

Corporate Divestitures and Family Control*

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Abstract

This paper investigates the propensity of family firms to undertake divestitures and the performance consequences of these transactions, drawing on behavioral and agency theory. Using hand-collected data on a sample of over 30,000 firm-year observations, we find that family firms are less likely than their non-family counterparts to undertake divestitures, especially when these companies are managed by family- rather than non-family CEOs. We also show that family firms are less likely than non-family firms to divest unrelated businesses, though there is no difference in the relative propensities of these two types of companies to undertake related divestitures. However, the divestitures undertaken by family firms, particularly those run by family-CEOs, are associated with significantly higher post-divestiture performance than those undertaken by non-family firms. Taken together, these findings contribute to research on corporate strategy and family firms by showing that owners' and managers' identities help explain why divestitures are underutilized despite the value they create.

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

Introduction

Divestitures are the ugly ducklings of corporate strategy. Managers are exhorted by shareholders to pursue growth, especially by undertaking mergers and acquisitions. By contrast, divestitures are frequently depicted as mechanisms to reduce over-diversification (Markides 1992, Hoskisson and Johnson 1992, Hoskisson et al. 1994) and to undo failed acquisitions or remove weak business units from a company's portfolio (Porter 1987, Kaplan and Weisbach 1992, Bergh 1997, Dranikoff et al. 2002). Consistent with these portrayals, the value of U.S. mergers and acquisitions outpaced the value of divestitures nearly twenty to one in 2011.¹

This being said, divestitures often create a great deal of value for shareholders of divesting firms (Lee and Madhavan 2010, Brauer and Wiersema 2012). This value creation is partially attributable to the removal of poorly-performing business units (Shimizu and Hitt 2005, Hayward and Shimizu 2006, Berry 2010). But, divestitures have also been shown to have a positive impact on firm performance by facilitating a more efficient redeployment of resources (Chang 1996, Capron et al. 2001, Helfat and Eisenhardt 2004, Levinthal and Wu 2010), and by contributing to a reduction in the information asymmetry that diversified firms experience in the capital market (Zuckerman 1999, 2000, Bergh et al. 2008, Litov et al. 2012).

Given these performance results, the unpopularity of divestitures raises an interesting puzzle. Divestitures undo prior corporate strategies, and can therefore be seen as an admission of failure. However, given the short tenures of CEOs these days, these failed corporate strategies were likely somebody else's doing, making the manager who undertakes a divestiture look like a hero for correcting his predecessor's mistake and allowing that individual to make his own mark on the firm. In light of these benefits, why, then, do managers not undertake more divestitures?

¹ Source: "mergermarket M&A Round-Up for Year End 2011"
<http://www.mergermarket.com/pdf/Press-Release-for-Financial-Advisers-Year-End-2011.pdf>

In this paper, we show that the solution to this puzzle lies in the identity of corporate owners and managers. A fast-growing literature on corporate ownership has shown that, contrary to the Berle and Means (1932) model of the modern corporation as one with a diffuse set of owners that is run by managers who act in their own best interests, most corporations around the world are under the control, or at least the significant influence, of large shareholders, typically their founding families, who also often occupy the top management position (La Porta et al. 1999, Claessens et al. 2000, Faccio and Lang 2002). Even in the United States, where ownership dispersion is arguably at its greatest, more than half of all publicly traded companies are “family firms”—those in which one or more members of the founding family are officers, directors, or blockholders (Villalonga and Amit 2010).

In these companies, the above-described puzzle should be particularly pronounced, as the two forces that give rise to it—the reluctance of decision-makers to undertake divestitures and the positive impact of these transactions on firm value when they are undertaken—are likely to be stronger. In addition to the normal inertia against divestitures, families often have strong socioemotional attachments to the businesses that they or their next of kin founded, making them less likely to divest parts of their companies, even when those units are underperforming (Sharma and Manikutty 2005, Zellweger and Brauer, 2013). In fact, because families manage for the long-run and are often shielded from the short-run pressures of the stock market through control-enhancing mechanisms like dual-class stock, they may be willing and able to tolerate underperformance in parts of their business for a longer period of time. Additionally, the family is often a large shareholder or vote holder in these firms, and family members may exert substantial influence on board decisions. As such, the family may 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 social status in the community. A key implication of these points is that when families *do* undertake divestitures, the value these transactions create should be especially significant, since the threshold for a divestiture to be undertaken in the first place is higher in these companies.

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 test the predictions articulated in the foregoing discussion. Consistent with our arguments, we establish that family firms are indeed less likely to undertake corporate divestitures than non-family firms, especially when their CEO is a member of the family. We also find that family firms are less likely than non-family firms to divest unrelated business units, but that there is no difference in the relative propensities of these two types of companies to divest related businesses. Finally, we establish that firm value is higher when divestitures are undertaken by family rather than non-family firms, particularly when these companies are run by family-CEOs.

The research in this study bridges the literatures on corporate strategy and family business management, generating important contributions to each. For corporate strategy research, this paper yields the insight that the identity of the firm's controlling owners and managers—in particular, their affiliation with the founding family—significantly affects both their propensity to change the scope of the firm and the value created for all shareholders in doing so, helping to explain why we do not see greater divestiture activity despite its benefits for both managers and shareholders. For research on family firms, our work underscores the predominance in family firms of agency conflicts between family and non-family shareholders.

Theory and Hypotheses

Theoretical Background

The behavioral theory of the firm defines individuals as being boundedly rational (Simon 1947). Boundedly rational actors do not have full information about all possible alternatives available to them and have limited short-term memories, leading them to follow standardized rules and heuristics when making decisions (March and Simon 1958). Thus, organizational decision-making is guided by repertoires of routinized behavior (Cyert and March 1963, Nelson and Winter 1982), which rarely change in the absence of some external stimulus (Simon 1947). This theoretical perspective implies that in steady state, managers will not undertake major scope-altering transactions, such as mergers or divestitures, unless they are prompted to do so by some stimulus (March and Simon 1958, Greve 2003).

Alongside this perspective, agency theory treats managers as self-interested agents, seeking to maximize value for themselves at the expense of that of their principals, the shareholders of the companies they oversee (Jensen and Meckling 1976). One way in which this conflict of interests manifests itself is in managers growing and diversifying their companies beyond optimal levels to satisfy their personal preference to “build empires” (Amihud and Lev 1981, Jensen 1986). The implications of this perspective for corporate strategy are twofold. On the one hand, managers will be eager to undertake mergers and acquisitions to expand the scope of the firms they oversee. On the other hand, they will be reluctant to divest businesses, as this reduces the size of their empires.

