

Corporate Divestitures and Family Control*

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Abstract

This paper investigates the relationship between divestitures and firm value in family firms. Using hand-collected data on a sample of over 30,000 firm-year observations, we find that family firms are less likely than non-family firms to undertake divestitures, especially when these companies are managed by family- rather than non-family CEOs. However, we then establish that the divestitures undertaken by family firms, predominantly those run by family-CEOs, are associated with higher post-divestiture performance than their non-family counterparts. These findings indicate that family firms may fail to fully exploit available economic opportunities, potentially because they pursue multiple objectives beyond the maximization of shareholder value. These results also elucidate how the characteristics of corporate owners and managers can influence the value that firms derive from their corporate strategies.

Keywords: family firms, divestitures, corporate strategy, agency theory, CEOs

* We are very grateful to Alfonso Gambardella and two anonymous reviewers for their helpful comments and suggestions. We would also like to thank Laurence Capron, Alex Edmans, Phanish Puranam, David Reeb, and seminar participants at the 2013 Strategic Management Society Annual Meeting, the 2013 Academy of Management Annual Meeting, the 2013 London Business School Ghoshal Conference, the 2013 Atlanta Competitive Advantage Conference, University of Toronto, New York University, University of Maryland, George Washington University, Emory University, Purdue University, Columbia University, INSEAD, National University of Singapore, and Wirtschafts Universitat of Vienna for their feedback. We are especially grateful to Andrea Contigiani for his excellent research assistance throughout this project. We would also like to thank Levi Abramson, Albie Austin, Maria Corella, Magdalena Kala, Laurel McMechan, Mengshu Shen, Hue Vuong, and Joseph Yi for their support in assembling the dataset. We gratefully acknowledge the generous financial support of the Penn Undergraduate Research Mentoring program at the University of Pennsylvania and of the Wharton Global Family Alliance.

Introduction

The majority of corporations around the world are under the control, or at least the significant influence, of large shareholders, typically their founding families. Even in the United States, where ownership dispersion is arguably at its greatest, more than half of all publicly traded companies are “family firms,” defined as those in which a company’s founder or a member of his family by blood or marriage is an officer, director, or blockholder (Anderson and Reeb, 2003; Villalonga and Amit, 2006, 2009, 2010). Founding families frequently wish to realize objectives beyond maximizing economic value for both family and non-family shareholders. Examples of such objectives include, among others, preserving the founder’s legacy and heritage, creating employment opportunities for family members, and maintaining family harmony and social status. Additionally, families are often large shareholders or vote holders in these firms and are shielded from the short-run pressures of the stock market through control-enhancing mechanisms such as dual-class stock, enabling family members to exert substantial influence on the decision-making processes within these companies.

One domain in which a family firm, especially one that is family-managed, may be able to pursue the family’s unique preferences is in its corporate strategic decision-making, particularly its divestiture decision-making. We argue that founding families’ historical connections to their firms reduces the likelihood that family firms will undertake divestitures, consistent with findings from existing research (Chung and Luo, 2008; Zellweger and Brauer, 2013; Sharma and Manikuttu, 2005). We extend this logic by arguing that because only family firms, and not their non-family counterparts, experience these family-specific preferences against divestitures, the value a given divestiture creates for a family firm must exceed the value it creates for a non-family firm in order for that deal even to be undertaken in the first place. This

implies that divestitures undertaken by family firms will create more value for these companies than do the divestitures undertaken by non-family firms. This effect should be stronger in family firms that are run by founding family members, since the interests of family managers are especially closely connected to the firms they oversee.

We test these predictions using a hand-collected database consisting of detailed information on the divestiture activity and family ownership and control of 30,143 firm-year observations from 2,110 companies between 1994 and 2010. We first confirm that family firms are indeed less likely to undertake divestitures than non-family firms, particularly when the CEO is a member of the founding family. Then, consistent with our arguments, we establish that firm value is higher when divestitures are undertaken by family rather than non-family firms, and especially so when family firms are run by family-CEOs rather than non-family CEOs.

In light of the foregoing discussion, the dependent variable of interest in our study is the value created for a firm's shareholders by a given divestiture (not the value of the divested assets). As such, in our empirical tests, we carefully account for three factors that could distort the observed relationship between divestitures and firm value: we employ coarsened exact matching models to deal with the issue of non-random selection in the divestiture decision; we use the first-differenced value of Tobin's q as the dependent variable in these coarsened exact matching models to minimize the effects of time-invariant, firm-specific, unobservable factors on the relationship between divestitures and firm value; and we implement event studies to isolate investors' immediate reactions to divestiture announcements, which reduces the effects of any *ex ante* differences that might exist between the traits of family and non-family firms. The fact that we find support for our predictions regarding the relatively greater value created by divestitures undertaken by family (and family-CEO) firms using these rigorous methodologies

suggests that the core mechanism driving our results is the distinctive preferences of founding families, since our empirical approaches rule out both the observable and unobservable sources of bias that could constitute alternative explanations to this interpretation. We also provide descriptive evidence in support of this point by showing that the shareholder value created by divestitures declines in the generation of a given company's family ownership and management. This reveals that the family firms and family managers that exhibit the strongest preferences against divestitures enjoy the highest returns when they do undertake these deals.

The research in this study bridges the literatures on family business management and corporate strategy, generating two key theoretical contributions. Our work underscores the predominance in family firms of agency conflicts between family and non-family shareholders: the unique preferences of founding families and their ability to act on them appear to manifest themselves in firms' corporate strategy decisions and outcomes, illustrating how and why family firms might fail to fully exploit the economic opportunities that are available to them. Our study also addresses the questions of when, and for which firms, divestitures create value, and helps explain the relative scarcity of divestiture activity despite its potential benefits.

Theory and Hypotheses

Agency Problems in Family Firms

The canonical, agency-based model of the modern corporation is one in which the primary goal of managers (agents) is to maximize value for the shareholders (principals) of the companies they oversee (Berle and Means, 1932). Agency problems arise in corporations when self-interested managers instead seek to maximize value for themselves at the expense of their shareholders (Jensen and Meckling, 1976).

An additional conflict beyond this traditional conceptualization of the agency problem may occur in firms in which a large shareholder holds an ownership stake alongside a fringe of small shareholders (Shleifer and Vishny, 1986). In such firms, the large shareholder, by virtue of its controlling ownership stake, may extract “private benefits of control” by maximizing over its own preferences at the expense of those of small shareholders, a principal-principal conflict.

Family firms are a classic example of this circumstance, in that the families that found these companies exhibit a unique set of preferences that their controlling ownership stakes (and often, their roles in management) enable them to pursue (Burkart, Panunzi and Shleifer, 2003; Villalonga and Amit, 2006). The distinctive preferences of family firms, relative to those of non-family firms, can be grouped into two broad categories, financial and non-financial.

