FOUNDER REPLACEMENT IN NEWLY PUBLIC FIRMS

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ABSTRACT

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We study the relationship between family ownership and the performance of newly public family firms around founder resignations. We find some preliminary evidence that founder resignations are a part of his or her exit strategy that involves an exit from the equity position as well. In particular, founders who completely resign from all positions in their firms do so after a relatively good performance. Our results also suggest an entrenchment at low levels of family ownership and a better alignment of family's interests with those of minority shareholders at high levels of family ownership. First, we find a non-linear and concave relationship between family ownership and the market reaction upon the founder resignation announcements. Second, we find the same non-linear and concave relationship between changes in the operating performance after founder resignations and ownership of the founding family. Finally, we find a bell-shaped relationship between family ownership and the likelihood of a family succession and a convex relationship between family ownership and the likelihood of a founder's complete exit from management and governance roles.

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1. Introduction

Much of the recent studies on family firms have focused on large, index listed firms (see e.g., Anderson and Reeb (2003) and Villalonga and Amit (2006)). These studies find that the presence of a founding family is an asset to the firm. In particular, large family firms are more valuable and have better operating performance than are their non-family counterparts. At the same time, very little research has been done on small, newly public family firms. In a recent study of family firms at the time of their IPOs, Paeglis and Tirtiroglu (2005) find that underwriters, financial analysts, and institutional investors view the presence of a founding family as a liability. They find a convex and statistically significant relationship between the family ownership, on the one hand, and underwriter reputation, analyst coverage, and institutional interest in the firm immediately after its IPO, on the other. The difference in the market's perception of the established and newly public family firms raises an interesting and yet unanswered question: "How does a founding family become an asset to the firm?" In this paper, we hypothesize that one way in which the transition of a founding family from a liability to an asset takes place is through an exit (either voluntary or forced) of founders, who the market may have perceived as a liability for their firms. We attempt to answer this question by examining performance and its changes around founder resignations in newly public firms. In particular, we study stock price performance before resignation, market reaction upon the resignation announcement, and changes in the operating performance after resignation.

Starting with a sample of 1,448 US firms that went public between 1993 and 1996, we track the changes in the founders' positions until firms' delisting or the end of 2004,

whichever comes first. By focusing on newly public firms we are able to examine and link founder resignations to their exits from the equity position in the firm. The existing studies, again, mostly on established firms, have looked at founder resignations as isolated events (see, e.g., Perez-Gonzalez (2004) and Smith and Amoako-Adu (1999)). At the same time, as reported by Stein (2001), eighty percent of family firms never make it to the second generation. For our sample of small and newly public family firms, the exit from the equity position is a real possibility since family loyalty to the firm is less likely to have developed at this early stage in the firm's life. In fact, founder exits from all management and / or governance roles in the firm accounts for around 25 percent of our sample. In another 25 percent of cases, a founder maintains a non-top position in the firm (either as a member of the board of directors or as a senior manager). Furthermore, our sample contains only 24 cases of family succession.

We expect the following three types of resignations to be more closely associated with a founder's eventual exit from the equity position in the firm: (1) forced exits; (2) complete exits from management and / or governance positions; and (3) exits with an outside succession. We, therefore, examine the differences between the above three types of founder resignations and other resignations (that are less likely to lead to a founder's eventual exit from the equity position). Finally, we examine the determinants of a family's continued involvement in the firm. In particular, we study the choice between a family succession and other forms of succession and between partial and complete exits from management and governance roles.

We find some preliminary evidence that founder resignations are indeed a part of his or her exit strategy, including an exit from the equity position. First, we find no

relationship between the pre-resignation performance and the ownership of founding family. This contrasts with the findings of Hillier and McColgan (2005) who, for their sample of UK family firms, find that founder-CEOs are less likely to be replaced, following poor performance, than are non-family CEOs. Second, we find some evidence that founders, who completely resign from all positions in their firms, do so after a relatively good performance. To the extent that a complete exit from management and governance may also signal a founder's intention to exit from the equity position in the firm, this finding seems to indicate that founders are timing their exit.

Overall, our results suggest an entrenchment at low levels of family ownership and a better alignment of family's interests with those of minority shareholders at high levels of family ownership. First, we find a non-linear and concave relationship between family ownership and the market reaction upon founder resignation announcements. In particular, we find that cumulative abnormal returns are increasing with the level of family ownership (until about 40%), then decreasing, and finally becoming negative after around 80%. Our tests also suggest that this relationship is not driven by either of our proxies for a founder's exit from the equity position. In particular, we do not observe any differences in the market reaction between normal and forced exits, partial and complete exits, or between an outside and other types of succession.[1] Second, we find the same non-linear and concave relationship between changes in the operating performance around founder resignations and ownership of the founding family.

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[1] It is possible that a founder's complete exit is expected (e.g., due to his or her equity sales in an SEO or on the open market) and therefore may be already incorporated in the stock price. A further examination of the first indication of a founder's intention to exit his or her equity position could provide more evidence on the market's perception of the value of family ownership and could strengthen the results reported in this paper by allowing to focus only on cases where resignation is a first step in the exit process.

Finally, we find a bell-shaped relationship between family ownership and the likelihood of a family succession. Our results imply that a family succession is more likely at intermediate levels of family ownership. At low and high levels of family ownership, the likelihood of a family succession approaches zero. We also find a convex relationship between family ownership and the likelihood of a complete exit. Both of these results are surprising, especially for firms with high levels of family ownership. It is in these firms that one would expect the family to maintain its influence and control. [2]

The rest of the paper is organized as follows. The next section reviews relevant literature, while section 3 presents empirically testable hypotheses examined in this paper. Section 4 covers data and sample characteristics. Section 5 offers empirical methodology and results. Section 6 concludes the paper and discusses potential extensions.

2. Literature review

Our study is related to several strands in the finance literature, which we review in this section. Section 2.1 reviews the relevant family firm literature, while section 2.2 reviews the relevant literature on founder resignations and various types of succession. Section 2.3 reviews the relevant literature on management turnover.

2.1. Family firm literature

Using accounting and market measures of Standard & Poor's 500 (S&P 500) firms' performance from 1992 through 1999, Anderson and Reeb (2003) conduct a time-

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[2] An examination of the dynamics of the founder's post-resignation equity position, especially in cases of complete exits from both the management and governance positions in firms with a high level of family ownership, could shed more light on the reasons behind these resignations.

series cross-sectional comparison of family and non-family firms. They also examine the impact of family ownership and the discrepancy between family ownership and their control rights on firm performance. They estimate Tobin's Q, their primary performance measure, as the market value of total assets divided by the replacement cost of assets.

Anderson and Reeb (2003) compare performance between family firm and non-family firms. The coefficient estimate of a family firm dummy variable is positive and significant when using either EBITDA or net income as the numerator in calculating ROA. For market measures of performance, the coefficient estimates for the family firm dummy variable are still positive and significant. Differentiating between young and old family firms, they again find that both groups of family firms are associated with higher Tobin's Q. Finally, they include three classifications of CEOs: (1) founders; (2) founder-descendants; and (3) hired hands, and find that founders are associated with greater firm values. However, they find that founder-descendants are unrelated to market performance. Further testing suggests that greater profitability of family firms, relative to non-family ones, stems from those firms in which a family member serves as the CEO.

Anderson and Reeb (2003) also examine the impact of family ownership (as opposed to the presence of a founding family) and the discrepancy between family ownership and control rights on firm performance. They modify their regression specification by including family ownership and the square of family ownership as independent variables. Overall, their analysis suggests that the relationship between family ownership and the performance is not uniform over the entire range of family ownership. The firm performance is increasing until families own about one-third of the firm's outstanding equity.

Villalonga and Amit (2006) examine the following three questions: (1) does the family *ownership* create or destroy value; (2) does the family *control* create or destroy value; and (3) does the family *management* create or destroy value? Their sample comprises a panel dataset of 2,808 firm-years from 508 *Fortune 500* firms during the period of 1994 to 2000. The authors use the firm's market-to-book ratio as their proxy for Tobin's q (Q).

