financing	-0.001	-0.0012	-0.0013
	[0.0023]	[0.0023]	[0.0023]
Book to market	-0.0401***	-0.0403***	-0.0404***
	[0.0054]	[0.0053]	[0.0053]
Firm size	-0.0002	0.0001	-0.0002

	[0.0028]	[0.0028]	[0.0028]
Leverage	-0.2260***	-0.2322***	-0.2331***
	[0.0353]	[0.0353]	[0.0354]
Repurchase	-0.0007	-0.0017	-0.0013
	[0.0224]	[0.0224]	[0.0223]
Constant	-0.0386	-0.0413	-0.0373
	[0.0572]	[0.0576]	[0.0576]
Adjusted R-squared	0.1292	0.1311	0.1318
Observations	6,078	6,078	6,078

Table 6. Regressions on cash holdings with alternative dependent variables. In Models 1-3, the dependent variable is cash and cash equivalents divided by net assets, computed as total assets minus cash and cash equivalents. In Models 4-6, the dependent variable is the log of the ratio between cash and cash equivalents and net assets. Independent variables are the same as in Table 3. Standard errors (in brackets) are clustered by firm. Year, country, and industry fixed effects are included. ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.

	Cash/Net Assets			Ln(Cash/Net Assets)		
	(1)	(2)	(3)	(4)	(5)	(6)
Family	0.0354***			0.2911***		
	[0.0094]			[0.0682]		
Non-family CEO		0.0265***	0.0269***		0.2114***	0.2128***
		[0.0099]	[0.0099]		[0.0699]	[0.0700]
Family CEO		0.0589***			0.5030***	
		[0.0156]			[0.0917]	
Family founder CEO			0.0223			0.3550**
			[0.0157]			[0.1405]
Family heir CEO			0.0723***			0.5571***
			[0.0199]			[0.1000]
Book to market	-0.0049***	-0.0048**	-0.0049***	-0.0116	-0.0113	-0.0115
	[0.0018]	[0.0019]	[0.0019]	[0.0126]	[0.0128]	[0.0128]
Firm size	-0.0048	-0.004	-0.0039	0.0530**	0.0601***	0.0607***
	[0.0040]	[0.0039]	[0.0038]	[0.0228]	[0.0230]	[0.0229]
Cash flow	0.2283**	0.2251**	0.2297**	1.5116***	1.4835***	1.5018***
	[0.0968]	[0.0968]	[0.0968]	[0.4726]	[0.4686]	[0.4664]
Net working capital	-0.2830***	-0.2878***	-0.2895***	-1.9105***	-1.9532***	-1.9605***
	[0.0348]	[0.0346]	[0.0348]	[0.2706]	[0.2681]	[0.2685]
Capex	-0.4453***	-0.4550***	-0.4629***	-1.7638***	-1.8518***	-1.8833***
	[0.1024]	[0.1035]	[0.1036]	[0.5627]	[0.5628]	[0.5582]
Leverage	-0.3765***	-0.3834***	-0.3809***	-2.4314***	-2.4930***	-2.4831***
	[0.0454]	[0.0459]	[0.0454]	[0.2615]	[0.2624]	[0.2647]
Stock return volatility	0.4022**	0.4004**	0.4253***	2.3051**	2.2901**	2.3905**
	[0.1595]	[0.1586]	[0.1593]	[1.0592]	[1.0414]	[1.0557]
Dividend payout	-0.0187*	-0.0184*	-0.0180*	-0.1818***	-0.1786***	-0.1771***
	[0.0100]	[0.0100]	[0.0100]	[0.0595]	[0.0584]	[0.0584]
Constant	0.2523***	0.2508***	0.2466***	-3.2090***	-3.2226***	-3.2396***
	[0.0642]	[0.0632]	[0.0624]	[0.4936]	[0.4841]	[0.4816]
Adjusted R-squared	0.1886	0.1914	0.1934	0.2496	0.2568	0.2578
Observations	6,200	6,200	6,200	6,200	6,200	6,200

Table 7. Value of cash: regressions with alternative dependent variable. The dependent variable is the firm's raw stock return, computed as the market cap at the end of fiscal year *t* minus the market cap at the end of fiscal year *t-1*, divided by the market cap at *t-1*. Independent variables are the same as in Table 5. Standard errors (in brackets) are clustered by firm. Year and industry fixed effects are included. ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.

	(1)	(2)	(3)
ΔCash * Family	-0.2007***		
	[0.0745]		
ΔCash * Non-family CEO		-0.1235*	-0.1238*
		[0.0709]	[0.0707]
ΔCash * Family CEO		-0.2514***	
		[0.0730]	
ΔCash * Family founder CEO			-0.0546
			[0.1444]
ΔCash * Family heir CEO			-0.2738***
			[0.0651]
Family	0.0258***		
	[0.0088]		
Non-family CEO		0.0205**	0.0204**
		[0.0096]	[0.0096]
Family CEO		0.0354***	
		[0.0123]	
Family founder CEO			0.0417**
			[0.0197]
Family heir CEO			0.0307**
			[0.0140]
ΔCash	0.2132***	0.2154***	0.2161***
	[0.0608]	[0.0608]	[0.0605]
ΔEarnings	-0.0069	-0.007	-0.0075
	[0.0133]	[0.0134]	[0.0131]
ΔNet Assets	0.0479***	0.0486***	0.0484***
	[0.0076]	[0.0076]	[0.0076]
ΔR&D expenses	-0.0243	-0.0193	-0.019
	[0.0544]	[0.0543]	[0.0543]
ΔInterest expenses	-0.0803	-0.065	-0.0615
	[0.1458]	[0.1400]	[0.1365]
ΔDividends	0.3261***	0.3303***	0.3200***
	[0.1002]	[0.1007]	[0.0951]
Lagged Cash	0.0970***	0.1017***	0.1014***
	[0.0208]	[0.0204]	[0.0206]
Net Financing	0.0040**	0.0039**	0.0038**
	[0.0016]	[0.0016]	[0.0016]
Book to market	-0.0422***	-0.0424***	-0.0425***
	[0.0057]	[0.0057]	[0.0057]
Firm size	0.0004	0.0005	0.0001
	[0.0027]	[0.0027]	[0.0027]
Leverage	-0.2370***	-0.2404***	-0.2416***
	[0.0339]	[0.0339]	[0.0339]
Repurchase	-0.0073	-0.008	-0.0079
	[0.0219]	[0.0218]	[0.0218]
Constant	0.3579***	0.3572***	0.3627***
	[0.0550]	[0.0549]	[0.0550]
Adjusted R-squared	0.2979	0.2988	0.2994
Observations	6,078	6,078	6,078