From a financial standpoint, founding families frequently have long investment and profit horizons. Accordingly, they may shield themselves from the short-run pressures of the stock market through control-enhancing mechanisms such as dual-class stock, disproportionate board representation, pyramids, and voting agreements (Villalonga and Amit, 2009; Gompers, Ishii, and Metrick, 2008; La Porta, López-de-Silanes, and Shleifer, 1999; Claessens, Djankov, and Lang, 2000; Faccio and Lang, 2002). Consequently, their control rights often exceed their cash flow rights, a circumstance that has been shown to be associated with lower firm value (Villalonga and Amit, 2006, 2009; La Porta *et al.*, 2002; Claessens *et al.*, 2002).

From a non-financial perspective, founding families are embedded in the firms they create, often in tacit and intangible ways (Gómez-Mejía *et al.*, 2007; Gómez-Mejía, Makri, and Kintana, 2010). The corporate names of family firms frequently include or are derived from the surname of the family itself (*e.g.*, Ford, Johnson, Kohler, etc.), reflecting strong identity-based connections (Dyer and Whetten, 2006), and the management of a family firm may be passed

down across generations, such that the family's ways of doing business are preserved (Hall and Nordqvist, 2008). As such, the family may wish to realize objectives beyond maximizing economic value for shareholders. Examples of such objectives include, among others, preserving the founder's legacy and heritage (Casson, 1999), creating employment opportunities for family members (Pérez-González, 2006; Bennedsen *et al.*, 2007), behaving responsibly towards employees and other relevant stakeholders (Stavrou, Kassinis, and Filotheou, 2007; Berrone *et al.*, 2010; Block, 2010), and maintaining social status in the community (Arregle *et al.*, 2007).

The foregoing discussion indicates that there are a number of dimensions along which the preferences of family firms may differ from those of non-family firms. Thus, while the primary objective of both family and non-family firms should, in theory, be to maximize value for all shareholders, the fact that founding families have this unique set of preferences (along with the power to pursue them) suggests that family firms may instead make decisions that satisfy the preferences of the families that found them. As will now be discussed, one important domain in which this tendency might manifest itself quite strongly is in family firms' corporate strategic decision-making, and in particular, its divestiture decision-making.

The Benefits and Costs of Divestitures

Corporate strategy is fundamentally concerned with the question of how a firm can create value over and above the value its business units create by themselves (Porter, 1987; Goold, Campbell, and Alexander, 1994; Collis and Montgomery, 1998; Prahalad and Doz, 2003), which, by definition, involves decisions about where to draw firm boundaries. Diversification has traditionally been featured quite prominently in this literature: transactions like mergers and acquisitions, through which diversification is frequently effectuated, are thought to enable firms

to leverage their core competences and attain synergies across their disparate business units (Wernerfelt, 1984; Singh and Montgomery, 1987).

Increasingly, however, refocusing activity has come to be viewed as an important part of corporate strategic decision-making, a point that is underscored by the recent prevalence of divestitures as a mode of corporate reconfiguration (Davidoff, 2014). Divestitures are believed to enable firms to reconfigure resources within their corporate portfolios (Capron, Dussauge, and Mitchell, 1998; Karim and Mitchell, 2000; Helfat and Eisenhardt, 2004) and to remove obsolete or misaligned business units therefrom (Chang, 1996; Capron, Mitchell, and Swaminathan, 2001). In so doing, divestitures often clarify the perceptions of relevant external stakeholders like securities analysts, and in turn, shareholders (Zuckerman, 2000; Bergh, Johnson, and DeWitt, 2008; Feldman, Gilson, and Villalonga, 2013). As such, the implementation of divestitures like asset sales and corporate spinoffs has typically been found to be positively associated with firm value (Markides, 1992, 1995; Bergh, 1995; Comment and Jarrell, 1995; John and Ofek, 1995; Daley, Mehrotra, and Sivakumar, 1997; Desai and Jain, 1999).

This being said, however, it is not costless for firms to undertake divestitures. In general, firms undertake fewer divestitures than acquisitions,¹ in that the latter are conceptualized as representing growth and vitality while the former are viewed as signs of weakness and failure (Dranikoff, Koller, and Schneider, 2002). As such, organizational inertia against divestitures may be quite high, as evidenced by the empirical findings that these transactions typically follow management turnover events (Wiersema and Bantel, 1992; Hambrick, Geletkanycz, and Frederickson, 1993; Bigley and Wiersema, 2002) and periods of underperformance (Hoskisson, Johnson, and Moesel, 1994; Shimizu and Hitt, 2005; Hayward and Shimizu, 2006; Shimizu,

¹ For example, the value of U.S. mergers and acquisitions outpaced the value of divestitures nearly twenty to one in 2011. Source: “mergermarket M&A Round-Up for Year End 2011” <http://www.mergermarket.com/pdf/Press-Release-for-Financial-Advisers-Year-End-2011.pdf>

2007). Furthermore, divestitures necessitate the separation of shared financial, managerial, and reputational resources (Woo, Willard, and Daellenbach, 1992; Seward and Walsh, 1996; Corley and Gioia, 2004; Semadeni and Cannella, 2011), processes that might be organizationally quite costly and difficult to implement. Further to this point, certain divestitures may disrupt tacit and taken-for-granted, yet organizationally valuable, competences and interdependencies that have developed over time within diversified firms, suggesting that the costs of divestitures for divesting firms can, at times, outweigh their benefits (Feldman, 2014).

Divestitures in Family and Non-Family Firms

In articulating the benefits and costs of divestitures, the foregoing discussion has drawn no distinction between the divestitures undertaken by family and non-family firms. As mentioned previously, however, the fact that founding families have unique preferences, along with the power to pursue them, suggests that divestiture decision-making in family firms may be quite different from the analogous processes in non-family firms. The core argument advanced in this study is that these family-specific preferences should impose an additional set of costs on family firm divestitures, which are expected to reduce the propensity that family firms will undertake divestitures, relative to that of non-family firms. This implies that when family firms do undertake divestitures, the value these deals create for the divesting firms will exceed the value created by divestitures undertaken by non-family firms.

The effect of founding families' histories within their firms is likely to be the core driver of their preference to avoid undertaking divestitures. Management and ways of doing business may be passed down through the generations in family firms (Dyer and Whetten, 2006; Hall and Nordqvist, 2008). Retaining rather than divesting business units may help family firms maintain these historically-based practices (Feldman, 2014), for example, by creating management roles

for members of the family's later generations (Pérez-González, 2006; Bennedsen *et al.*, 2007) or by continuing relationships with long-time employees, buyers, and suppliers (Stavrou *et al.*, 2007; Berrone *et al.*, 2010; Block, 2010). The preservation of the founder's legacy and heritage (Casson, 1999) may also play an important role in family firms' inertia against divestitures. In family firms, retired family members may remain involved in these companies for a long time after they step down, whether directly as significant shareholders or board members, or indirectly as relatives of the succeeding CEOs. As a result, current CEOs of family firms, in general, may be disinclined to undertake divestitures, as these transactions may reflect negatively on or even reverse their predecessors' strategic decisions.

This discussion suggests that due to their family-specific preferences, family firms will be less likely than non-family firms to undertake divestitures. Consistent with all of above arguments, family firms have been shown to engage in less divestiture activity than non-family firms (Zellweger and Brauer, 2013; Sharma and Manikuttu, 2005; Chung and Luo, 2008), especially as their ownership stakes increase (Praet, 2013). Additionally, family firms are less likely than non-family firms to downsize their workforces (Block, 2010; Stavrou *et al.*, 2007), an action that is close in spirit to the decision to divest a business.