The union of these theories yields the insight that while managers may experience pressures either in favor of or against mergers and acquisitions, they will unambiguously prefer not to undertake divestitures unless there is some powerful reason to do so. Consistent with this

prediction, for example, research has established that firms undertake divestitures only following management turnover events (Wiersema and Bantel 1992, Hambrick et al. 1993, Weisbach 1995, Bigley and Wiersema 2002) or periods of underperformance in the divested unit or the divesting firm (Hoskisson et al. 1994, Shimizu and Hitt 2005, Hayward and Shimizu 2006, Shimizu 2007).

Propensity to Divest

Family firms are a type of company in which both of the explanations for the pressure that managers experience against divestitures—the stickiness of their routines and their empire-building tendencies—are likely to be pronounced. There are several reasons for this prediction.

From a behavioral perspective, the routines guiding decision-making in family firms are likely to be particularly sticky. Families are deeply embedded in the firms they create, often in tacit and intangible ways. For example, the corporate names of family firms often include or are derived from the surname of the family itself (e.g., Ford, Johnson, Kohler, etc.), reflecting strong identity-based connections. Similarly, the management of a family firm may be passed down from generation to generation, such that the family's ways of doing business are preserved. As a result of these and other socioemotional connections in family businesses, inertia against divesting a business unit that may have taken a current family member (or one of his ancestors) many years to build may be quite high.

From an agency perspective, moreover, families are the consummate empire-builders, in the sense that founders create and build their firms from the ground up. The pressure against shrinking the scope of the firm may therefore be especially high in these firms even though the classic agency problem between owners and managers (Jensen and Meckling 1976) may be mitigated by the presence of large, committed shareholders—or eliminated altogether if the CEO

is a member of the founding family himself. As noted by Burkart, Panunzi and Shleifer (2003) and Villalonga and Amit (2006), the dominant agency problem in family firms is typically a different one: the discrepancy between the interests of family and non-family shareholders. This second type of agency problem is in fact exacerbated, rather than mitigated, when the large shareholder occupies the top management position in the firm, yielding the maximum form of entrenchment for these companies' CEOs. This form of entrenchment may thus enable managers of family firms to act in ways that are value-maximizing for the family but not for all shareholders—for example, by failing to undertake value-creating divestitures.

In sum, therefore, these explanations imply that while companies in general are unlikely to undertake divestitures, the inertia against these transactions should be more pronounced in family firms than in non-family firms:

H1: Family firms are less likely than non-family firms to divest businesses.

This prediction about the comparative propensity of family versus non-family firms to divest business units is rooted in the differences between both groups of firms in the identity of their shareholders. The identity of their top manager is likely to have implications for these companies' relative propensities to undertake divestitures as well. After all, shareholders themselves only have a direct say on corporate 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. In all other instances, the ultimate decision rights on divestitures correspond to the board or, *de facto*, to the CEO himself, who is often given enough leeway by the board to undertake divestitures and only inform the board about his decision *ex post*.

Thus, in family firms whose CEO is not a member of the family, the family's resistance to divestitures may be moderated by the balance of power between shareholders or board

members and the CEO. By contrast, if the CEO is a member of the founding family, that individual will have both the power and the motivation to avoid divestitures.

This behavior is to be expected from both founders and descendants alike. A founder who continues to run his company even after he takes it public deserves most, if not all, of the credit for the company's success. Because of this success and all the hard work that it took to achieve it, the founder may be the last person to realize that the time has come for him or her to divest part of the business that he created. For a founder, the business is typically his "baby"—often the one who received the lion's share of parental time and attention—and the source of the family's socioeconomic status. Thus, his socioemotional ties to the business are as binding as they can be (Gómez-Mejía et al. 2011). Moreover, because of founders' self-earned power and dominance within their family and their business, decision power in founder-managed firms is usually very highly concentrated in the CEO (Gersick et al. 1997). As a result, founder-managed firms are particularly unlikely to engage in divestitures.

From a behavioral perspective, the socioemotional attachment of descendant-CEOs to their firms may be just as strong, if not more so, than that of founder-CEOs. These descendant-CEOs often view themselves as stewards of their family's heritage, as embodied in the family firm. This feeling may impose a profound sense of responsibility on these individuals not to remove parts of the firms that their ancestors worked so hard to build, creating an additional source of inertia against divestitures in these firms. This inertia may be further reinforced by the presence of a family governance system—increasingly common among business families—that formalizes descendant-CEO's accountability to their families.

The likelihood that founder-CEOs will undertake corporate divestitures relative to that of descendant-CEOs is thus an empirical question, which we will examine in our analyses. In any

case, the theoretical arguments above suggest that family firms whose CEOs are family members will be less likely to undertake divestitures than family firms with non-family CEOs.

H2: Family firms run by family-CEOs are less likely to divest businesses than family firms run by non-family CEOs.

Characteristics of Divested Businesses

The above discussion provided two distinct explanations as to why family firms, especially those run by family-CEOs, would be less likely than non-family firms to divest businesses: a behavioral explanation and an agency-based rationale. While the implications of these two theoretical perspectives are entirely consistent with one another, it is possible to determine which one exerts a stronger influence on the divestiture decision-making process in family firms by considering the characteristics of the divested units—in particular, the industrial relatedness of any divested units to the company’s primary operations. To do this, it is first necessary to understand an important tension faced by family firms in choosing what type of diversification to undertake.

On the one hand, the significant concentration of a family’s financial interests in its company might lead it to prefer to diversify into businesses that are unrelated to the primary operations of its firm, as a means of reducing the family’s total risk exposure (Anderson and Reeb 2003). On the other hand, however, a family also has a strong interest in maintaining full oversight of and control over all of its operations, and there is significant evidence that families are loss-averse when it comes to their socio-emotional wealth (Gómez-Mejía et al. 2007). These tendencies may instead lead family firms to prefer to diversify into related rather than unrelated domains, or not to diversify at all (Gómez-Mejía et al. 2010).

By implication, to the extent that family shareholders are able to prioritize their own interests – a preference for risk reduction attained through unrelated diversification – over the interests of other shareholders (Burkart, Panunzi and Shleifer 2003, Villalonga and Amit 2006), family firms will be less likely than non-family firms to divest *unrelated* businesses (Chung and Luo 2008). However, to the extent that families seek to preserve their socio-emotional wealth (Gómez-Mejía et al. 2007, Gómez-Mejía et al. 2010) through related diversification, this implies that family firms will be less likely than non-family firms to divest *related* businesses. The foregoing discussion yields the following pair of hypotheses:

H3a: Family firms are less likely than non-family firms to divest unrelated units.