Villalonga and Amit (2006) first estimate the relationship between the family ownership and firm value. They report that the mean Q of family firms is higher than the Q of non-family firms, and that the difference is statistically significant. The data thus suggests that family firms perform better than do non-family firms. Their results are generally robust to the use of alternative specifications and econometric techniques, including multivariate OLS regressions of Q and industry-adjusted Q on continuous and categorical measures of family ownership.

Villalonga and Amit (2006) then estimate the relationship between the family control and a firm's market value. The authors' findings about family ownership and control suggest that, despite the costs associated to the family's excess control, the benefits of family ownership make minority shareholders better off than they would have been in a non-family firm. Family control in excess of ownership is often manifested in the form of multiple share classes, pyramids, cross-holdings, or voting agreements. In descendant-CEO firms, control-enhancing mechanisms have a mildly positive impact on market value. This positive impact suggests that these mechanisms play a different role in family firms or at least send a weaker signal to the market. Nevertheless, non-family

shareholders in descendant-CEO firms are worse off than they would have been in a non-family firm.

The authors include lagged Q in the probit model to test for a potential reverse causation between market value and the family's decision to maintain their ownership of the firm, to enhance the control beyond their ownership stake, or to participate in the management of the firm. The coefficient of lagged Q is positive and significant. The same coefficient is negative and significant for descendant-CEO firms.

Villalonga and Amit (2006) estimate the relationship between the family management and a firm's market value. Family management adds value as long as the founder serves as the CEO or as its Chairman with a non-family CEO. When the descendants of the founder serve as CEOs, firm value is destroyed.

Finally, the authors try other alternative definitions of a family firm and find that the more restrictive the definition of a family firm, the stronger the evidence reported. The final answer to the three questions posed in Villalonga and Amit (2006) depends on how the three elements of family involvement in the firm (ownership, control, and management) are incorporated into the definition of a family firm.

Paeglis and Tirtiroglu (2005) examine young family firms at the time of their IPO. Their sample consists of US firms that went public between 1993 and 2000. The authors study the relationship between family ownership, on the one hand, and the reputation of a firm's underwriters, the extent of analyst coverage, and post-IPO institutional interest, on the other. Paeglis and Tirtiroglu (2005) estimate these relationships for various extents of founder's involvement in the firm (e.g., in management, governance, or both) and by the presence or absence of pre-IPO institutional capital.

Paeglis and Tirtiroglu (2005) find a non-linear and convex relationship between family ownership and their three measures of market participant's perception (underwriter reputation, analysts coverage, and institutional interest in the firm) for non-venture-backed firms and a concave relationship for venture-backed firms. Their findings seem to suggest that, for non-venture-backed firms, at low levels of family ownership the entrenchment aspect seems to dominate, while at high levels of family ownership the incentive alignment aspect seems to dominate. They conjecture that for these firms other aspects of control, such as stacking of the board of directors, can augment a low level of control (as measured purely in terms of equity ownership). Since these other aspects of control are less likely to be present in venture-backed firms, equity ownership is likely to be a better proxy for a founder's effective control in these firms.

2.2. Founder resignation literature

Hillier and McColgan (2005) investigate the role of the family status of a company's top officer in managerial replacement decisions. Their sample of 683 companies covers CEO succession in UK listed companies over the period from 1992 to 1998.

Hillier and McColgan (2005) first estimate the probabilities of CEO turnover in family firms. They use logit models to examine the impact of company's performance on top management turnover, controlling for the potential entrenchment effects using the ownership of the company's CEO. Finally, they include a family firm dummy variable to capture the difference in the sensitivity of performance to the CEO ownership between family and non-family firms. Their results suggest that CEO turnover is more likely

following poor stock price performance than a good one and that the likelihood of CEO turnover is decreasing with the ownership of the company's top officer. More importantly, family-CEOs are less likely to be removed from their position than are non-family CEOs. In addition, stock prices react favorably when companies announce departure of a family-CEO, but only when these executives are replaced by non-family successors.

Hillier and McColgan (2005) also estimate the relationship between corporate governance, firm performance, and CEO turnover. In order to examine the ways in which corporate governance interacts with performance in impacting the likelihood of a CEO turnover, they add additional interaction terms between family firm status and various measures of company's governance practices (such as the size of a firm's board of directors and fraction of the board seats held by outsiders). They find that the fraction of outside directors on the company's board increases the likelihood of a forced CEO turnover, but find no differences in the influence of this variable on the likelihood of a forced CEO turnover between family and non-family firms.

Finally, Hillier and McColgan (2005) examine corporate restructuring following CEO turnover and find that CEO turnover in family firms is followed by increases in profitability, sales, and employment levels. They argue that this higher level of growth following the departure of a family-CEO suggests an untapped potential that new managers are able to exploit.

Perez-Gonzalez (2004) examines the impact of inherited control on firms' performance by evaluating immediate and long-term abnormal returns around CEO resignation announcements. He splits the sample by the status of departing CEOs

(retirements and unexpected deaths), by internal and external successions, and by college selectivity. Focusing on all non-financial, non-utility firms in 1994, he arrives at 335 firms in which a management change had occurred and matching financial data is available both before and after succession.

Perez-Gonzalez (2004) estimates the relationship between abnormal returns and the type of successions. Before CEO transitions, the firms in the sample, regardless of their type, did not earn significant abnormal returns relative to any of the benchmarks presented, while the portfolio of post-CEO transition firms achieves economically large and statistically significant abnormal returns. A sudden death of a CEO who is a founder or a member of the founding family is associated with positive abnormal returns (6.6 percent). Only unrelated successions are associated with positive abnormal returns, both upon the announcement and in the three years after the appointment. When the author uses market-to-book (MB) ratio and Tobin's Q, he finds that firms that outperform their industry peers, either in terms of industry-adjusted ROA or MB ratio prior to successions, are more likely to promote internal CEOs. In contrast, larger firms do not appear to be more likely to promote CEOs from within. Firms where family directors have a larger share of the seats on the board are more likely to promote CEOs internally. In contrast, board ownership does not seem to affect this decision. Examining the robustness of the results using differences in industry- and performance-adjusted ROA as the dependent variable, the author finds that family CEOs, on average, experience a decline in industry- and performance-adjusted ROA relative to that of unrelated CEOs. The relative gap in the performance between family- and unrelated-CEOs may be explained by implicit contracts. In addition, the lower performance of family CEO firms is observed using accounting

profitability measures, such as the ratio of operating or net income to total assets. Market valuation measures of performance such as MB ratios or stock returns around CEO transitions also point to the superiority of non-family CEO successors. These latter measures indicate that the gains from appointing a CEO from a competitive pool of managers are substantial.

Perez-Gonzalez (2004) also tests for nepotism by examining whether the undergraduate institution attended by family-CEOs predicts subsequent differences in firm performance. In this case, the author sorts CEOs into two groups: those that attended selective colleges and those that attended less selective colleges. Consistent with wasteful nepotism hypothesis, declines in performance are particularly prominent in firms that appoint family CEOs, who did not attend a selective undergraduate institution, while firms with CEOs, who attended selective colleges, do not seem to bring about significant abnormal returns upon the announcement of a family succession. Finally, comparable firms that promote non-family CEOs do not experience negative changes in performance, even when incoming unrelated CEOs did not attend selective colleges.

Smith and Amoako-Adu (1999) estimate the influence of management succession on financial performance of Canadian family-controlled firms listed on the Toronto Stock Exchange (TSE) between 1962 and 1996. The impact of prior corporate performance and other factors on the likelihood of a company choosing a particular successor type is estimated using a multinomial logit model.

Smith and Amoako-Adu (1999) estimate the immediate impacts on shareholder wealth using cumulative abnormal residuals (CARs) of the company's common stock. The CARs of the firms announcing successions over the period of 40 days before to 20

days after the announcement date are compared across the three types of successors. A cross-sectional regression is conducted with the CARs over the three-day event window surrounding the management succession announcement date [−1; +1] as the dependent variable and a set of explanatory variables measuring whether the successor is a family member or outsider, the age of the successor, the number of years of experience in senior management of the successor, the size of the company, and whether the predecessor is a founder. Analysis of stock prices indicates that appointments of family members result in significant losses to shareholders whereas there is no negative reaction to appointment of non-family insiders and outsiders. Going a step further, a cross-sectional analysis indicates that the age of a successor and the size of the company are significantly related to the stock price reaction.