This being said, however, these family-specific preferences should influence not only the propensity of family firms to undertake divestitures, but more importantly, the relationship between divestitures and firm value in family firms. Economically, in non-family firms, managers should decide to undertake a divestiture only when the benefits (B) of that transaction exceed its costs (C), such that the net value created for a firm by that divestiture is positive ($B - C > 0$). The argument that the benefits associated with a divestiture must exceed the costs of

implementing it for the deal to be undertaken is consistent with existing findings that divestitures are positively associated with firm value on average.

In family firms, however, managers should decide to undertake a divestiture only when the benefits (B) of that transaction exceed the sum of both the generic (C) and the family-specific (FC) costs of the deal, such that the net value of that divestiture is positive ($B - C - FC > 0$). By definition, therefore, the total cost associated with undertaking divestitures must be higher in family firms ($C + FC$) than it is in non-family firms (C). This suggests that family firms will only be willing to divest businesses when the foreseeable benefits of these transactions are high enough to offset both the generic and the family-specific costs of undertaking them ($B > C + FC$), whereas non-family firms will be willing to undertake divestitures when their benefits exceed their generic costs ($B > C$). Accordingly, for divestitures to be undertaken in the first place, the benefits associated with family firm divestitures must exceed those associated with non-family firm divestitures. This implies that the divestitures undertaken by family firms will be more positively associated with firm value than those undertaken by non-family firms.

H1: Divestitures will be more positively associated with firm value when they are undertaken by family firms than when they are undertaken by non-family firms.

Divestitures in Family-Managed and Non-Family Managed Firms

A similar logic to the above discussion helps justify the argument that divestitures undertaken in family firms run by family-CEOs will be more valuable than those undertaken in family firms run by non-family CEOs. The heritage-based connections described previously are quite likely to influence both the divestiture decisions and outcomes of family-CEOs in particular, whether they are founders or descendants of founders.

Given the hard work it takes to create, build, and run a company, especially a publicly-traded firm, a founder-CEO may be the last person to realize that the time has come for him to divest part of the business that he worked to create. Along similar lines, descendant-CEOs may view themselves as stewards of their family's heritage, as embodied in the family firm, imposing a profound sense of responsibility on these individuals not to remove parts of the firms that their ancestors worked so hard to build. This inertia may be further reinforced by the presence of a family governance system—increasingly common among business families—that formalizes descendant-CEOs' accountability to their families. Furthermore, because family-CEOs are usually large shareholders in their companies, they have strong financial interests in their firms, incentivizing them to maximize over the preferences from which they feel they will personally benefit most significantly, by, for example, avoiding divestitures. By comparison, while a non-family CEO may be influenced by the presence of members of the founding family on the board, as shareholders, or in top management positions, and is likely to have some equity ownership in his firm, he will not experience the emotional or financial inertia against divestitures as personally or as acutely as his family-CEO counterpart.

In addition to their inclination to avoid divestitures, family-CEOs may also have significant power to put those preferences into action. Shareholders only have a direct say on divestitures (*i.e.*, the right to vote on them at a shareholders' meeting) in the exceptional case in which a divestiture constitutes a disposition of materially all assets of the firm. Otherwise, the ultimate decision rights on divestitures correspond to the board or, *de facto*, to the CEO himself. Thus, in a family firm whose CEO is a member of the founding family (whether a founder or a descendant), that individual will have both the motivation and the power to avoid divestitures. By contrast, if the CEO of a family firm is not a member of the founding family, the family's

reluctance to undertake divestitures may be moderated by the balance of power between shareholders or board members and the CEO. This suggests that family firms run by family-CEOs will be less likely to divest businesses than family firms run by non-family CEOs.

Thus, while a family firm will undertake a divestiture when the benefits (B) of that transaction exceed the sum of the generic (C) and the family-specific (FC) costs of the deal, family-CEOs running family firms will experience these family-specific costs (FC) more acutely than non-family CEOs, and have the power to respond to them by only undertaking divestitures when it is valuable enough to do so. Accordingly, the foreseeable benefits of divestitures undertaken by family-CEOs managing family firms must be high enough to offset the family-specific costs of divesting a business unit. This implies that the divestitures undertaken in family firms run by family-CEOs should be more valuable than their non-family counterparts.²

H2: Within family firms, divestitures will be more positively associated with firm value when they are undertaken by family-CEOs than when they are undertaken by non-family-CEOs.

Methods

Sample and Data

The sample used in this paper consists of 30,143 firm-year pairs pertaining to 2,110 publicly-traded U.S. companies from 1994 to 2010, and was constructed as follows.

The baseline sample of companies used in this paper comes from the sample in Villalonga and Amit (2010), which consisted of the 8,104 firms that were active in the year 2000. Due to the intensive nature of gathering information on family control, data on the identity

² We leave open as an empirical question the issue of whether the divestitures undertaken by founder-CEOs are more or less valuable than those undertaken by descendant-CEOs because it is not obvious, *ex ante*, for which type of CEO the family-specific costs of divestitures will be higher, and hence, for which type of CEO the value created by these transactions will be greater.

of the founder and family relationships among shareholders were only collected for a random subsample of 2,110 firms out of those 8,104. These data were manually gathered from proxy statements filed with the Securities and Exchange Commission (SEC), corporate histories extracted from Hoover's, company websites, and Internet searches. The randomization was carried out within industries so as to ensure a minimum degree of representation within each industry (20% for three-digit level industries and 25% for two-digit level industries).

For this paper, we built a panel out of the cross-sectional sample of 2,110 firms in Villalonga and Amit (2010) by collecting analogous family control information about those companies going back to 1994 (the first year for which proxy statements are electronically available), and going forward until 2010.³ The resulting panel dataset, consisting of 30,143 firm-year pairs from 1994 to 2010 for 2,110 companies, is the most comprehensive random sample of U.S. corporations that has been used thus far in research on family firms.

The ownership data for these 2,110 companies were supplemented with detailed data on the divestitures they undertook between 1994 and 2010. Specifically, these data consist of information on every divestiture undertaken by each firm in the sample, the mode of divestiture (sell-off or spinoff)⁴, and the dollar value of each transaction. Divestiture data were collected from SDC Platinum, Mergers & Acquisitions Magazine, the CCH Capital Changes Reporter, and the Federal Trade Commission Statistical Report on Mergers.

³ Because the group of firms that were active in the year 2000 was extended backwards to 1994 and forwards to 2010, certain firms may have entered our sample after 1994 (but before the year 2000), and other firms may have exited the sample before 2010 (but after the year 2000). Thus, it could be the case that these two subsets of firms differ in systematic ways from the firms that remained in the sample from 1994 to 2010. To confirm that this was not the case, we conducted t-tests of the difference in Tobin's q between two pairs of firms: (1) entering firms in their post-1994 but pre-2000 entry years versus all other firm-year pairs from 1994 to 2000; and (2) exiting firms in their post-2000 but pre-2010 exit years versus all other firm-year pairs from 2000 to 2010. Neither t-test was significant, suggesting that selection bias from firm entry and exit is not an issue.