H3b: Family firms are less likely than non-family firms to divest related units.

If Hypothesis 3a is supported but Hypothesis 3b is not, this would provide evidence for the agency-based explanation that family firms exert their preference for unrelated diversification by undertaking fewer divestitures. By contrast, if Hypothesis 3b is supported but Hypothesis 3a is not, this would provide evidence in support of behavioral mechanisms driving family firms' reluctance to divest.

Performance Implications

The reluctance of family firms, particularly those run by family-CEOs, to undertake divestitures has implications for the value of the divesting firms following these transactions.

In general, divestitures have been shown to have favorable consequences for divesting firms. Divestitures allow managers to focus on core businesses (Markides 1992, 1995, Comment and Jarrell 1995, John and Ofek 1995, Daley et al. 1997, Desai and Jain 1999), remove slow-growing or underperforming business units (Porter 1987, Kaplan and Weisbach 1992, Shimizu

and Hitt 2005, Hayward and Shimizu 2006, Shimizu 2007, Berry 2010), and facilitate the reconfiguration of resources (Chang 1996, Capron et al. 2001, Helfat and Eisenhardt 2004, Berry 2010, Levinthal and Wu 2010). They also reduce information asymmetry in these firms (Zuckerman 1999, 2000, Bergh et al. 2008, Litov et al. 2012).

However, because families incur private, socioemotional costs when they undertake divestitures, family firms in particular should only be willing to undertake divestitures whose foreseeable benefits are high enough to offset not only the normal costs associated with these transactions, but also these family-specific costs. Moreover, because agency problems between owners and managers are generally lower in family firms, managerial decisions in these firms are more likely to be made in the best interest of shareholders as a group (Villalonga and Amit 2006). Thus, to the extent that divestitures are positively associated with firm value on average, this effect should be even more pronounced when family firms divest businesses.

H4: 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.

By the same logic, divestitures undertaken by companies run by family-CEOs will be more likely to create value than those in family firms run by non-family CEOs. Because the companies they manage are more closely connected to their personal heritage, family-CEOs (whether they are founder-CEOs or descendant-CEOs) will incur greater private costs by undertaking divestitures than do non-family-CEOs. Moreover, because family-CEOs are also, in most cases, large shareholders in their companies, they also have a relatively stronger personal motivation to maximize value for their firms than do non-family CEOs. Thus, when family-CEOs undertake divestitures, the implication is that these transactions will be more valuable for the divesting family firms than when non-family-CEOs divest businesses.

H5: 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 year 2000. Due to the intensive nature of gathering information on family control, data on the identity 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 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). Because of these thresholds and the fact that each firm typically operates in more than one industry, the average percentage of all segments in an industry represented by the sample was much higher: 39% (15.5 firms) for three-digit level industries and 40% (60 firms) 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. The resulting panel dataset, consisting of 30,143 firm-year pairs from 1994 to 2010 for 2,110 companies, the most comprehensive and 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 financial information from Compustat as well as with detailed data on the divestitures they undertook between 1994 and 2010. Specifically, the divestiture data in this paper consist of information on every divestiture undertaken by each firm in the sample, the mode by which the divestiture took place (sell-off or spinoff)², and the dollar value of each transaction. Divestiture data were collected from SDC Platinum, M&A Magazine, the CCH Capital Changes Reporter, and the FTC Statistical Report on Mergers.

Among the control variables, CEO turnover data were gathered from ExecuComp and Equilar, and for missing observations, hand-collected from firms' proxy statements.³ Similarly, firm age data were gathered from CRSP and Professor Jay Ritter's online database of IPO ages,⁴ and for missing observations, hand-collected from firms' SEC filings, Hoover's, the International Directory of Company Histories,⁵ and other online research. Finally, all financial data were gathered from Compustat and CRSP.

Family Control

This paper uses three main 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,

² Sell-offs are defined as the sale of a subsidiary, segment, or product line to another organization. Spinoffs are defined as the *pro-rata* distribution of shares in an existing subsidiary or business segment to the existing shareholders of the divesting firm. Spinoffs are distinct from entrepreneurial spinoffs (also known as spin-outs or spawns), in which a group of employees founds a new venture in the same industry as their former parent company.

³ Accessed online through www.sec.gov/edgar

⁴ <http://bear.warrington.ufl.edu/ritter/ipodata.htm>

⁵ Accessed online through www.fundinguniverse.com

or blockholder, either individually or as a group (Anderson and Reeb 2003, Villalonga and Amit 2006, 2009, 2010).⁶ “Family-CEO firms” are those companies whose CEO is the founder or a member of the founding family (Villalonga and Amit 2006, 2009). 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 company (see Villalonga and Amit (2006) for the precise meaning of founders and the process by which they are identified). “Descendant-CEO firms” are those in which the CEO is a descendant of the founder.

Table I shows the extent of family management in the sample, measured across different family generations, for all of the years in our panel. Consistent with the prevalence of family firms documented in other research (Anderson and Reeb 2003, Villalonga and Amit 2006, 2009, Anderson et al. 2009), out of the 30,143 firm-year observations, 15,021 of them (50% of the sample) are owned and/or controlled by their founding families. Of these, 8,953 or 60% of the 15,021 family firm-year pairs are family-CEO observations: 6,957 have a founder-CEO, while 1,996 have a descendant-CEO. With respect to these firms’ generation, 9,813 firm-year observations or 65% out of 15,021 are still in their first generation (the founder’s), including 5,934 where the founder is the CEO and 3,872 where he exercises a non-executive role (including that of chairman of the board). 3,424 firm-year observations or 23% of all founder- and founding family-owned firm-years are in their second generation, including 1,021 firm-years which have a founder-CEO—which implies that there are second-generation family members involved in the company as board members and/or blockholders, and possibly as employees as

⁶ The distribution of ownership within family firms did not affect the results in Villalonga and Amit (2006, 2009), so we do not consider its role in this paper.

well but not at the CEO level. The second-generation firm-year observations also include 1,129 firm-years with a descendant CEO and 1,274 family firm-year pairs that are not family-managed. As can be expected, there is considerable attrition in the number of family firm-year observations in subsequent generations. Only 1,028 firm-year observations (7% of all family firm-year pairs) are in their third generation, 590 (4%) in their fourth generation, and 166 (1%) in their fifth generation. Altogether, there are 5,208 second- or later-generation family firm-year observations, of which 3,012 are family-CEO firm-year observations.