Smith and Amoako-Adu (1999) also estimate the long-term impacts on shareholder wealth. For the sample of family successor firms, there is a significant decrease in the median industry-adjusted return on assets of family firms from before to after the succession. At the same time, there is a significant increase in the industry-adjusted return on assets for the outside-successor sample, while for the non-family insider sample there is a positive but insignificant increase in operating profits. Finally, outside successor firms have a negative long-term post-succession stock performance.

2.3. Management turnover literature

Denis and Denis (1995) examine the market reaction to the announcements of management changes that took place between 1985 and 1989. They classify management changes into two groups: top management changes (i.e., those involving CEO,

chairperson of the board of directors, and/or president) and lower-level management changes. The paper examines reasons for the change, the identity and previous employment of the new manager, the destination and age of the departing manager, and if the management change was associated with a change in the control of the firm. In addition, since news stories rarely disclose that a resignation is forced, the authors develop a new definition of a forced departure. According to Denis and Denis (1995), the management resignation is classified as forced if it satisfies the following three conditions: (1) it involves an external appointment, (2) the departing manager is not between the ages of 64 and 66, and (3) the departing manager leaves the firm.

The authors recognize that the use of a pre-event estimation period would bias market model parameter estimates. This arises from the possibility that the likelihood of management turnover is systematically related to firm performance. Instead, the authors use market model parameters, estimated over the 250-day period beginning two days following the management change announcement. They find that (1) forced departures are preceded by extremely large shareholder losses while normal retirements are not preceded by uncommon performance and (2) over the two-day event window, including the day of and the day before the announcement of the change, abnormal returns for forced resignations are positive and statistically significant while those of normal retirements are insignificant. In addition, the abnormal returns surrounding top executive changes are much larger than those involving lower level executives.

Denis and Denis (1995) also study changes in the operating performance around the management change announcements. Defining an industry-adjusted change in the operating performance as a change in the ratio of operating income to total assets for the

sample firm minus the same change for the median firm in the same two-digit SIC code industry, they find that forced top executive departures follow significant losses and often lead to significant increases in industry-adjusted operating income. Nevertheless, the median level of ROA following forced departures is below that of normal retirements even three years after the event. The authors also examine the sensitivity of their results to different definitions on forced departures (such as Warner, Watts, and Wruck's (1988) definition and external appointments), but find no evidence of performance changes under these alternative definitions.

Finally, Denis and Denis (1995) find significant decreases in the book value of total assets, the number of employees, and capital expenditures surrounding top executive resignations. In addition, they find large differences of firm behavior between forced resignations and normal retirements. In particular, firms experiencing either forced departures or normal retirements announce assets sales, but normal retirement firms also announce new acquisitions and joint ventures. This explains why forced departure firms downsize their assets base while normal retirement firms increase it.

Denis, Denis, and Sarin (1997) examine the relationship between ownership structure and top executive turnover. The authors argue that the effect of managerial ownership on the executive turnover has two components. On the one hand, higher managerial ownership makes it difficult to remove current managers, especially since this action is costly. On the other hand, a higher insider ownership better aligns the interest of management and shareholders. Consequently, it is beneficial for shareholders to encourage managers to invest in their firms. It is unclear which effect is likely to dominate, therefore the relationship between managerial ownership and top management

turnover is an empirical question. In addition, Denis, Denis, and Sarin (1997) hypothesize that the presence of blockholders and institutional investors may affect the likelihood of a management change.

The authors use a panel data set containing firms covered by the Value Line Investment Survey between 1984 and 1988 and link the likelihood of management change to the firm's pre-replacement performance and several equity ownership and board composition characteristics (e.g., insider ownership and presence of a blockholder). In particular, they use the sample firm's return minus the return on the CRSP value-weighted index as a measure of a firm's performance and find a negative relationship between firm performance and the likelihood of management turnover. This negative relationship persists even after controlling for the ownership of officers and directors, other aspects of ownership structure, and board composition as well as other variables concerning on the effectiveness of internal monitoring.

Denis, Denis, and Sarin (1997) then proceed to examine the differences in the sensitivity of the management turnover to the firm's performance between various levels of insider ownership, board characteristics, and the presence (or absence) of a blockholder. They find that the sensitivity of management turnover to the performance is negatively related to managerial ownership and positively related to the presence of an outsider dominated board of directors. Higher equity ownership makes top executives less sensitive to internal monitoring and to the influence of outside blockholders. Top executive turnover is more sensitive to poor performance in firms with outside blockholders than in those without them. Further adjusting their test variables based on

different criteria, Denis, Denis, and Sarin (1997) find that the negative relationships is stronger when management ownership is between 5% and 25%.

Denis, Denis, and Sarin (1997) go on to examine the relationship between top executive turnover, managerial ownership, and corporate control activity. By comparing the frequency of corporate control activity over the 12 months preceding management turnover between top and non-top executive changes, the authors find an indirect relationship between external control activity and internal monitoring. In particular, if a hostile control activity threatens a firm, high managerial ownership reduces both the possibility of a successful bid and the effectiveness of internal monitoring.

Warner, Watts, and Wruck (1988) also address the relationship between the firm's performance and management change. In addition, they examine the monitoring by board of directors and significant shareholders. Their sample is randomly chosen from the companies listed on the New York and American Stock Exchanges (NYSE and AMEX) from 1962 to 1978. To avoid the noise in their measures of management performance, such as market and industry factors, the authors use stock performance relative to a benchmark as a measure of performance.

Warner, Watts, and Wruck (1988) separate the management changes according to several categories: (1) forced departures (as a consequence of a poor performance); (2) changes involving outsiders (such a change should create greater benefits when the performance is poor; when the performance is good, such a change could signal that the company will expand into a new industry); (3) CEO changes (it is common for the chairman or CEO to pass the CEO title to the president). Since forced departures are rarely identified as such, the authors introduce a new definition of a forced departure. In

particular, they define a departure as forced if the departing executive: (1) leaves to pursue other interests; (2) leaves to take a position outside the firm; (3) leaves due to disagreements over a firm's policy; (4) is fired; or (5) if no reason for departure is mentioned in the announcement. Normal departure, in turn, is defined as either: (1) retirement; (2) a.leave to take a position inside the firm; (3) a departure involving a transfer of a block of common shares; or (4) a departure due to ill health or death.

Warner, Watts, and Wruck (1988) find that the likelihood of a management change is negatively related to the performance for all categories of management change except for an outsider succession category. The authors argue that the model explains management changes very well only in extreme condition. In addition, the time delay of up to two years between poor performance and management change implies that management turnover is not very sensitive to poor stock price performance.

Slovin and Sushka (1993) examine the influence of the ownership concentration on the firm value, corporate governance, and the control of public companies after the death of blockholders. They focus on the announcements of deaths of insiders of firms traded on NYSE/AMEX and NASDAQ for the period of 1973 to 1989. They define a blockholder as an individual who holds at least 5 percent of a firm shares at the time of his or her death.

Slovin and Sushka (1993) calculate the share price reaction using the market model around the date of the Wall Street Journal report of the death of the blockholder. They find that for firms with concentrated equity ownership structures, the death of an inside blockholder increases shareholder value. The authors also examine the effect of ownership concentration on the event study results by disaggregating excess returns into

ranges of the personal ownership stake of the deceased inside blockholders. They find a significantly positive market reaction when the level of the deceased insider's ownership exceeds 10% of firm's shares. In addition, their cross-section regression results are suggestive of a curvilinear relationship between ownership concentration and firm value. In addition, neither the deceased's position as a CEO at the time of death nor his status as the firm's founder have a significant impact on the share-price reaction.