⁴ Sell-offs are defined as the sale of a business unit to another organization. Spinoffs are defined as the *pro-rata* distribution of shares in an existing subsidiary or business segment to the shareholders of the divesting firm.

Among the control variables, CEO turnover data were gathered from ExecuComp and Equilar, and for missing observations, hand-collected from firms' proxy statements.⁵ Similarly, firm age data were gathered from Center for Research in Security Prices (CRSP) and Professor Jay Ritter's online database of initial public offering ages,⁶ and for missing observations, hand-collected from firms' SEC filings, Hoover's, the International Directory of Company Histories,⁷ and other online research. Finally, data on mergers and acquisitions were gathered from SDC Platinum, and all financial data were gathered from Compustat and CRSP.

Family Control

This paper uses three measures of family control. "Family firms" are defined as those in which the founder or a member of his family by blood or marriage is an officer, director, or blockholder, either individually or as a group (Anderson and Reeb, 2003; Villalonga and Amit, 2006, 2009, 2010). "Family-CEO firms" are those firms whose CEO is the founder or a member of the founding family. Within family firms, "non-family-CEO firms" are those that are not managed by the founder or any member of the founding family. Family-CEO firms are split into two categories: "Founder-CEO firms" are those in which the CEO is the company's founder, regardless of whether other family members of the same or later generations, serve as officers or directors in the firm. "Descendant-CEO firms" are those in which the CEO is a descendant of the founder. Table I shows the extent of family management, by family generation, in our sample.

-----Table I here-----

Divestiture Activity

Panel A of Table II presents descriptive information on the number, value, and mode of divestitures undertaken by the firms in the sample, broken down according to whether the

⁵ Accessed online through www.sec.gov/edgar

⁶ Accessed online through <http://bear.warrington.ufl.edu/ritter/ipodata.htm>

⁷ Accessed online through www.fundinguniverse.com

companies were family or non-family firms in the year of the divestiture. Family firms undertook significantly fewer divestitures overall than non-family firms; between 1994 and 2010, they divested an average of 2.79 businesses (worth an average of \$1.1m each), as compared to the 4.58 businesses (worth an average \$2.6m each) divested by non-family firms.

Panel B of Table II disaggregates the divestiture activity of family firms according to whether these companies were managed by family-CEOs, non-family CEOs, founder-CEOs, or descendant-CEOs. Family firms that are managed by non-family CEOs undertake divestitures more frequently (4.26 divestitures worth an average of \$1.9m over the sample period) than family firms that are managed by family-CEOs (2.33 divestitures worth an average of \$1m). The difference is pronounced for founder-CEOs, who undertake an average of 2.02 divestitures worth \$0.9m each, but is still significant relative to descendant-CEOs (3.39 divestitures worth an average of \$1m). The t-statistics for the differences between these pairs of mean values appear in Panel C of Table II: while the differences in the numbers of divestitures are significant, the differences in the value of these transactions are not. These results provide initial support for the idea that family-managed firms divest businesses less frequently than their non-family peers.

-----Table II here-----

Variables

Table III describes the main variables used in this study. The variable we use to test a firm's propensity to undertake divestitures is *Divestiture*, an indicator variable that takes the value one if a firm undertakes at least one divestiture in a given year, and zero if not.

Our measure of firm value is Tobin's *q*, the ratio of the firm's market value to the replacement cost of its assets. Market value is the value of common equity plus the book value of preferred stock and debt, and the replacement cost of assets is proxied by their actual book value.

In terms of control variables, CEO Turnover is an indicator variable taking the value one in years in which a company's CEO differs from its CEO in the previous year. Firm Age is the number of years elapsed since a firm's founding date. Measuring firm size, $\ln(\text{Total Sales})$ is the natural log of a firm's total sales. Leverage is calculated as the sum of short- and long-term debt scaled by market capitalization, measuring a firm's indebtedness. Current Ratio, defined as a firm's current assets over its current liabilities, measures the cash constraints a firm faces. Along similar lines, Negative Net Income is an indicator variable taking the value one if a firm has negative net income, representing the most financially-constrained firms. Diversification is a count of the number of business segments in which a firm operates in a given year. Number of M&A is a count of the number of mergers and acquisitions undertaken by a firm in a given year. Finally, Industry Sales Growth is defined as the average sales growth rate of all single-segment firms operating in the main four-digit SIC code in which each company in the sample operates.

Table IV presents descriptive statistics on the financial characteristics of the firms in the sample. These statistics are measured in the individual year prior to each divestiture these companies undertake. Family firms are significantly smaller than their non-family counterparts in terms of both assets and sales; they are also less levered and operate in fewer business segments (Villalonga and Amit, 2006). Despite these differences, however, the mean Tobin's q of family and non-family firms in the year prior to the divestitures these companies undertake are not significantly different from one another.

-----Tables III and IV here-----

Methodologies

Hypotheses 1 and 2 predict that the divestitures undertaken by family firms will be more positively associated with firm value than those undertaken by non-family firms, especially in

family firms managed by family-CEOs. We have argued that the mechanism driving these differences is the family-specific costs associated with divestitures, which necessitate that family firm (and family-CEO) divestitures create more value than their non-family counterparts in order for them even to be undertaken in the first place.

To isolate the existence of the family-specific costs associated with divestitures as the core mechanism driving our results, it is necessary to rule out the effects of three confounding factors. First, the fact that family firms and family-CEOs may divest business units in response to particular exigencies suggests that non-random selection among the firms that *choose* to undertake divestitures could influence their performance consequences. Second, time-invariant, unobservable, firm-specific characteristics could be correlated with the relationship between divestitures and firm value. Third, the pre-divestiture performance of family and family-CEO firms could differ systematically from that of their non-family peers, which could explain any post-divestiture performance differences between these types of firms. We use coarsened exact matching models with a first-differenced dependent variable to account for the first two of these problems (Heckman *et al.*, 1998), and event studies to account for the third issue.

Results

Coarsened Exact Matching Models

We begin by estimating the relationship between divestitures and firm value using coarsened exact matching models with a first-differenced dependent variable. In coarsened exact matching models, a first-stage regression is fitted to predict each firm's "propensity" to undertake an action (here, divesting a business), which is considered the "treatment." Firms that undertake the action are considered as the "treated" group, whereas those that do not undertake it

are the control group. The independent variables in this first-stage regression represent the *observable* characteristics that are driving firms to undertake divestitures.

The estimated propensities that firms will undertake divestitures (as generated by the predicted values of the dependent variable in the first-stage regression) are then used as the independent variable in the second-stage regressions measuring the relationship between divestitures and firm value. In these regressions, the dependent variable is a first-differenced measure of firm value (here, Tobin's q in year t less Tobin's q in year $t-1$). This first-differencing soaks up the effects of any *unobservable* firm-specific factors that could be driving the relationship between divestitures and firm value. Thus, coarsened exact matching models with a first-differenced dependent variable account for the effects of both observable and unobservable characteristics on the relationship between divestitures and firm value.⁸

The Propensity of Family Firms to Divest

Our theoretical development suggests that family firms will be less likely than non-family firms to undertake divestitures, especially when they are run by family-CEOs rather than non-family CEOs. Table V presents the results of regressions investigating these predictions. The dependent variable is Divestiture. All models are specified as logistic regressions and include the control variables described above. Robust standard errors are clustered by firm.