-----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 companies were family or non-family firms in the year of the divestiture. Overall, the firms in the sample undertake an average of 3.68 divestitures over the seventeen-year panel.

Providing some preliminary evidence in support of Hypothesis 1, family firms undertake 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.

Sell-offs are the preferred divestiture mode for both family and non-family firms: The firms in our sample undertook an average of 3.57 sell-offs and 0.11 spinoffs during the 1994-2010 period, or 32 sell-offs for each spinoff undertaken. The dominance of selloffs is remarkable given the potential tax advantages of spinoffs for shareholders, who are effectively not taxed for the divestiture unless or until they sell their shares in the spun-off unit. For this reason, spinoffs

should be particularly advantageous—and our finding particularly surprising—for family firms, due to the flexibility they provide to family members as to when to convert the shares of the spun-off business into cash—thus serving to accommodate diverging preferences within a family with respect to liquidity and control. Perhaps due to this family firm specific advantage, the selloff-to-spinoff ratio is considerably higher in non-family (37:1) than in family firms (30:1).

On the other hand, it is worth noting that the average dollar value of spinoffs (\$3.4m) exceeds the average value of sell-offs (\$1.2m) by a factor of 2.7 times, suggesting that spinoffs may be the preferred mode for large divestitures. There is again a considerable difference in this ratio between family firms (for which the average spinoff value exceeds the average selloff value by a factor of 3.7 times) and non-family firms (for which this factor is only 2.4). This difference is consistent with the notion that family firm shareholders may be particularly sensitive to the cash-flow and tax flexibility spinoffs allow them, particularly above a certain financial threshold.

Panel B of Table II further disaggregates the divestiture activity undertaken by the family firms in the sample according to whether these companies were managed by family-CEOs, non-family CEOs, founder-CEOs, or descendant-CEOs. On average, family firms that are managed by non-family CEOs undertake divestitures much more frequently (4.26 divestitures worth an average of \$1.9m over the 1994-2010 sample period) than family firms that are managed by family-CEOs (2.33 divestitures worth an average of \$1m). The difference is particularly 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 undertaken are statistically significant, the differences in the values of these transactions are not. Nevertheless, these results provide some

preliminary evidence in support of Hypothesis 2, that family-managed firms divest businesses less frequently than family firms run by non-family managers.

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

Variables

Table III describes the main variables used in this study.

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The key variable we use to test a firm's propensity to undertake divestitures is Divestiture, defined as an indicator variable that takes the value one if a firm undertakes at least one divestiture (sell-off or spinoff) in a given year, and zero if not. Related Divestiture is defined as an indicator variable that takes the value one if a firm divests at least one business unit that operates in its primary three-digit SIC code, and zero if the firm undertakes no divestitures in a given year. Unrelated Divestiture is defined as an indicator variable that takes the value one if a firm divests at least one business unit that does not operate in its primary three-digit SIC code, and zero if the firm undertakes no divestitures in a given year.⁷

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 defined as an indicator variable taking the value one in years in which a company's CEO differs from its CEO in the previous year.

⁷ Related Divestiture takes the value one in years in which a firm undertakes at least one related divestiture and no unrelated divestitures, as well as in years in which a firm undertakes at least one related divestiture and any number of unrelated divestitures. This variable only takes the value zero in years in which a firm undertakes no related or unrelated divestitures. The same logic holds for Unrelated Divestiture. The results that follow are robust to more restrictive definitions of these variables, such as dropping all firm-year pairs in which firms undertake both related and unrelated divestitures, for example.

Consistent with the idea that a company will only implement a major shift in strategy, such as a divestiture, following a significant stimulus like a change in top management (Wiersema and Bantel 1992, Hambrick et al. 1993, Bigley and Wiersema 2002), we expect that CEO Turnover will be positively associated with a firm's propensity to undertake divestitures.

Firm Age is defined as the number of years elapsed since a firm's founding date. To the extent that older firms experience a greater need to implement strategic shifts in response to market or industry changes, this variable should be positively associated with divestiture propensity. Similarly, $\ln(\text{Total Sales})$, the natural log of a firm's total sales, measures its size, under the argument that larger firms have more businesses to divest, and hence will be more likely to undertake these transactions than their smaller counterparts.

Leverage measures a firm's indebtedness, to the extent that this financial condition affects either its propensity to divest business units and/or the mode of divestiture it chooses to utilize. For example, firms that are heavily levered may exhibit a greater propensity to sell rather than to spin off businesses, since sell-offs generate cash that could be redeployed within the firm (Chatterjee and Wernerfelt 1991). Current Ratio, defined as a firm's current assets over its current liabilities, measures the cash constraints a firm faces, as this could equally affect both the divestiture decision and mode. Along similar lines, Negative Net Income, an indicator variable taking the value one if a firm has negative net income, represents the most financially-constrained firms, those that may be the most likely to divest businesses to generate cash.

Diversification is defined as a count of the number of business segments in which a firm operates in a given year. This variable accounts for the possibility that multi-business firms are more likely to undertake divestitures, since companies frequently employ these transactions to

reduce excess diversification (Markides 1992, 1995, Comment and Jarrell 1995, John and Ofek 1995, Daley et al. 1997, Desai and Jain 1999).

Finally, Industry Sales Growth is defined as the average sales growth rate of all single-segment firms operating in the same main four-digit SIC code in which each company in the sample operates. This variable accounts for the strength of the opportunities available in a firm's primary industry, to the extent that firms are more likely to divest business units when they have better opportunities in the core areas of their portfolios (Anand and Singh 1997, Capron et al. 2001, Helfat and Eisenhardt 2004, Levinthal and Wu 2010, Berry 2010).

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 and are disaggregated according to whether a company is a family or non-family firm in that year.⁸ In line with the existing literature (e.g. Villalonga and Amit 2006), 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. 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. Moreover, although these statistics are not presented formally in Table IV, there are also no significant differences in the mean Tobin's q of family and non-family firms in any of the five years prior to the divestitures these companies undertake. As will be discussed in the next section of the paper, this suggests that *ex ante* differences in the valuation of family and non-family firms are not driving the performance results we will later present.

-----Table IV here-----

⁸ t-statistics are clustered by firm to account for the effects of the same firm undertaking multiple divestitures.

Results

The Propensity of Family Firms to Divest

Hypotheses 1 and 2 predicted that family firms would be less likely than non-family firms to undertake divestitures, especially when they are run by family-CEOs rather than non-family CEOs. Additionally, Hypotheses 3a and 3b proposed a pair of hypotheses as to whether family firms would be less likely than non-family firms to divest related or unrelated business units. Table V presents the results of regressions testing these hypotheses. The dependent variables are Divestiture, Related Divestiture, and Unrelated Divestiture. All models are specified as logistic regressions and include the control variables described above. Robust standard errors are clustered by firm to account for intra-group correlation.