Slovin and Sushka (1993) further examine the dispersal of shares subsequent to deaths of inside blockholders. Collecting information about the extent of subsequent corporate control events for a period of ten years following the deaths of blockholders, the authors find that, on average, the dispersal occurs two years after an inside blockholder's death. However, there is no evidence that at the time of a blockholder's death the exact pattern of dispersal events can be predicted.

3. Theory and hypotheses

In this section we develop the hypotheses that will serve as the basis for our empirical tests.

3.1. Pre-resignation performance

As discussed above, a founder's resignation from an active involvement in the management and / or governance of a firm can also be a part of his or her exit strategy that may also involve a sale of the equity stake. Therefore, the pre-resignation stock price performance should be related to the motivation behind the resignation. If the resignation is a part of a founder's exit strategy, we expect to observe a positive relationship between family ownership and pre-resignation stock price performance. In this case, the founder is

more likely to exit at higher equity prices. If, on the other hand, a founder's resignation does not involve an exit from the equity position, we expect to see a negative relationship between family ownership and pre-resignation performance. It takes a larger decline in the performance to replace a founder, who owns a large percentage of equity in the firm, than a non-family executive with a low level of ownership. The extent of entrenchment is likely to be increasing with the level of his or her ownership. In other words, our first hypothesis can be summarized as follows:

Hypothesis 1a: If the resignation is a part of a founder's complete exit strategy, which also includes an eventual exit from his or her equity position in the firm, there will be a positive relationship between family ownership and pre-resignation stock price performance.

Hypothesis 1b: If the resignation is a result of market discipline and not related to the exit from the equity position, there will be a negative relationship between family ownership and pre-resignation stock price performance.

3.2. Performance changes around resignation announcements

The performance changes around resignation announcements reveal market's assessment of the value of a founder and his or her ownership stake to the firm. There are two contrasting effects that a family ownership can have on the firm value. One strand in the finance literature argues that there should be a positive relationship between insider ownership and firm value. Jensen and Meckling (1976) argue that increased managerial ownership leads to a decrease in the agency costs of equity by reducing incentives to consume perquisites and to expropriate shareholder wealth. Leland and Pyle (1977) argue

that managerial ownership can serve as a signal of a firm's value. Another strand of finance literature argues that increased managerial ownership permits consumption of perquisites and entrenchment of incumbent management by reducing the probability of a disciplining takeover (see, e.g., Stulz (1988)).

Since it is not possible, a priori, to predict which of these two effects will dominate at each level of managerial ownership, the relationship between family ownership and firm value remains an empirical question.

Several empirical studies have examined the relationship between insider ownership and, in particular, family ownership, and firm value. Morck, Shleifer, and Vishny (1988) examine the relationship between Tobin's Q and insider ownership, and find that insider ownership has a positive influence on Tobin's Q for low levels of insider ownership (below 5%), a negative influence for the 5% to 25% range, and a weak positive influence for ownership levels above 25%. McConnell and Servaes (1990) find a non-linear and concave relationship between managerial ownership and Tobin's Q with firm value reaching its maximum at managerial ownership of between 40 to 50%. Anderson and Reeb (2003) find a similar concave relationship between family ownership and firm value for their sample of S&P 500-listed family firms. Slovin and Sushka (1993), however, find a concave relationship between the market reaction upon the announcement of the deaths of insider blockholders and their ownership stake in the firm.[3] Their results imply entrenchment at low levels of ownership.[4]

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[3] A similar relationship is reported by Denis, Denis, and Sarin (1997) for the top management resignations.

[4] Slovin and Sushka (1993) hypothesize that one of the reasons for the difference between their findings and those of other studies is the potential causality problem as to whether ownership concentration increases firm value or firm value induces insiders to hold more shares, thereby increasing concentration.

All of the above studies, however, have examined the relationship between insider ownership and firm value in large firms. The evidence on the above relationship in small and young firms is rather limited. The only study we are aware of is that by Paeglis and Tirtiroglu (2005), who find a convex relationship between family ownership, on the one hand, and underwriter reputation, extent of analyst coverage, and institutional interest in family firms at the time of their IPOs, on the other.

To summarize, while most of the studies on the relationship between managerial ownership and firm value find a non-linear relationship, the shape of this relationship varies among studies and different samples used. Therefore, in our empirical tests, we allow for a non-linear relationship between family ownership and various measures of performance changes around founder resignation announcements. Our next set of hypotheses can be summarized as follows:

Hypothesis 2: There will be a positive (negative) relationship between family ownership and the market reaction to a founder's resignation announcement if he or she has been a liability (an asset) to the firm.

Hypothesis 3: There will be a positive (negative) relationship between family ownership and changes in the operating performance, following a founder's resignation if he or she has been a liability (an asset) to the firm.

Hypothesis 4: The positive (negative) relationship between family ownership, on the one hand, and the market reaction to a founder's resignation and changes in the operating performance, on the other, will be more pronounced for the types of resignations that are likely to be a part of a complete exit strategy.

3.3. Founder's continued involvement in the firm

We now turn to the determinants of family's continued involvement in the firm. We hypothesize that the likelihood of family succession and founder's continued involvement in the management and / or governance firm will be positively related to the family ownership. Our final two hypotheses can be summarized as follows:

Hypothesis 5: There will be a positive relationship between family ownership and the likelihood of a family succession.

Hypothesis 6: There will be a negative relationship between family ownership and the likelihood of a complete exit from management and / or governance positions in the firm.

4. Data and sample characteristics

Our initial sample consists of 1,448 US firms that went public between 1993 and 1996. We collect the names of firms' top executive officers (defined as CEO, president, and chairman of the board) and classify them as founders and non-founders, based on the information in the management sections of IPO prospectuses.[5] We then track the presence of these individuals in the firm by examining firm's proxy statements until the time of delisting or December 31, 2004, whichever comes first. The exact resignation announcement dates are obtained by searching Factiva. Once an announcement is identified, we search for a possible earlier story in the preceding 12 months. This ensures that we have identified the first mention of an executive's exit from management and / or governance positions in the firm. In addition, we also note if there are any additional

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[5] While we have the names of founders who at the time of IPO were in positions other than the three mentioned above (mostly vice-presidents and directors), we do not include them in our sample since resignations of vice-presidents and directors are rarely announced in the business press and newswires.

announcements contained in the news story, announcing an executive's departure (e.g., quarterly earnings announcements). Finally, we collect the data on the founding family's ownership from the closest proxy statement preceding the resignation announcement.

Our final sample consists of 905 resignation announcements, 500 (405) of which are for founders (non-founders). Panels A and B of Table 1 show the distribution of our final sample by the pre- and post-resignation positions held by founders and non-founders, respectively. Of the 500 founder resignations in our sample, 278 hold top positions in both the management and governance (i.e., hold positions of either (1) CEO and chairman of the board; (2) CEO, chairman, and president; or (3) chairman and president), 111 are in management positions (i.e., serve as CEOs or presidents or both), and 111 have a governance role (i.e., serve as chairmen of the board). Of the 500 founder resignations, more than a half are transitions to a governance role involving either a top governance position (chairman of the board) or a position on the board of directors (179 and 117 cases, respectively). The second largest group involves complete exits from management and governance positions in the firm: in 117 cases, founders resign from all positions in the firm and in additional 14 cases, they remain as consultants for a limited period of time.

Table 2 shows the distribution of the sample by the position held before resignation and by the type of succession. Of the 500 founders, 262 are replaced by non-family insiders and 126 are succeeded by outsiders. Only 24 founders are succeeded by a family member. In only four cases does a founder take on an additional management or governance role. In the remaining 84 cases, the announcement either mentions a commencement of a search for a replacement or makes no mention of potential

successors. It is interesting to note that in 15 cases (reported in Panel B of Table 2) a departing non-family executive is succeeded by a founder, who at the time of the IPO, was not in either top management or governance positions.

Table 3 shows the distribution of the sample by the position held before resignation and the type of exit. Consistent with Denis and Denis (1995) and Warner, Watts, and Wruck (1988), we find that very few announcements mention that resignation is forced. To get around this problem, we use Denis and Denis's (1995) definition of forced resignations. In particular, an exit is classified as forced if the departing executive is replaced by an outsider or the announcement mentions a search for a replacement *and* the departing executive leaves the firm, *and* the departing executive is not between the ages of 64 and 66.[6] All other exits are classified as normal. This leaves us with 50 forced resignations for the founder subsample and 77 for the non-founder subsample.