-----Table V here-----

In Regression (1), the coefficient on Family Firm is negative and significant at 1%, and the marginal effect of this coefficient indicates that family firms are 2.1% less likely than non-family firms to divest businesses in any given year. Given that about 15% of the firms in our sample undertake divestitures, this effect appears to be economically meaningful as well.

⁸ As a robustness check, we also estimate propensity score matching models with a first-differenced dependent variable, and these results are consistent with those generated by our coarsened exact matching models.

Regression (2) tests the propensity of family firms run by family-CEOs to undertake divestitures, compared to the propensity of family firms run by non-family CEOs to do so. The negative and significant coefficient on Family-CEO suggests that family firms run by family-CEOs are 1.5% less likely to undertake divestitures than family firms run by non-family-CEOs.

Regression (3) separately tests the propensities of family firms run by founder-CEOs and descendant-CEOs to undertake divestitures, both as compared to the propensity of family firms run by non-family-CEOs to do so. Here, the coefficients on Founder-CEO and Descendant-CEO are both negative, though only the coefficient on Descendant-CEO is significant; family firms run by descendant-CEOs are 1.8% less likely to divest businesses than family firms run by non-family CEOs. A Wald test shows that the difference between the coefficients on Founder-CEO and Descendant-CEO is not statistically significant, indicating that founder-CEOs in family firms are no less likely to undertake divestitures than descendant-CEOs in these companies.

Among the control variables, CEO turnover events and firm age are both positively associated with firms' divestiture propensities (Wiersema and Bantel, 1992; Hambrick *et al.*, 1993; Bigley and Wiersema, 2002). Moreover, larger companies and firms that are more highly levered, cash constrained, unprofitable, acquisitive, and diversified are more likely to undertake divestitures (Chatterjee and Wernerfelt, 1991; Markides, 1992, 1995), as are companies that are experiencing higher growth in their primary industries (Anand and Singh, 1997; Capron *et al.*, 2001; Helfat and Eisenhardt, 2004; Berry, 2010).

The Relationship between Divestitures and Firm Value in Family Firms

To estimate the second-stage regressions in coarsened exact matching models, the logistic regression predicting a firm's propensity to undertake a divestiture (Regression (1) in Table V) must first be re-estimated using coarsened values of the independent variables, in order to

accurately group firms that share similar values of these variables. More specifically, the three indicator variables that appear in this regression (Family Firm, CEO Turnover, and Negative Net Income) are each coarsened into two groups (*i.e.*, family and non-family firms; firms that do and do not change CEOs; and firms that do and do not have negative net income). Diversification is coarsened into six sub-groups (single-segment firms, firms that have two or three segments; firms that have four or five segments; firms that have six to eight segments; firms that have nine to fifteen segments; and firms that have sixteen or more segments). The remaining six variables (Firm Age, $\ln(\text{Total Sales})$, Leverage, Current Ratio, Number of M&A, and Industry Sales Growth) are coarsened into quintiles based on their distributions.⁹

Firms' predicted propensities to undertake divestitures, as derived from the output of this coarsened first-stage regression, are then incorporated into a second-stage regression. This second-stage regression estimates the relationship between divestitures and firm value, and the (un-coarsened) observations are weighted according to the prominence of each stratum into which they fall. Un-coarsened values of the independent variables are also included in the second-stage regression to account for any remaining imbalance. The dependent variable in these regressions is the first-differenced value of Tobin's q , defined as $Q_t - Q_{t-1}$, which again soaks up the effects of time-invariant, firm-specific characteristics on the relationship between divestitures and firm value (Heckman *et al.*, 1998). Table VI presents the results of these regressions.¹⁰

-----Table VI here-----

In Regression (1), the coefficient on Divestiture is positive, although not significant. Regression (2) estimates this same second-stage regression for the subset of family firms only,

⁹ We implement coarsened exact matching in Stata using Blackwell *et al.*'s (2009) "cem" code. As described above, we initially selected the values on which to coarsen the independent variables. Our results are unchanged if we allow Stata to choose the values on which to coarsen the independent variables in the first-stage regression.

¹⁰ These results are also robust to the use of three alternate dependent variables: ROA, ROS, and ROE.

while Regression (3) does so for the subset of non-family firms. In Regression (2), the coefficient on Divestiture is positive and significant, suggesting that the Tobin's q of family firms that undertake divestitures is higher by 0.17 (about 11% of the mean value of Tobin's q) than that of family firms that do not undertake divestitures. By contrast, the coefficient on the Divestiture variable is not significant in Regression (3), meaning that firm value does not differ depending on whether or not non-family firms undertake divestitures. These two models are simultaneously estimated, and a Wald test of the equality of these two coefficients on the Divestiture variable is rejected at 1%, providing support for Hypothesis 1.

Regressions (4) and (5) estimate the relationship between divestitures and firm value for family firms that are managed by family-CEOs versus non-family CEOs. In Regression (4), the positive and significant coefficient on Divestiture means that the Tobin's q of family-CEO firms that undertake divestitures is about 0.20 higher (13% of mean Tobin's q) than that of family-CEO firms that do not undertake divestitures. By contrast, in Regression (5), the coefficient on Divestiture is not significant, suggesting a null relationship between divestitures and Tobin's q in family firms managed by non-family CEOs. A Wald test of the equality of the two coefficients on the Divestiture variable is rejected at 5%, providing support for Hypothesis 2.

Regressions (6) and (7) estimate the relationship between divestitures and firm value for family-CEO firms that are managed by founder- versus descendant-CEOs. In Regression (6), the coefficient on Divestiture is positive and significant, suggesting that when family firms that are led by founder-CEOs undertake divestitures, their Tobin's q is higher (by about 16% of its mean) than the Tobin's q of their non-divesting counterparts. The coefficient on the Divestiture variable is not significant in Regression (7), meaning that firm value does not differ depending on whether or not family firms run by descendant-CEOs undertake divestitures. A Wald test of the

equality of these coefficients is rejected at 5%, indicating that divestitures in family-CEO firms are more positively associated with Tobin's q in founder-led than descendant-led companies.

Event Study Results

In addition to our coarsened exact matching models, we also run an event study to quantify the relationship between divestitures and firm value in family and non-family firms. Because event studies measure investors' immediate reaction to divestiture announcements, any differences in the stock market's response to the divestitures undertaken by family and non-family firms should not be driven by *ex ante* differences in these firms' characteristics, since these are all accounted for in the calculation of these firms' "normal" stock market returns.