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

In Regression (1) in Table V, the coefficient on Family Firm is negative and significant at 5%, and the marginal effects of this coefficient indicates that family firms are 1.7% less likely than non-family firms to divest businesses in any given year.⁹ This result provides support for Hypothesis 1, that family firms are less likely than non-family firms to undertake divestitures.

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. Consistent with Hypothesis 2, the coefficient on Family-CEO is negative and significant, suggesting that family firms run by family-CEOs are less likely to undertake divestitures than family firms run by non-family-CEOs.

⁹ Coefficients in logistic regressions measure the incremental change in the log of the odds ratio for a unit change in the key independent variable of interest (here, Family Firm). Thus, it is useful to translate the key coefficients in logistic regressions into odds ratios calculated at the mean values of the other independent variables, called marginal effects. Using this process, the coefficient in Regression (1) on Family Firm (-0.141) translates into a marginal effect of -0.017, which can be interpreted as family firms being about 1.7% less likely to undertake divestitures than non-family firms.

Further disaggregating this effect, Regression (3) separately tests the propensities of family firms run by founder-CEOs and descendant-CEOs, respectively, to undertake divestitures, also as compared to the propensity of family firms run by non-family-CEOs. Here, the coefficients on Founder-CEO and Descendant-CEO are both negative, though only the coefficient on Descendant-CEO is significant. A Wald test indicates 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.

Regressions (4) and (5) consider the relative propensities of family and non-family firms to undertake related and unrelated divestitures, respectively. In Regression (4), the coefficient on Family Firm is negative, though not statistically significant, indicating that family firms are no more or less likely than non-family firms to divest related business units. By contrast, in Regression (5), the coefficient on Family Firm is negative and statistically significant at 5%, revealing that family firms are significantly less likely than non-family firms to divest unrelated business units. The fact that we find support for Hypothesis 3a, but not for Hypothesis 3b, suggests that family firms' reluctance to divest businesses may be more strongly driven by their agency-based preference to maintain their level of unrelated diversification than by behaviorally-based inertia and socio-emotional wealth preservation in family firms.

Among the control variables, as expected, CEO turnover events and firm age are both positively associated with firms' divestiture propensities. Moreover, larger companies and firms that are more highly levered, cash constrained, unprofitable, and diversified are more likely to undertake divestitures, as are companies that have higher growth in their primary industries.

The Performance Implications of Family Firm Divestitures

Methodologies

Hypotheses 4 and 5 predicted that the divestitures undertaken by family firms would be more positively associated with firm value than those undertaken by non-family firms, especially in family firms managed by family-CEOs rather than non-family CEOs. The argument underlying both of these hypotheses was that because family firms (and family-CEOs) incur private costs when they undertake divestitures, they should only be willing to do so when the foreseeable benefits of these divestitures are high enough to offset both the normal and the family-specific costs associated with these transactions.

This being said, there are two ways in which the effects of endogeneity could potentially bias our results. First, the pre-divestiture performance of family firms could differ in systematic ways from that of non-family firms, which itself could explain any post-divestiture performance differences between the two types of companies. Second, 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 and those that do not could also influence the performance consequences of these transactions.

To deal with the first problem of potential *ex ante* performance differences between family and non-family firms, we have already documented that there are no significant differences in the mean Tobin's q of these two groups of companies in any of the five years leading up to the divestitures they undertake. As a further means of reinforcing this point, we also present the results of an event study testing the stock market's response to announcements of divestitures undertaken by 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 the characteristics of these companies.

To correct for the second selection problem arising from the fact that the decision to undertake a divestiture is non-random, we model the impact of firms' divestiture activity on Tobin's *q* as a treatment-effects model, which we then estimate using three different statistical methods: propensity-score matching, Heckman's two-stage approach, and switching regressions (Li and Prabhala 2007). In treatment-effects 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 estimated propensities are then used in a second-stage model to measure the performance consequences of the divestiture, *accounting for the fact that the decision to undertake that transaction was not random*. As will be described, the process for estimating the second-stage model differs across these three methods.

Event Study Results

To compare investors' reactions to divestitures undertaken by family and non-family firms, we first ran an event study to measure the cumulative abnormal returns to announcements of the divestitures undertaken by each of these two groups of companies.

We 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.¹⁰ Table VI presents our event study results.

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

Panel A of Table VI 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. Panel B disaggregates this CAR into two sub-groups, family and non-family firms. The CAR to divestitures undertaken by family firms are +1.0%, significantly greater than the CAR to divestitures undertaken by non-family firms of +0.6%.

Panels C and D consider the stock market's response to divestitures undertaken by family firms in particular. While Panel C reveals that there is no statistical difference in the CAR to divestiture announcements undertaken by family- and non-family-CEOs within family firms, the CAR to divestitures undertaken by family firms run by family-CEOs is larger than that of divestitures undertaken by family firms run by non-family-CEOs. Additionally, Panel D indicates that divestitures undertaken by founder-CEOs in family firms are greeted more favorably by investors than those undertaken by descendant-CEOs in family firms.

Taken together, these results provide strong evidence in support of Hypothesis 4's prediction that family firm divestitures would be more positively associated with firm value than non-family firm divestitures. Our findings are also consistent with Hypothesis 5's prediction that divestitures undertaken by family-CEOs would outperform divestitures undertaken by non-family-CEOs. Importantly, these results are not tainted by endogeneity: by definition, cumulative abnormal returns measure investors' reactions to divestiture announcements, regardless of any *ex ante* differences in the performance of family and non-family firms.

¹⁰ The results that follow are invariant to the use of alternate estimation and event windows. Results are available upon request from the authors.

Propensity Score Matching Results

In addition to these event study results, we also estimate the relationship between firm value and divestitures undertaken by family and non-family firms using propensity score matching and treatment effects models. These latter two techniques account for the effects of non-random selection in the divestiture decision.

In propensity-score matching models, each firm from the treated group is matched to one or several firms from the control group on the basis of their propensity scores, and the difference in an outcome variable (here, Tobin's q) between the treated firm and the control firm(s) is computed for each pair of treated-control firms. Then, the average treatment effect on the treated (ATT) (here, the selectivity-corrected estimate of the effect of divesting a business on firm value) is computed as the average of those differences across all pairs of treated-control firms.