The stock price data necessary to calculate returns over various event windows comes from the Center for Research in Security Prices (CRSP) database, while the data on post-resignation operating performance comes from COMPUSTAT.

Table 4 summarizes the dependent and independent variables used in the subsequent tables, and reports correlations among them. Panel A of Table 4 reports summary statistics of independent variables. We find that the average (median) family ownership is 11.7% (2.9%) for the full sample and 21.1% (14.9%) for the family firm subsample. Of the 905 resignations in our sample, 14% are forced and 33% are complete exits (defined as exits in which the departing executive either has no position in the firm or remains as a consultant for a limited period of time). 23.8% (2.7%) of departing

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[6] We also tried the Warner, Watts, and Wruck (1988) definition of forced resignations, but found that, according to it, 90% of our sample would be classified as forced.

executives in our sample are replaced by outsiders (family members), while in 1.7% of cases, a founder returns to either a top management or a top governance role after a resignation of a non-family executive. The average age of departing executives at the time of resignation is 51.73 years and the average resignation takes place 2.68 years after the firm's IPO. The average age of firms at the time of an executive's resignation is 12.63 years and the average market capitalization is $104 million.

5. Empirical methodology and results

In this section, we discuss the empirical methodology used to test the hypotheses presented in Section 3, and report the results. In Section 5.1, we examine the univariate differences in the stock price performance before and around resignations for the full sample and for various types of succession and exit, as well as for various extents of exit. We describe the testing methodology and report results for our multivariate tests from Section 5.2 onwards.

5.1. Univariate event study results

We use the standard event study methodology to examine the market reaction upon the resignation announcements. Since the use of a pre-event estimation period would bias market model parameter estimates due to the fact that the likelihood of management turnover is systematically related to firm performance, we use the market model parameters estimated over the 250-day period beginning eleven days following the resignation announcements. As discussed above, this approach is suggested and used by

Denis and Denis (1995) and Denis, Denis, and Sarin (1997).[7] We also examine the pre-event stock price performance using a market-adjusted return as our measure of a firm's performance. In particular, we use returns over 250 (500) trading days ending on the 11th day before the resignation announcement as our measures of pre-resignation performance (we refer to these returns as 1-year (2-year) pre-resignation returns, respectively).

Table 5 reports the univariate event study results. We find a statistically significant underperformance over the one- and two-year event windows before the resignation announcement for both founders and non-founders. The mean and median pre-resignation performance is negative and significant at the 1% level not only for the full sample (as reported in Panel A), but also for various types of exit and succession, as well as for various extents of exit reported in Panels B, C, and D. The only exception is the family succession subsample, for which we find only weak evidence of underperformance over the year before the resignation and no evidence of underperformance over the two years before the resignation. While, as expected, forced resignations are preceded by lower performance than are normal resignations, we do not observe any significant differences between forced resignations by founders and non-founders. Our findings contrast with those of Denis, Denis, and Sarin (1997) and Hillier and McColgan (2005), who find that the likelihood of resignation is negatively related to the insider and founder ownership, respectively.

Over the three-day event window around the resignation announcement, we find an overall positive and significant market reaction for founders and a negative but insignificant market reaction for non-founders (Panel A). In particular, the mean (median)

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[7] Our results are qualitatively unchanged when we use market-adjusted cumulative returns as our measure of the market's reaction upon a resignation announcement.

three-day abnormal return for founder resignations is 1.3% (0.4%), which is significant at the 5% (10%) level. In Panel B we split the sample by the extent of exit and find that for founders the positive and significant market reaction is confined to the partial exit subsample, while for complete exits there is a negative but insignificant market reaction. These results seem to suggest that a founder's continued presence in the firm, albeit in a less prominent management or governance role, is considered by the market as a benefit to the firm.[8] It is also interesting to note that the overall insignificant market reaction to a non-founder resignation is largely a result of a large and significantly negative (–2.2% mean and –2.5% median) announcement effect for the complete exit subsample and a positive and marginally significant announcement effect for the partial exit subsample.

In Panel C, we split the sample by the type of succession and find evidence of a positive market reaction to the announcement of both insider and outsider successions in family firms. While the market reaction is somewhat stronger in the case of an outside succession (2.8% versus 1.4%), the differences are not statistically significant. We do not, however, find a significant market reaction to either family succession announcements or those containing an announcement of search for a successor. These findings are similar to those of Perez-Gonzalez (2004), who finds no significant market reaction upon the family succession announcements and are in contrast to those of Smith and Amoako-Adu (1999) who, for their sample of Canadian family firms, find a significant price decline upon a family succession announcement. Finally, we find no significant market reaction for

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[8] It is, however, also possible that partial exits are more likely to be a first indication of a founder's intention of stepping aside from the management and / or governance of the firm (and potentially, in due time, an exit from his or her equity position as well). Complete exits, on the other hand, are more likely to be a final stage of a founder's exit from the firm. To the extent that there have been previous indications of a founder's intention to leave the firm (such as equity sales either in the IPO, following SEOs, or in the open market), complete exits are more likely to have been expected and therefore might have already been incorporated in stock prices.

either inside or outside successions for non-founders, but do find some evidence of a negative market reaction upon announcements that mention a search for a successor.

In Panel D, we split the sample by the type of exit. We find positive and significant abnormal returns only upon the announcement of normal founder resignations, while the abnormal returns for normal exits by non-founders are not statistically significant. Also, neither the abnormal returns for forced founder resignations, nor for forced non-founder resignations are statistically significant. This contrasts with the findings of Denis and Denis (1995), who find a positive and statistically significant market reaction upon the announcement of forced manager resignations for their sample of firms.

5.2. Family ownership and pre-resignation performance

We examine the potential relationship between pre-resignation performance and family ownership using the following basic empirical model:

$$
\begin{aligned}
PREYEAR_i = \beta_0 &+ \beta_1 FAM\_OWN_i + \beta_2 FAM\_OWN2_i + \beta_3 FORCED_i + \beta_4 REPLNFAM_i \\
&+ \beta_5 REPLOUT_i + \beta_6 REPLFOUND_i + \beta_7 COMPL_i + \beta_8 LAGE_i + \beta_9 LMKT_i \\
&+ \beta_{10} LFAGE_i + \beta_{11} LTIPOR_i + \beta_{12} YEARD_i + \varepsilon_i
\end{aligned}
\tag{1}
$$

We use two measures of pre-resignation performance: PRE1YEAR and PRE2YEAR, the market-adjusted stock returns over the 250 and 500 trading days ending on the 11th day before the resignation announcement, respectively. FAM_OWN is family ownership and FAM_OWN2 is family ownership squared. We use the following dummy variables to examine the differences in the pre-resignation performance between various types of exit and succession, as well as between various extents of exit. FORCED is a dummy variable that takes on a value of one if the departing executive is replaced by an

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outsider or if the announcement mentions a search for a replacement *and* the departing executive leaves the firm, *and* the departing executive is not between the ages of 64 and 66. REPLNFAM (REPLOUT) is a dummy variable that takes on a value of one if the departing executive is replaced by a non-family insider (an outsider), and zero otherwise. REPLFOUND is a dummy variable that takes on a value of one if the departing non-family executive is replaced by the founder, and zero otherwise. COMPL is a dummy variable that takes on a value of one if the executive left the firm completely (i.e., did not have any position either on the management team or on the board of directors or served only as a consultant). LAGE is the natural logarithm of the executive's age at the time of resignation. [9]

In addition, we use the following two variables to control for the firm size and firm age. LMKT is the natural logarithm of the market value of the firm's equity on the 20th trading day before the resignation announcement. LFAGE is the natural logarithm of one plus firm age, where firm age is defined as the number of years between the year of incorporation or start of operations (whichever is earlier), and the year of resignation. LTIPOR is the natural logarithm of the time (in days) between the IPO and the resignation announcement. Finally, since our sample period includes both the bull market of late 1990s and the bear market of early 2000s, we also control for the potential differences in the performance between different years using a set of year dummy variables.