To run this event study, we first identified the announcement dates of all of the divestitures in our sample using SDC Platinum, and we collected from CRSP the daily stock returns within 250-day estimation windows [-800, -551] before these announcement dates. From there, we predicted these firms' normal returns from their daily stock returns and the stock market's returns, and then their abnormal returns within three-day event windows [-1, +1] surrounding the announcement dates (Anand and Singh, 1997). Cumulative abnormal returns (CAR) are the cumulative sum of these abnormal returns over this three-day window.¹¹

Table VII presents our univariate event study results. Panel A reveals that overall, investors react favorably to divestitures: the CAR to announcements of these transactions are +0.7%, statistically different from zero at the 1% level of significance.

In Panel B of Table VII, the CAR to divestitures undertaken by family firms (+1.0%) is significantly greater than the CAR to divestitures undertaken by non-family firms (+0.6%), providing support for Hypothesis 1. While Panel C reveals that there is no statistical difference in

¹¹ Our results will be presented on the basis of these estimation [-800, -551] and event [-1, +1] windows, though they are invariant to the use of an alternate estimation window [-515, -366], and to the use of several other event windows ([-1, 0], [0, +1], [-2, +2], and [-3, +3]) with both estimation windows.

the CAR to divestiture announcements undertaken by family- and non-family-CEOs in family firms, the CAR of family-CEO divestitures (+1.2%) is larger than the CAR of non-family-CEO divestitures (+0.9%). Finally, Panel D indicates that investors react more favorably to divestitures undertaken by founder-CEOs (+1.5%) than descendant-CEOs (+0.6%).

As a further extension of these findings, Table VIII presents the results of multivariate regressions that take the above-described CAR as their dependent variable. These regressions are estimated as ordinary least squares models with robust standard errors.

In Regression (1), the positive and significant coefficient on Family Firm indicates that the stock market responds more favorably to announcements of divestitures undertaken by family firms than it does to divestiture announcements made by non-family firms. This coefficient estimate reveals that the average difference in the returns earned by these two types of companies is about +0.4%, consistent with the above-described univariate results.

In Regression (2), the coefficient on Family-CEO is not significant, suggesting that there is no statistical difference in the stock market's response to divestitures undertaken by family firms that are run by family-CEOs versus non-family-CEOs, as in the univariate results. Similarly, in Regression (3), the coefficient on Founder-CEO is not significant, meaning that there is no statistical difference in the stock market's reaction to divestitures undertaken by family-CEO firms that are run by founder-CEOs versus descendant-CEOs.

-----Tables VII and VIII here-----

Summary and Interpretation of Results

We have used two different methodologies to test our hypotheses: coarsened exact matching models with a first-differenced dependent variable, and event studies. Under both methodologies, family firm divestitures are more positively associated with stock market

performance than non-family firm divestitures, providing strong support for Hypothesis 1. Under the coarsened exact matching models, but not the event study, the divestitures undertaken by family-managed firms are significantly more positively associated with firm value than those undertaken by non-family-managed firms, providing some evidence in support of Hypothesis 2.

As mentioned previously, the fact that we find support for our hypotheses using these restrictive methodologies, which rule out the potentially confounding effects of observable and unobservable firm-specific characteristics on the relationship between divestitures and firm value, implies that the family-specific preferences to avoid divestitures are the core mechanism that is driving our results. Figures I and II provide further evidence in support of this point. In these charts, the average CAR to divestiture announcements is disaggregated according to the generation of the family firm (in Figure I) or the family-CEO (in Figure II) that undertook each divestiture. Both figures reveal that the mean CAR to divestitures declines in the generation of the firm or the CEO that is undertaking these deals. These findings provide further evidence that family-specific preferences to avoid undertaking divestitures are the core driver of the greater value creation associated with family and family-CEO divestitures,¹² since earlier-generation founding families and family managers, which are arguably the most closely connected to their firms, appear to enjoy the greatest economic gains from the divestitures they undertake.

-----Figures I and II here-----

¹² One important potential alternative explanation for this pattern of results could simply be that managerial capabilities diminish in the generation of a family firm or a family-CEO. Indeed, there is evidence from previous studies that founders contribute positively to firms' market value, while descendants do not (Villalonga and Amit, 2006). However, because the results presented in Figures I and II are derived using the event study methodology, any stock market premium in recognition of founders' capabilities (or discount for the presumed lack of such capabilities in heirs) is netted out, by construction, in the measure of cumulative abnormal returns. This suggests that the pattern of results appearing in these figures can reasonably be interpreted to reflect family-specific preferences to avoid divestitures as the core driver of the greater value creation associated with these deals in family- and family-CEO firms.

Conclusion

This paper has investigated the relationship between divestitures and firm value in family firms. Consistent with findings from existing research, we first establish that family firms are significantly less likely than non-family firms to divest businesses, particularly in family-managed firms. More importantly, we find that the divestitures undertaken by family firms are associated with significantly higher firm value than divestitures undertaken by non-family firms. This improvement in post-divestiture performance is pronounced when family firms run by family-CEOs, rather than non-family CEOs, undertake these transactions.

The key theoretical contribution of this study is to show that because family firms may pursue objectives beyond the simple maximization of shareholder value, they may not fully exploit the economic opportunities available to them. Agency theory suggests that family firms, especially those that are family-managed, will seek not only to maximize value for their shareholders (Berle and Means, 1932), but also to accommodate their founding families' unique preferences (Shleifer and Vishny, 1986; Burkart *et al.*, 2003; Villalonga and Amit, 2006). As a result, family firms should be, and are, less likely than their non-family counterparts to undertake divestitures. However, when family firms do divest business units, overcoming the family-specific inertia against these transactions, the divestitures they undertake appear to create more value than those implemented by non-family firms. Thus, the "principal-principal" agency problem that is known to exist between family and non-family shareholders in family firms appears to manifest itself in these companies' corporate strategy decisions and outcomes.

On a related note, another important theoretical contribution of this study is that it helps to address the questions of when and for which firms divestitures create value. Divestitures are generally thought to be positively associated with firm performance (Lee and Madhavan, 2010;

Brauer and Wiersema, 2012). However, research has begun to nuance that view by investigating the circumstances in which or the types of divestitures for which this might or might not be true (e.g., Feldman, 2014). This study supplements this effort by showing that the positive relationship between divestitures and firm value is concentrated among family firms, especially those that are family-managed, suggesting that the characteristics of the owners and managers of divesting firms influence the magnitude of the benefits they derive from divestitures.

Furthermore, even though divestitures often create a great deal of value, they are undertaken significantly less frequently than their scope-expanding counterparts, mergers and acquisitions, and are often portrayed quite negatively to both internal and external constituents (Dranikoff *et al.*, 2002). The prevalence of family firms in both the American and global economies (La Porta *et al.*, 1999; Claessens *et al.*, 2000; Faccio and Lang, 2002; Villalonga and Amit, 2010) could explain this pair of stylized facts, in that this study has established that it is family firms, rather than their non-family counterparts, that are simultaneously the ones that could derive the greatest benefit from using, but are least likely to use divestitures as an active part of their corporate strategies. Thus, the research in this paper highlights the idea that divestitures are a highly underutilized, though potentially very valuable, corporate strategy. A stream of research has begun considering the role of divestitures as an active part of portfolio reconfiguration strategies (e.g., Capron *et al.*, 2001; Capron and Mitchell, 2012). This study further underscores the importance of these transactions, with clear practical implications for how corporations could be managed more effectively.