Table VII presents the results of propensity score matching models testing Hypotheses 4 and 5. The first-stage regression estimating a firm's propensity to undertake a divestiture is the same as Regression (1) in Table V, so we do not re-display it in the interest of saving space. Thus, Table VII presents the difference in Tobin's q between the "treated" firms that undertake divestitures and the "control" firms that do not undertake divestitures (where the treatment is estimated by the first-stage propensity regression), as well as its statistical significance.

-----Table VII here-----

In Panel A in Table VII, the difference in the ATTs of the treated and control groups is positive and statistically significant. Importantly, the positive sign on the ATT is consistent with results in the existing literature that show that divestitures are positively associated with firm performance (Comment and Jarrell 1995, John and Ofek 1995, Daley et al. 1997, Desai and Jain 1999, Lee and Madhavan 2010, Brauer and Wiersema 2012). However, this result does not

address the key issue of interest raised in Hypothesis 4: whether family firm divestitures are more positively associated with firm value than non-family firm divestitures.

To shed light on this issue, we re-estimate the above propensity score matching model separately for family and non-family firms and compare the ATTs generated in these two models. Results appear in Panel B of Table VII. Among family firms, the ATT is positive and significant: family firms that undertake divestitures have higher Tobin's q than those that do not. By contrast, among non-family firms, the ATT is negative but not statistically significant, meaning that there is no difference in the average performance of non-family firms that undertake divestitures and non-family firms that do not undertake divestitures. Taken together, these results provide support for Hypothesis 4 by showing that the divestitures undertaken by family firms are more positively associated with firm value than those undertaken by non-family firms, controlling for the effects of non-random selection in firms' decisions to divest businesses.

Turning now to Hypothesis 5, which predicts that divestitures undertaken by family firms managed by family-CEOs will be more positively associated with firm value than divestitures undertaken by family firms managed by non-family CEOs, Panel C in Table VII presents results that provide support for this prediction. Among family firms managed by family-CEOs, the ATT is positive and significant, whereas among family firms managed by non-family CEOs, the ATT is positive but not statistically significant. This result is consistent with our arguments that because family-CEOs may feel especially close personal connections to their companies' heritage and because they may have a relatively stronger personal motivation to maximize value for their firms, the divestitures that these CEOs undertake will be more valuable for the divesting firms than those undertaken by non-family-CEOs.

Digging further into these results, Panel D in Table VII compares the ATTs of family firms managed by founder-CEOs versus descendant-CEOs. The ATT of family firms that are run by founder-CEOs is positive but not statistically significant, whereas the ATT of family firms that are run by descendant-CEOs is positive and significant, suggesting that (in contrast to the event study results described previously) it is the latter group of CEOs who are driving the results we find in support of Hypothesis 5.

Heckman's Two-Step Approach and Switching Regressions

An alternative approach to estimating our treatment-effects models of the relationship between divestiture activity and firm value is to use Heckman's two-step approach. As with propensity-score matching models, these models also use a first-stage regression to estimate a firm's propensity to undertake a divestiture in the first place; then, that estimated propensity is included in a second-stage regression to measure the performance consequences of the divestiture, correcting for non-random selection.

A key difference between propensity-score matching models and Heckman's two-step approach is their identifying assumption. Propensity-score matching models require selection on observables, with the key assumption being that every observable factor that influences a firm's decision to divest is included in the first-stage regression. By contrast, Heckman's estimation procedure requires the use of an instrument to properly identify the first-stage regression. An appropriate instrument must be correlated with the endogenous decision (here, the decision to divest) but not with the outcome variable of interest (here, Tobin's q).

We use as our instrument Minority Interest, an indicator variable that takes the value one if a firm reports a non-zero minority interest on its balance sheet, and zero otherwise (Dimitrov

and Tice 2006, Hund et al. 2010, Kuppuswamy and Villalonga 2012). The presence of a non-zero minority interest on a firm's balance sheet indicates that the company has engaged in acquisitions in the past and has not absorbed the acquired units into their existing operations. Consequently, Minority Interest should be positively correlated with a firm's propensity to divest, since this variable reflects the availability of businesses that can be readily divested. This argument is supported by the extensive evidence documenting that firms frequently divest previously-acquired units (Porter 1987, Kaplan and Weisbach 1992, Shimizu and Hitt 2005, Hayward and Shimizu 2006, Shimizu 2007). By contrast, there is no reason to believe that Minority Interest should systematically influence Tobin's q, making this variable an appropriate instrument for the purposes of our Heckman models.

Table VIII presents the results of our treatment-effects models of the performance implications of divestitures, estimated using Heckman's approach.

-----Table VIII here-----

In Panel A, Regression (1) presents the results of the first-stage treatment regression, in which the dependent variable is Divestiture, measuring a firm's propensity to divest. As expected, the coefficient on Minority Interest is positive and significant, indicating that firms that have minority interests listed on their balance sheets are more likely to undertake divestitures than those that do not. The coefficients on the remaining variables in this regression are consistent with those in Table V.

Regression (2) in Panel A presents the results of the second-stage regression, whose dependent variable is Tobin's q. In Regression (2), the key independent variable is Divestiture, measuring a firm's propensity to divest, as estimated by the first-stage model. Consistent with the positive ATT documented in Panel A of Table VII, the coefficient on Divestiture is positive

and significant, indicating that firms that undertake divestitures have higher Tobin's q than firms that do not, controlling for non-random selection in the divestiture decision.

The foregoing result again does not address the key issue of interest raised in Hypothesis 4: whether divestitures undertaken by family firms are more positively associated with firm value than divestitures undertaken by non-family firms. To shed light on this issue, we apply a switching regressions framework to our treatment-effects models. The switching regressions approach is similar to Heckman's but involves estimating separate second-stage regressions of the performance consequences of divestitures for family and non-family firms, respectively; the first-stage propensity regression remains the same as it had been previously. This approach accounts for the possibility that the regression coefficients on the Divestiture variable (measuring the marginal effects of divestitures on Tobin's q) might differ for family and non-family firms (Hamilton and Nickerson 2003, Li and Prabhala 2007). We measure the statistical significance of the difference in the coefficients in these two regressions using a Wald test.

Results of the two second-stage performance regressions, estimated separately for the family firms in Regression (3) and the non-family firms in Regression (4), appear in Panel B of Table VIII. In both regressions, the coefficients on Divestiture are positive and significant, indicating that divestitures undertaken by family and non-family firms are positively associated with Tobin's q. The magnitude of the Divestiture coefficient is clearly larger for the family firms than it is for the non-family firms, and a Wald test reveals that these two coefficients are statistically different from one another at the 1% level of significance. This finding provides further evidence in support of Hypothesis 4 by showing that divestitures undertaken by family firms are more positively associated with firm value than those undertaken by non-family firms.