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[9] We replicate the results in this and the following sections separately for firms that were non-venture-backed and venture-backed at the time of their IPOs, but find no differences between the two subsamples. This lack of differences could be explained by the fact that, by the time of founder resignations (around 2.7 years after IPO), the venture capitalists have already exited their equity position in the firm.

Table 6 presents the empirical results on the relationship between family ownership and pre-resignation performance. In panel A of Table 6, we report results for the full sample, while in Panel B we report the results for the family firm subsample. The basic results with PRE1YEAR and PRE2YEAR as dependent variables are reported in models (1) and (5), respectively. For the full sample we do not find any significant relationship between family ownership and pre-resignation performance. For the family firm subsample, however, we do find some weak evidence of a positive relationship between family ownership and the performance over the two years preceding the resignation.

These results are inconsistent with the entrenchment hypothesis under which one would expect to observe larger declines in the performance before a founder resignation in a firm with high family ownership. In fact, our findings suggest that founders are timing their resignations after a period of exceptionally good performance. This, in turn, would suggest that founder resignation announcements could be a part of a founder's exit strategy, which involves a sale of his or her equity stake in the firm as well. Additional support for this conjecture is provided by the results of models (4) in Panels A and B. Here we allow for the influence of family ownership to differ between complete and partial exits. We do so by introducing two interactive dummy variables: COMPL_F and COMPL_F2, which are obtained by multiplying COMPL with FAM_OWN and FAM_OWN2, respectively. Our results imply that in the complete exit firms the relationship between family ownership and pre-resignation performance is more positive than in the partial exit firms. This could imply that founders prefer to resign after a

stretch of good performance, potentially indicating an exit from the equity position as well.[10]

We also allow for the influence of family ownership on the pre-resignation performance to differ between various types of exit and succession. In particular, we introduce the following interactive dummy variables. FORCED_F and FORCED_F2 are interactive dummy variables, obtained by multiplying FORCED with FAM_OWN and FAM_OWN2, respectively. REPLOUT_F and REPLOUT_F2 are interactive dummy variables, obtained by multiplying REPLOUT with FAM_OWN and FAM_OWN2, respectively. The results of these regressions are reported in models (2), (3), (6), and (7) of Table 6. For the full sample (Panel A) we do not find any differences in the influence of family ownership on the pre-resignation performance between various types of exits and succession. For the family firm subsample (Panel B) we find some weak evidence that a bad performance in a firm with a high family ownership is followed by an outside succession. This finding is consistent with incentive alignment at high levels of family ownership.

Finally, it is interesting to note that the coefficients for the departing executive's age, LAGE, are positive and statistically significant at the 5% level for all models with PRE2YEAR as the dependent variable. This evidence seems to suggest that older managers are resigning following a stretch of good performance. Comparison of the results in Panels A and B, however, suggest that this relationship seems to be driven primarily by non-founders as none of the coefficients of LAGE in Panel B is statistically significant.

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[10] An examination of post-resignation changes in founder's ownership could shed more light on this conjecture.

While for the full sample, we do not find a significant relationship between family ownership and pre-resignation performance, our findings imply that in the complete exit firms the relationship between family ownership and pre-resignation performance is more positive than in the partial exit firms.

5.3. Family ownership and abnormal returns upon the resignation announcement

We examine the relationship between the cumulative abnormal return upon the resignation announcement and family ownership using the following regression:

$$
\begin{aligned}
CAR_i = {} & \beta_0 + \beta_1 FAM\_OWN_i + \beta_2 FAM\_OWN2_i + \beta_3 FORCED_i + \beta_4 REPLNFAM_i + \beta_5 REPLOUT_i \\
& + \beta_6 REPLFOUND_i + \beta_7 COMPL_i + \beta_8 LAGE_i + \beta_9 LMKT_i + \beta_{10} LFAGE_i + \beta_{11} LTIPOR_i + \varepsilon_i
\end{aligned}
\tag{2}
$$

We use two measures of market reaction upon the resignation announcements: CAR11 and CAR0, which are the cumulative abnormal returns over the three- (one-) day event windows ([−1; +1] and [0], respectively) around the resignation announcements.

Table 7 presents the empirical results on the relationship between cumulative abnormal returns upon the resignation announcements and family ownership. As before, we report the results for the full sample in Panel A and for the family firm subsample in Panel B. For the basic models (models (1) and (2) in both panels), we find that the coefficient estimates for FAM_OWN (FAM_OWN2) are positive (negative) and significant at 5% level for the three-day event window around the resignation announcement. This implies a concave relationship between family ownership and the market reaction upon the resignation announcement. This relationship is depicted in Figure 1. In particular, we find that this relationship is increasing until the family ownership reaches around 40%, and then starts declining, and finally, beyond 80% family ownership, starts having a negative influence on the cumulative abnormal returns. At its

peak, the difference in the cumulative abnormal returns between family and non-family firms reaches 2.8%. The results are qualitatively unchanged when we use the cumulative abnormal return on the resignation announcement date as the dependent variable.

Our results seem to indicate that the entrenchment effect is increasing with family ownership, but, starting at around 40% equity stake, the incentive alignment and / or signaling effects start to increase and counteract the entrenchment effect. Finally, above 80% ownership, the incentive alignment and / or signaling effects dominate, causing a negative relationship between family ownership and the market reaction upon resignation announcements. This result is broadly consistent with findings of Slovin and Sushka (1993), who find a similar concave relationship between the market reaction upon the death of a blockholder and the deceased's ownership, and Morck, Shleifer, and Vishny (1988), who for the 5 to 25% ownership range find a negative relationship between ownership and market value. [11]

Next, we allow for the relationship between family ownership and abnormal returns upon the resignation announcements to differ between various types of exit and succession, as well as between various extents of exit. These results are reported in models (3) to (8) of Panels A and B of Table 7. We find that none of the coefficient estimates of interactive dummy variables introduced in the previous section is statistically significant.

In short, we observe a concave relationship between family ownership and the market reaction upon the resignation, as shown in Figure 1. We also find no significant

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[11] Paeglis and Tirtiroglu (2005) find a similar relationship between family ownership, on the one hand, and underwriter reputation, the extent of analyst coverage, and the institutional interest in family firms around the time of their IPOs.

differences in the above relationship between various types of exit and succession, as well as between various extents of exit.

5.4. Family ownership and post-resignation operating performance

We examine the relationship between changes in the post-resignation operating performance and family ownership using the following regression:

$$
\begin{aligned}
ROA1_i = {} & \beta_0 + \beta_1 FAM\_OWN_i + \beta_2 FAM\_OWN2_i + \beta_3 FORCED_i + \beta_4 REPLNFAM_i + \beta_5 REPLOUT_i \\
& + \beta_6 REPLFOUND_i + \beta_7 COMPL_i + \beta_8 LAGE_i + \beta_9 LMKT_i + \beta_{10} LTIPOR_i + \beta_{11} ROAX1_i \qquad (3) \\
& + \beta_{12} LEVER_i + \beta_{13} RD_i + \beta_{14} RSDA_i + \beta_{15} YEARD_i + \varepsilon_i
\end{aligned}
$$

ROA1 and ROAX1 are returns on assets, defined as the ratio of EBITDA to the book value of total assets for the year after and the year before the resignation announcement, respectively. Following Anderson and Reeb (2003), we use the following firm-level control variables. LEVER is the ratio of long-term debt to the book value of total assets at end of the first full fiscal year after the resignation announcement. RD is the ratio of R&D expenses to the book value of total assets at the end of the first full fiscal year after the resignation announcement. RSDA is the standard deviation of the residuals from the market model, estimated over the 250 trading days starting on the 11th trading day after the resignation announcement. Finally, we control for differences in the operating performance over time using year dummy variables. [12]

Table 8 presents the empirical results on the relationship between changes in the post-resignation operating performance and family ownership. As in the case of the cumulative abnormal returns, we find a concave and statistically significant relationship

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[12] We also estimate the above regression using industry-level fixed effects (defining an industry using 2-digit SIC codes). The results are qualitatively unchanged in this alternative specification.

between the family ownership and changes in the operating performance around the resignation announcement. This relationship is depicted in Figure 2. In particular, we find that the coefficient estimates of FAM_OWN is positive and significant, while the coefficient estimates of FAM_OWN2 is negative and significant. The relationship between family ownership and changes in the operating performance surrounding resignation announcements is increasing until the family ownership reaches 27%, then starts declining, and finally, beyond 54% family ownership, starts having a negative influence on the change in the operating performance. At its peak, the difference in the change in the operating performance between family and non-family firms reaches 5.1%. The results are qualitatively unchanged for the family firm subsample. To summarize, our findings reported here are similar to those reported in the previous section and imply that at high levels of family ownership the incentive alignment and / or signaling effects dominate the entrenchment effects.