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Table I. Family Ownership, Control, and Management

Firm-year pairs in which the firm is managed by:	Family Firm's Generation					Total
	First	Second	Third	Fourth	Fifth or More	
Founder-CEO	5,934	1,021	2	0	0	6,957
Descendant-CEO	7	1,129	500	288	72	1,996
Non-Family CEO	3,872	1,274	526	302	94	6,068
Total	9,813	3,424	1,028	590	166	15,021

Table II. Divestiture Activity

Panel A: Average Total Number/Value of:	All Firms		Family Firms		Non-Family Firms		t-statistic (Fam vs. Non-Fam)	
	Number	Value	Number	Value	Number	Value	Number	Value
Divestitures	3.68 (7.81)	1,630.05 (7,699.18)	2.79 (6.03)	1,067.99 (4,035.04)	4.58 (9.18)	2,080.42 (9,658.09)	5.16***	2.11**
Sell-Offs	3.57 (7.67)	1,249.62 (5,977.61)	2.70 (5.90)	740.62 (2,158.02)	4.45 (9.03)	1,654.93 (7,753.00)	5.14***	2.44**
Spinoffs	0.11 (0.42)	3,397.65 (7,519.71)	0.09 (0.36)	2,732.43 (6,765.59)	0.12 (0.47)	3,997.70 (7,450.09)	1.94*	0.94

Panel B: Average Total Number/Value of:	Family-CEO		Founder-CEO		Descendant-CEO		Non-Family-CEO	
	Number	Value	Number	Value	Number	Value	Number	Value
Divestitures	2.33 (5.36)	956.81 (3,956.54)	2.02 (5.09)	939.56 (4,124.50)	3.39 (6.07)	997.42 (3,531.15)	4.26 (8.58)	1,850.80 (8,566.59)
Sell-Offs	2.26 (5.25)	667.11 (2,009.37)	1.96 (4.99)	649.04 (2,064.05)	3.31 (5.96)	709.30 (1,875.69)	4.14 (8.43)	1,440.54 (6,780.36)
Spinoffs	0.07 (0.33)	2,698.10 (6,589.53)	0.07 (0.34)	2,825.57 (6,947.73)	0.08 (0.28)	2,433.29 (5,789.18)	0.12 (0.45)	3,611.87 (7,314.26)

Panel C: t-statistics between	Fam vs. Non-Fam CEO		Found vs. Non-Fam CEO		Desc vs. Non-Fam CEO	
	Number	Value	Number	Value	Number	Value
Divestitures	3.08***	0.70	3.79***	0.68	0.08	0.41
Sell-Offs	3.04***	0.87	3.75***	0.88	0.04	0.43
Spinoffs	2.02**	0.04	2.04**	(0.03)	0.85	0.13

*** p<0.01, ** p<0.05, *p<0.10

Averages computed over 17-year panel (1994-2010) for each firm. Value of divestitures in \$000. t-statistics clustered by firm.

Table III. Descriptions of Key Variables

Family Variables	Description
Family Firm	Indicator variable equal to 1 if a firm's founder or a descendant of the founder is an owner, a director, or an officer of the firm
Family-CEO	Indicator variable equal to 1 if a firm's CEO is a family member
Founder-CEO	Indicator variable equal to 1 if a firm's CEO is its founder
Descendant-CEO	Indicator variable equal to 1 if a firm's CEO is a family member different from the founder

Divestiture Variable	Description
Divestiture	Indicator variable equal to 1 if a firm has divested at least one business in a given year, equal to 0 if the firm has divested no businesses in that year

Other Variables	Description
Tobin's Q	Ratio of a firm's market to book value
CEO Turnover	Indicator variable equal to 1 if a firm changes CEOs in a given year
Firm Age	Number of years elapsed since a firm's founding
ln(Total Sales)	Natural log of a firm's total sales
Leverage	Ratio of a firm's total debt to value
Current Ratio	Ratio of a firm's current assets to current liabilities
Negative Net Income	Indicator variable equal to 1 if a firm has negative net income
Diversification	Count of the number of business segments in which a firm operates in a given year
Number of M&A	Count of the number of mergers and acquisitions undertaken by a firm in a given year
Industry Sales Growth	Average sale growth rate of all single-segment companies operating in a firm's primary 4-digit SIC code

Table IV. Descriptive Statistics

Variable	All Firms	Family Firms	Non-Family Firms	t-statistic
Total Assets (\$000)	21,482.76 (76,012.80)	10,398.31 (28,680.53)	28,615.85 (94,012.75)	-3.54***
Total Sales (\$000)	11,563.35 (26,490.83)	7,671.36 (20,732.02)	14,066.31 (29,340.72)	-3.53***
Leverage	0.30 (0.01)	0.28 (0.01)	0.31 (0.01)	-2.10**
Number of Business Segments	3.34 (0.07)	3.20 (0.10)	3.44 (0.09)	-1.80*
Tobin's q	1.49 (0.15)	1.49 (0.23)	1.48 (0.20)	0.02

*** p<0.01, ** p<0.05, *p<0.10

All values measured in the year prior to divestiture activity. t-statistics clustered by firm.

Table V. Family Control and the Propensity to Divest

DV: Divestiture	(1)	(2)	(3)
Family Firm	-0.174*** (0.064)		
Family-CEO		-0.162** (0.083)	
Founder-CEO			-0.145 (0.102)
Descendant-CEO			-0.231** (0.135)
CEO Turnover	0.260*** (0.064)	0.371* (0.212)	0.373* (0.212)
Firm Age	0.006*** (0.001)	0.007*** (0.002)	0.006*** (0.002)
ln(Total Sales)	0.300*** (0.017)	0.268*** (0.025)	0.268*** (0.025)
Leverage	0.403*** (0.126)	0.742*** (0.183)	0.745*** (0.183)
Current Ratio	-0.106*** (0.024)	-0.076** (0.040)	-0.076** (0.040)
Negative Net Income	0.432*** (0.074)	0.478*** (0.100)	0.475*** (0.101)
Diversification	0.125*** (0.017)	0.140*** (0.024)	0.140*** (0.024)
Number of M&A	0.150*** (0.020)	0.152*** (0.025)	0.152*** (0.025)
Industry Sales Growth	0.010*** (0.004)	0.022** (0.011)	0.022** (0.011)
Constant	-4.125*** (0.146)	-4.220*** (0.211)	-4.226*** (0.210)
Sample of Firms	All	Family Only	Family Only
Pseudo-R ²	0.155	0.138	0.138
Number of Observations	19,133	10,265	10,265

*** p<0.01, ** p<0.05, *p<0.10

Robust standard errors clustered by firm in parentheses.