Panel C of Table VIII presents the results of regressions testing Hypothesis 5, which predicted that divestitures undertaken by family firms managed by family-CEOs will be more positively associated with firm value than divestitures undertaken by family firms managed by non-family CEOs. Regression (5) is the second-stage regression measuring the performance consequences of divestitures undertaken by family firms managed by family-CEOs, and Regression (6) is the second-stage regression measuring the performance consequences of divestitures undertaken by family firms managed by non-family CEOs. In both regressions, the coefficients on Divestiture are positive and significant, indicating that divestitures undertaken by family firms managed by either family- or non-family CEOs are positively associated with Tobin's q . Consistent with the propensity score matching results, the magnitude of the Divestiture coefficient is larger for family firms managed by family-CEOs than it is for family firms managed by non-family-CEOs, and a Wald test reveals that these two coefficients are statistically different from one another at the 5% level of significance. Thus, this result provides further support for Hypothesis 5.

Panel D of Table VIII takes the final step of disaggregating family-CEOs into founder-versus descendant-CEOs. Regression (7) is the second-stage regression measuring the performance consequences of divestitures undertaken by family firms managed by founder-CEOs, and Regression (8) is the second-stage regression measuring the performance consequences of divestitures undertaken by family firms managed by descendant-CEOs. Again, the coefficients on Divestiture are positive and significant in both regressions. The magnitude of the Divestiture coefficient is larger for family firms managed by founder-CEOs than it is for family firms managed by descendant-CEOs, and a Wald test reveals that these two coefficients are statistically different from each other. Thus, in contrast to the propensity score matching

results, which indicated that divestitures undertaken by descendant-CEOs were more valuable than divestitures undertaken by founder-CEOs, the switching regressions approach reveals the opposite, that divestitures undertaken by founder-CEO outperform those undertaken by descendant-CEOs (consistent with the event study results).¹¹

Conclusion

This paper has investigated the propensity of family firms to undertake divestitures, as well as the performance consequences of these transactions. Consistent with predictions generated by the behavioral theory of the firm and agency theory, this work presents five key findings. First, family firms are significantly less likely than non-family firms to divest businesses. Second, family firms managed by family-CEOs are significantly less likely than family firms run by non-family CEOs to undertake divestitures. Third, family firms are significantly less likely than non-family firms to divest unrelated businesses, though there is no significant difference in these firms' propensities to divest related business units. Fourth, the divestitures undertaken by family firms are associated with significantly higher firm value than divestitures undertaken by non-family firms. Fifth, the improvement in post-divestiture performance is pronounced when family firms run by family-CEOs, rather than non-family CEOs, undertake these transactions. Taken together, these findings make several contributions to research on corporate strategy and family business management.

First, 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

¹¹ The ambiguity of the results about the relationship between firm value and divestitures undertaken by founder-versus descendant-CEOs in family firms is consistent with our framing of this issue as an empirical question.

(e.g. Capron et al. 2001, Capron and Mitchell 2012), and this study further underscores the importance of these transactions. Furthermore, the stickiness of family firms' routines and their unique motivations, both documented in this work, only serve to reinforce this point, since these companies 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.

Additionally, this study provides evidence that both corporate and managerial identities exert a significant influence on firms' corporate strategies. While existing research has addressed this possibility (e.g. Tripsas and Gavetti 2000, Bigley and Wiersema 2002, Corley and Gioia 2004, Tripsas 2009), the work in this paper extends these ideas by laying out and testing the specific mechanisms that might explain family firms' reluctance to undertake divestitures and potentially the consequences of these transactions as well. An intriguing direction for future research in this vein might be to consider alternative ways in which firms' and managers' identities affect corporate strategic decision-making and outcomes, such as differing levels of discipline, patience, and or implementation capabilities. Greater attention to such issues has the potential to shed light on how firms can cultivate and effectively utilize their corporate development capabilities (Haleblian and Finkelstein 1999, Bergh and Ngah-Kiing 2008).

This study also sheds light on a yet-uninvestigated aspect of the literature on family firms. While there is evidence that family firms are more restrained in their diversification decisions, this work establishes that their divestiture activity is similarly limited. This is an important insight, revealing that family firms may be less likely than non-family firms to change overall. Additionally, our finding that family firms are significantly less likely than non-family firms to divest unrelated businesses, but that there is no such difference for related divestitures, highlights that in family firms, agency conflicts between family and non-family shareholders

may be more significant than agency conflicts between owners and managers. Thus, the research in this paper provides a deeper understanding of the constraints and motivations that affect the behavior of family firms.

The work in this paper raises several interesting questions about the types of divestitures undertaken by family and non-family firms. For example, among family and non-family firms alike, this paper has documented that sell-offs are undertaken substantially more frequently than spinoffs. However, as noted previously, there is reason to believe that spinoffs are theoretically preferable to the managers of family firms who are seeking to maximize their own or their families' best interests, yet the same may or may not be true for non-family firms. Additionally, there may be significant differences in the characteristics, particularly with respect to family control, of the firms that acquire business units that are divested by family and non-family firms. These and related issues present intriguing directions for future research about the overlap between firms' corporate strategies and the preferences of their owners and managers.

Finally, from a practical perspective, our research helps explain why we do not see greater divestiture activity despite its benefits for both managers and shareholders, given the prevalence of family firms in both the American and global economies. Our findings reinforce the notion that divestitures are a powerful, but underutilized, instrument in a manager's corporate strategy toolbox that could be profitably employed, especially in family firms – a conclusion that has a clear implication 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 Variables	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
Related Divestiture	Indicator variable equal to 1 if a firm has divested at least one business in its primary 3-digit SIC code in a given year, equal to 0 if the firm has divested no businesses in that year
Unrelated Divestiture	Indicator variable equal to 1 if a firm has divested at least one business not in its primary 3-digit SIC code 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
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