As before, we allow for the influence of the family ownership on changes in the operating performance to differ between various types of exit and succession, as well as between complete and partial exits. The results are reported in models (2) to (4) of Panels A and B of Table 8. None of the coefficient estimates of interactive dummy variables is significant.

To summarize, we find a concave and statistically significant relationship between the family ownership and changes in the operating performance around the resignation relationship, as shown in Figure 2. Furthermore, there are no differences in the relationship between family ownership and changes in the operating performance between various types of exit and succession.

5.5. Family ownership and the likelihood of various types of resignations

We examine the relationship between the likelihood of various types of resignations and family ownership using the following logit regression:

$$TYPE_i = \beta_0 + \beta_1 FAM\_OWN_i + \beta_2 FAM\_OWN2_i + \beta_3 LAGE_i + \beta_4 LMKT_i \\ + \beta_5 LFAGE_i + \beta_6 LTIPOR_i + \varepsilon_i \tag{4}$$

We examine the following types of successions and the extents of resignation: (1) family succession versus other types of succession (using REPLFAM as the dependent variable) and (2) complete versus partial exits (using COMPL as the dependent variable).

Table 9 reports the empirical results on the relationship between family ownership and the likelihoods of a family succession and a complete exit. Panel A shows the results for the full sample, while Panel B reports the results for the family firm subsample. First, we find a concave and statistically significant relationship between family ownership and the likelihood of a family succession. This indicates that the family succession is most likely to happen at intermediate levels of family ownership. The implied probabilities, based on the model (1) reported in Table 9, for various levels of family ownership are calculated in Table 10 and are depicted in Figure 3 (values of all other independent variables are held at their respective means). In particular, we find that at 49% family ownership the probability of a family succession reaches its peak (at 10.20%) and then starts approaching zero as family ownership continues to increase. This relationship remains unchanged when we use the family firm subsample (model 3).

Our results suggest that firms in which founding family owns more than 50% of shares are increasingly more likely to choose a professional management instead of promoting a family member to the top management and / or governance positions. The above finding also supports evidence reported in previous sections. In particular, the low

probability of a family succession at high levels of family ownership seems to indicate an increasing incentive alignment between family and minority shareholders for this range of family ownership. [13]

Second, we find a convex relationship between family ownership and the likelihood of a complete exit. Again, the implied probabilities for various levels of family ownership are calculated in Table 10 and depicted in Figure 3. The probability of a complete exit decreases with family ownership until the latter reaches about 35% and then starts increasing. This finding seems to provide another piece of evidence that family loyalty to the firm may not yet be present in newly public family firms and that other factors, such as founder's desire to exit from his or her equity position, could have a significant influence on the resignation decision. On the other hand, this result is highly puzzling, especially given the fact that firms with a high level of family ownership are more highly valued by the market as evidenced by the findings of this paper and those of Paeglis and Tirtiroglu (2005).

In short, our results show a bell-shaped relationship between family ownership and the likelihood of a family succession and a convex relationship between family ownership and the likelihood of a complete exit.

6. Conclusions and extensions

In this paper, by examining performance and its changes around founder resignations in newly public firms, we have attempted to answer the following question:

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[13] In unreported results we also find a concave (convex) relationship between family ownership and the percentage of board seats held by family members (outside directors). This could indicate either an incentive alignment (i.e., a founder's willingness to submit to the scrutiny of outside directors) or purely reflect the fact that his or her equity position is sufficient to control the firm (i.e., that the board control is not needed to strengthen his or her control over the firm).

"How does a founding family become an asset to the firm?". We hypothesize that one way in which the transition of a founding family from a liability to an asset takes place is through an exit (either voluntary or forced) of founders who have become a liability to their firms.

We argue that resignations from management and / or governance positions in the firm could be seen as steps in the founder's exit strategy. We find no relationship between the pre-replacement performance and the ownership of founding family. We do, however, find some evidence that founders who completely resign from all positions in their firms do so after a relatively good performance. This finding seems to indicate that, to the extent that a complete exit signals a founder's intention to exit from the equity position in the firm as well, founders are timing their exit. Since it is possible that the resignation announcement is not the first indication of his or her intention to leave the firm (e.g., there could have been equity sales by the founder before the resignation announcement), one of potential extensions of this paper is to examine the market reaction upon the first indication of a founder's intention to leave the firm.

Overall, our results indicate an entrenchment at low levels of family ownership and a better alignment of family's interests with those of minority shareholders at high levels of family ownership. First, we find a non-linear and concave relationship between family ownership and the market reaction upon founder resignation announcements. In particular, we find that cumulative abnormal returns are increasing with the level of family ownership (until about 40%), then decreasing, and finally becoming negative after around 80%. Our tests also suggest that this relationship is not driven by either of our proxies for a founder's exit from the equity position. In particular, we do not observe any

differences in the market reaction between normal and forced exits, partial and complete exits, as well as between an outside and other types of succession. A potential extension of this study could look at the subset of the announcements for which there have been no previous indications of a founder's intention to exit his or her equity position. Second, we find the same non-linear and concave relationship between changes in the operating performance around founder resignations and ownership of the founding family.

Finally, we find a bell-shaped relationship between family ownership and the likelihood of a family succession. Our results imply that a family succession is more likely at intermediate levels of family ownership, while at low and high levels of family ownership the likelihood of a family succession approaches zero. This finding seems to provide an additional evidence of a better alignment of family's incentives with those of minority shareholders. At the same time, we find a convex relationship between family ownership and the likelihood of a complete exit. This result is somewhat surprising, especially for firms with high levels of family ownership, since it is in these firms that one would expect the family to maintain its influence. A further investigation of founder's post-resignation ownership position in the firm could shed some light on both the motivation behind the exit and the accompanying negative market reaction.

Potential extensions of this theses could include an examination of the relationship between various personal characteristics of a founder and the likelihood of his or her resignation. In particular, if the bequest of the firm to his or her children is an important factor in the founder's utility function, the number of founder's children could have a significant influence on the likelihood of a complete exit from the firm.

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Table 1: Sample distribution by position held before and after resignation

The sample includes 905 resignation announcements between 1993 and 2004. The sample is obtained by identifying changes in the positions held by CEO, president, and / or chairman of the board for the 1,448 firms that went public between 1993 and 1996. The status of an executive as a firm's founder is obtained from the firm's IPO prospectus. Columns show the positions at the time of the IPO, while rows show the post-resignation positions.