Table VI. Performance Following Divestitures, Second-Stage Regressions of Coarsened Exact Matching Models

DV: $Q_t - Q_{t-1}$	Panel A: All Firms	Panel B: Family vs. Non-Family Firms		Panel C: Family- vs. Non-Family-CEOs in Family Firms		Panel D: Founder- vs. Descendant-CEOs in Family Firms	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Divestiture	0.040 (0.041)	0.165** (0.076)	-0.042 (0.068)	0.201** (0.100)	0.107 (0.085)	0.244** (0.121)	0.107 (0.085)
Family Firm	-0.032 (0.032)						
CEO Turnover	0.176*** (0.052)	0.262** (0.114)	0.091 (0.084)	0.264* (0.162)	0.199** (0.089)	0.432** (0.213)	0.199** (0.089)
Firm Age	-0.002*** (0.001)	-0.002 (0.002)	-0.002 (0.001)	-0.005*** (0.001)	-0.000 (0.001)	-0.020*** (0.003)	-0.000 (0.001)
ln(Total Sales)	-0.104*** (0.010)	-0.090*** (0.028)	-0.121*** (0.035)	-0.078*** (0.021)	-0.116*** (0.021)	-0.068*** (0.023)	-0.116*** (0.021)
Leverage	-1.864*** (0.069)	-1.608*** (0.210)	-2.060*** (0.182)	-1.640*** (0.141)	-1.504*** (0.157)	-1.753*** (0.165)	-1.504*** (0.157)
Current Ratio	-0.019* (0.010)	-0.003 (0.018)	-0.035 (0.027)	0.007 (0.019)	-0.022 (0.021)	0.004 (0.020)	-0.023 (0.021)
Negative Net Income	0.478*** (0.053)	0.424*** (0.133)	0.529*** (0.098)	0.320*** (0.102)	0.530*** (0.106)	0.190* (0.114)	0.530*** (0.106)
Diversification	-0.083*** (0.010)	-0.059** (0.026)	-0.100*** (0.023)	-0.030 (0.024)	-0.098*** (0.021)	-0.021 (0.030)	-0.098*** (0.021)
Number of M&A	0.073*** (0.015)	0.027 (0.035)	0.116*** (0.036)	0.034 (0.036)	0.025 (0.025)	-0.002 (0.045)	0.025 (0.025)
Industry Sales Growth	-0.085*** (0.021)	-0.060 (0.040)	-0.104** (0.046)	-0.015 (0.052)	-0.092** (0.039)	0.012 (0.057)	-0.092** (0.039)
Constant	-0.289*** (0.086)	-0.566*** (0.199)	-0.040 (0.309)	-0.724*** (0.157)	-0.270 (0.173)	-0.454** (0.179)	-0.270 (0.173)
Sample of Firms	All	Family	Non-Family	Family-CEO	Non-Family CEO	Founder-CEO	Descendant-CEO
R ²	0.171	0.133	0.205	0.124	0.159	0.161	0.159
Number of Observations	14,760	6,649	8,111	3,458	3,191	2,341	1,117

*** p<0.01, ** p<0.05, *p<0.10

Robust standard errors in parentheses.

Table VII. Univariate Event Study Results

Panel A. All Firms	All Firms	t-statistic	
CAR	0.007	3.79***	
Number of Observations	7,243		
Panel B. Family vs. Non-Family Firms	Family Firms	Non-Family Firms	t-statistic
CAR	0.010	0.006	2.86***
Number of Observations	2,703	4,540	
Panel C. Family-CEOs vs. Non-Family CEOs in Family Firms	Family-CEO Firms	Non-Family CEO Firms	t-statistic
CAR	0.012	0.009	0.87
Number of Observations	1,277	1,426	
Panel D. Founder-CEOs vs. Descendant-CEOs in Family Firms	Founder-CEO Firms	Descendant-CEO Firms	t-statistic
CAR	0.015	0.006	2.12**
Number of Observations	831	446	

*** p<0.01, ** p<0.05, *p<0.10

Table VIII. Multivariate Event Study Results

DV: CAR	(1)	(2)	(3)
Family Firm	0.004*** (0.002)		
Family-CEO		-0.001 (0.003)	
Founder-CEO			-0.000 (0.006)
CEO Turnover	-0.002 (0.002)	0.000 (0.004)	-0.015* (0.008)
Firm Age	-0.000 (0.000)	-0.000 (0.000)	-0.000** (0.000)
ln(Total Sales)	-0.003*** (0.001)	-0.005*** (0.001)	-0.006*** (0.001)
Leverage	0.017*** (0.004)	0.023*** (0.007)	0.004 (0.010)
Current Ratio	0.002* (0.001)	0.002* (0.001)	-0.001 (0.001)
Negative Net Income	0.007*** (0.003)	0.014*** (0.005)	0.011* (0.007)
Diversification	-0.000 (0.000)	0.000 (0.001)	0.001 (0.001)
Number of M&A	-0.000 (0.000)	-0.001 (0.001)	-0.001 (0.001)
Industry Sales Growth	0.000 (0.000)	0.000 (0.000)	0.000 (0.001)
Constant	-0.001 (0.003)	0.003 (0.005)	0.016** (0.008)
Sample of Firms	All	Family Only	Family-CEO Only
R ²	0.016	0.022	0.041
Number of Observations	5,340	2,078	909

*** p<0.01, ** p<0.05, *p<0.10

Robust standard errors in parentheses.

Figure I. Cumulative Abnormal Returns by Firm Generation

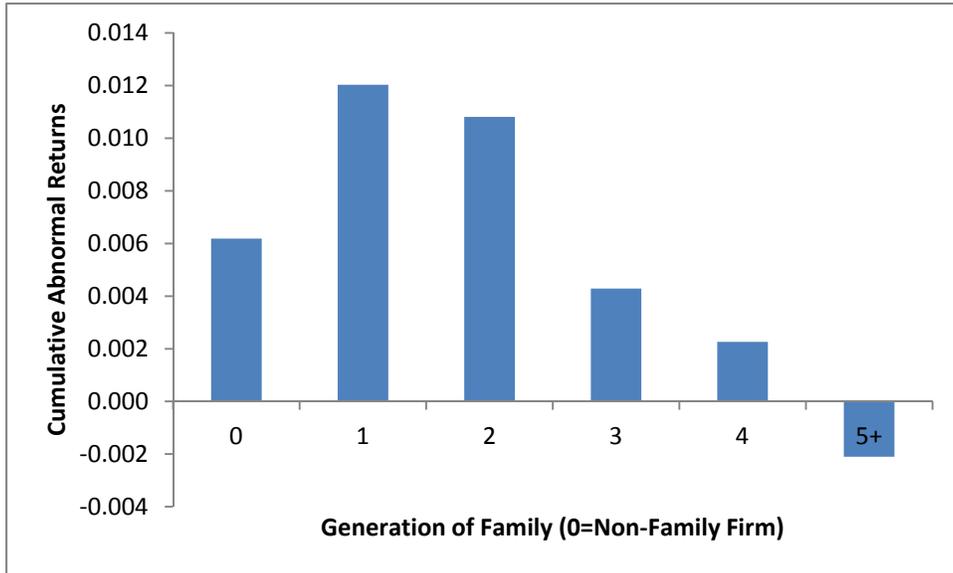


Figure II. Cumulative Abnormal Returns by CEO Generation