Dependent Variable:	(1) Divestiture	(2) Divestiture	(3) Divestiture	(4) Related Divestiture	(5) Unrelated Divestiture
Family Firm	-0.141** (0.065)			-0.085 (0.101)	-0.144** (0.073)
Family-CEO		-0.180** (0.095)			
Founder-CEO			-0.152 (0.105)		
Descendant-CEO			-0.231** (0.135)		
CEO Turnover	0.244*** (0.063)	0.341* (0.209)	0.345* (0.209)	0.299*** (0.089)	0.257*** (0.073)
Firm Age	0.006*** (0.001)	0.006*** (0.002)	0.006*** (0.002)	0.003* (0.001)	0.007*** (0.001)
ln(Total Sales)	0.329*** (0.018)	0.298*** (0.026)	0.298*** (0.026)	0.393*** (0.027)	0.341*** (0.020)
Leverage	0.275** (0.127)	0.652*** (0.183)	0.657*** (0.184)	0.128 (0.202)	0.301** (0.141)
Current Ratio	-0.108*** (0.024)	-0.076* (0.041)	-0.076* (0.041)	-0.203*** (0.046)	-0.080*** (0.026)
Negative Net Income	0.430*** (0.075)	0.474*** (0.102)	0.469*** (0.102)	0.557*** (0.115)	0.394*** (0.086)
Diversification	0.137*** (0.018)	0.160*** (0.025)	0.160*** (0.025)	0.072*** (0.025)	0.174*** (0.019)
Industry Sales Growth	0.010*** (0.004)	0.022** (0.011)	0.022** (0.011)	0.012*** (0.004)	0.010*** (0.004)
Constant	-4.210*** (0.152)	-4.294*** (0.218)	-4.305*** (0.218)	-5.209*** (0.249)	-4.834*** (0.177)
Sample of Firms	All	Family Only	Family Only	All	All
Pseudo-R ²	0.147	0.128	0.128	0.134	0.162
Number of Observations	19,133	10,265	10,265	17,120	18,319

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

Robust standard errors clustered by firm in parentheses.

Table VI. Event Study Results

Panel A. All Firms	All Firms	t-statistic	
CAR	0.007	3.79***	

Panel B. Family vs. Non-Family Firms	Family Firms	Non-Family Firms	t-statistic
CAR	0.010	0.006	2.86***

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

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**

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

Table VII. Performance Following Divestitures, Propensity Score Matching Models

Panel A. All Firms	Treated	Control	Difference	S.E	t-statistic
ATT	0.1653	0.1104	0.0549	0.0168	3.27***
<hr/>					
Panel B. Family vs. Non-Family Firms	Treated	Control	Difference	S.E	t-statistic
Family Firm ATT	0.2290	0.1515	0.0775	0.0245	3.16***
Non-Family Firm ATT	0.1240	0.0904	0.0336	0.0227	1.48
<hr/>					
Panel C. Family-CEOs vs. Non-Family CEOs in Family Firms	Treated	Control	Difference	S.E	t-statistic
Family CEO ATT	0.1891	0.1184	0.0707	0.0337	2.10**
Non-Family CEO ATT	0.2647	0.2090	0.0557	0.0357	1.56
<hr/>					
Panel D. Founder-CEOs vs. Descendant-CEOs in Family Firms	Treated	Control	Difference	S.E	t-statistic
Founder-CEO ATT	0.2186	0.1565	0.0621	0.0433	1.44
Descendant-CEO ATT	0.1146	0.0346	0.0800	0.0451	1.78*

The treated group consists of firm-year pairs in which there were divestitures, as predicted by the first-stage propensity model.

The control group consists of firm-year pairs in which there were no divestitures, as predicted by the first-stage propensity model.

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

Table VIII. Performance Following Divestitures, Switching Regressions

Dependent Variable:	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) Divestiture	(2) Tobin's q	(3) Tobin's q, Fam Firms	(4) Tobin's q, Non-Fam Firms	(5) Tobin's q, Fam-CEOs	(6) Tobin's q, Non-Fam CEOs	(7) Tobin's q, Found-CEOs	(8) Tobin's q, Desc-CEOs
Divestiture		0.799*** (0.102)	1.126*** (0.030)	0.681*** (0.035)	1.162*** (0.041)	0.783*** (0.058)	1.200*** (0.057)	0.787*** (0.058)
Minority Interest	0.104*** (0.033)							
Family Firm	-0.104*** (0.029)	0.028** (0.013)						
CEO Turnover	0.102*** (0.038)	-0.021 (0.019)	0.001 (0.025)	0.002 (0.024)	0.021 (0.042)	-0.026 (0.036)	0.029 (0.052)	0.007 (0.057)
Firm Age	0.003*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)	-0.001*** (0.000)	-0.002*** (0.001)	-0.001*** (0.000)	-0.004*** (0.001)	0.000 (0.000)
ln(Total Sales)	0.205*** (0.009)	-0.061*** (0.007)	-0.075*** (0.004)	-0.056*** (0.005)	-0.076*** (0.006)	-0.063*** (0.009)	-0.084*** (0.007)	-0.017* (0.010)
Leverage	0.139** (0.066)	-1.394*** (0.029)	-1.141*** (0.037)	-1.555*** (0.039)	-1.119*** (0.046)	-1.237*** (0.068)	-1.118*** (0.056)	-0.967*** (0.067)
Current Ratio	-0.051*** (0.012)	0.001 (0.003)	-0.007*** (0.002)	-0.009** (0.004)	-0.006*** (0.002)	0.004 (0.006)	-0.006** (0.002)	-0.017 (0.010)
Negative Net Income	0.253*** (0.046)	-0.156*** (0.021)	-0.104*** (0.022)	-0.113*** (0.027)	-0.133*** (0.028)	-0.204*** (0.041)	-0.180*** (0.032)	-0.030 (0.052)
Diversification	0.081*** (0.008)	-0.055*** (0.005)	-0.062*** (0.006)	-0.047*** (0.005)	-0.057*** (0.008)	-0.054*** (0.008)	-0.055*** (0.009)	-0.057*** (0.010)
Industry Sales Growth	0.006*** (0.002)	-0.000 (0.001)	-0.002 (0.003)	0.000 (0.001)	0.002 (0.006)	-0.003 (0.003)	-0.005 (0.013)	0.006 (0.005)
Constant	-2.579*** (0.087)	1.012*** (0.041)	0.998*** (0.029)	1.024*** (0.043)	0.972*** (0.037)	1.047*** (0.066)	1.066*** (0.044)	0.444*** (0.074)
lambda		-0.441*** (0.059)	-0.582*** (0.013)	-0.400*** (0.019)	-0.583*** (0.018)	-0.421*** (0.030)	-0.595*** (0.024)	-0.390*** (0.027)
Sample of Firms	All Firms	All Firms	Family Firms	Non-Family Firms	Family Firms, Family-CEOs	Family Firms, Non-Family CEOs	Family Firms, Founder-CEOs	Family Firms, Descendant-CEOs
Number of Observations	11,707	11,707	9,422	6,276	5,455	2,573	4,191	1,264

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

Robust standard errors in parentheses.