Panel A: For founders

	management and governance			management			governance	
	CEO and chairman	CEO, chairman, president	Chairman and president	CEO and president	CEO	President	Chairman	TOTAL
CEO and chairman	0	34	0	8	0	0	1	43
CEO, chairman, president	1	0	0	1	0	0	2	4
Chairman and president	0	1	0	0	0	0	0	1
CEO and president	0	2	0	0	0	0	0	2
CEO	0	1	0	3	0	1	1	6
President	0	0	0	3	0	0	0	3
Vice president	4	2	0	3	0	0	5	14
Chairman	113	36	4	16	8	2	0	179
Director	26	3	0	25	7	5	51	117
Consultant	3	3	1	4	0	1	2	14
None	33	9	2	19	3	2	49	117
TOTAL	180	91	7	82	18	11	111	500

Panel B: For non-founders

	management and governance			management			governance	
	CEO and chairman	CEO, chairman, president	Chairman and president	CEO and president	CEO	President	Chairman	TOTAL
CEO and chairman	0	15	0	3	1	0	1	20
CEO, chairman, president	0	1	0	0	0	0	0	1
Chairman and president	0	0	0	0	0	0	0	0
CEO and president	0	4	0	1	0	0	0	5
CEO	1	0	0	4	0	0	0	5
President	0	0	1	7	0	0	0	8
Vice president	1	1	0	1	2	0	1	6
Chairman	78	20	0	19	2	0	0	119
Consultant	3	4	0	10	2	0	3	22
Director	16	10	0	26	6	1	14	73
None	29	15	2	66	5	5	24	146
TOTAL	128	70	3	137	18	6	43	405

Table 2: Sample distribution by position held before resignation and the succession type

The sample includes 905 resignation announcements between 1993 and 2004. The sample is obtained by identifying changes in the positions held by CEO, president, and / or chairman of the board for the 1,448 firms that went public between 1993 and 1996. The status of an executive as a firm's founder is obtained from the firm's IPO prospectus. Columns show the positions at the time of the IPO, while rows show the type of succession.

Panel A: For founders

	management and governance			management			governance	
	CEO and chairman	CEO, chairman, president	Chairman and president	CEO and president	CEO	President	Chairman	TOTAL
replaced by a non-family insider	98	47	4	37	9	4	63	262
replaced by an outsider	43	30	0	24	5	3	21	126
replaced by a family member	13	2	0	3	1	1	4	24
promotion	1	0	0	0	0	0	3	4
search	24	10	2	18	3	2	5	64
no replacement sought	1	2	1	0	0	1	15	20
TOTAL	180	91	7	82	18	11	111	500

Panel B: For non-founders

	management and governance			management			governance	
	CEO and chairman	CEO, chairman, president	Chairman and president	CEO and president	CEO	President	Chairman	TOTAL
replaced by a non-family insider	84	28	0	61	11	2	24	210
replaced by an outsider	20	21	2	37	2	0	7	89
replaced by the founder	3	3	1	6	0	0	2	15
search	21	18	0	33	5	1	4	82
no replacement sought	0	0	0	0	0	3	6	9
TOTAL	128	70	3	137	18	6	43	405

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Table 3: Sample distribution by position held before resignation and the extent of exit

The sample includes 905 resignation announcements between 1993 and 2004. The sample is obtained by identifying changes in the positions held by CEO, president, and / or chairman of the board for the 1,448 firms that went public between 1993 and 1996. The status of an executive as a firm's founder is obtained from the firm's IPO prospectus. Columns show the positions at the time of the IPO, while rows show the type of exit. An exit is classified as forced if the departing executive is replaced by an outsider or the announcement mentions a search for a replacement *and* the departing executive leaves the firm, *and* the departing executive is not between the ages of 64 and 66. All other exits are classified as normal.

Panel A: For founders

	management and governance			management			governance	
	CEO and chairman	CEO, chairman, president	Chairman and president	CEO	CEO and president	President	Chairman	TOTAL
normal exit	166	87	5	18	67	10	97	450
forced exit	14	4	2	0	15	1	14	50
TOTAL	180	91	7	18	82	11	111	500

Panel B: For non-founders

	management and governance			management			governance	
	CEO and chairman	CEO, chairman, president	Chairman and president	CEO	CEO and president	President	chair	TOTAL
normal exit	115	59	2	15	94	5	38	328
forced exit	13	11	1	3	43	1	5	77
TOTAL	128	70	3	18	137	6	43	405

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Table 4: Summary statistics

The sample includes 905 resignation announcements between 1993 and 2004. The sample is obtained by identifying changes in the positions held by CEO, president, and / or chairman of the board for the 1,448 firms that went public between 1993 and 1996. FAM_OWN is family ownership. FAM_OWN2 is family ownership squared. FORCED is a dummy variable that takes on a value of one if the departing executive is replaced by an outsider or if the announcement mentions a search for a replacement *and* the departing executive leaves the firm, *and* the departing executive is not between the ages of 64 and 66. COMPL is a dummy variable that takes on a value of one if the executive left the firm completely. REPLOUT is a dummy variable that takes on a value of one if the departing executive was replaced by an outsider. REPLFAM is a dummy variable that takes on a value of one if the departing executive was replaced by a family member. REPLFOUND is a dummy variable that takes on a value of one if the departing non-family executive was replaced by the founder, and zero otherwise. FORCED_F is a product of FORCED and FAM_OWN. FORCED_F2 is a product of FORCED and FAM_OWN2. COMPL_F is a product of COMPL and FAM_OWN. COMPL_F2 is a product of COMPL and FAM_OWN2. REPLOUT_F is a product of REPLOUT and FAM_OWN. REPLOUT_F2 is a product of REPLOUT and FAM_OWN2. LAGE is the natural logarithm of the departing executive's age at the time of resignation. LFAGE is the natural logarithm of one plus firm age, where firm age is defined as the number of years between the year of incorporation or start of operations (whichever is earlier), and the year of an executive's resignation. LMKT is the natural logarithm of the market value of the firm's equity on the 20th trading day preceding the resignation announcement. LEVER is the ratio of long-term debt to the book value of total assets at the end of the 1st fiscal year after the resignation announcement. RD is the ratio of R&D expenses to the book value of total assets at the end of the 1st fiscal year after the resignation announcement. RSDA is the standard deviation of the residuals from the market model, estimated over the 250 trading days starting on the 11th trading day after the resignation announcement. LTIPOR is the natural logarithm of the time (in days) between the IPO and the resignation announcement. PRE1YEAR is the market-adjusted stock return over the 250 trading days ending on the 11th day before the resignation announcement. PRE2YEAR is the market-adjusted stock return over the 500 trading days ending on the 11th day before the resignation announcement. CAR11 is the cumulative abnormal return over the three day event window around the resignation announcement date. CAR0 is the cumulative abnormal return on the resignation announcement date. ROAX1 and ROA1 are returns on assets, defined as the ratio of EBITDA to the book value of total assets for the fiscal year before and the fiscal year after an executive's resignation, respectively. The dependent variables are winsorized at the 1st and 99th percentiles.

Panel A: Summary statistics of independent variables

	min	mean	median	max	sd
FAM_OWN	0	0.117	0.029	0.938	0.178
FAM_OWN2	0	0.045	0.001	0.880	0.108
FORCED	0	0.140	0	1	0.348
COMPL	0	0.330	0	1	0.471
REPLOUT	0	0.238	0	1	0.426
REPLFAM	0	0.027	0	1	0.161
REPLFOUND	0	0.017	0	1	0.128
FORCED_F	0	0.012	0	0.737	0.072
FORCED_F2	0	0.005	0	0.543	0.041
COMPL_F	0	0.028	0	0.819	0.101
COMPL_F2	0	0.011	0.001	0.670	0.056
REPLOUT_F	0	0.033	0	0.870	0.110
REPLOUT_F2	0	0.013	0	0.757	0.061
LAGE	3.091	3.946	3.951	4.500	0.189
LFAGE	0	2.536	2.485	5.100	0.760
LMKT	6.721	11.552	11.398	18.037	1.643
LEVER	0	0.159	0.035	0.999	0.220
RD	0	0.349	0.023	18.691	1.347
RSDA	0.012	0.060	0.051	0.395	0.036
LTIPOR	3.091	6.887	6.985	8.297	0.804

Panel B: Summary statistics of dependent variables

	min	mean	median	max	sd
PRE1YEAR	-1.168	-0.235	-0.421	4.589	0.717
PRE2YEAR	-1.547	-0.414	-0.672	6.532	0.973
CAR11	-0.353	0.003	-0.003	0.442	0.107
CAR0	-0.247	0.001	-0.003	0.246	0.066
ROA1	-2.169	-0.060	0.065	0.403	0.381
ROAX1	-1.677	-0.020	0.064	0.387	0.294

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Panel C: Correlations between independent variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	FAM_OWN	1													
2	FAM_OWN2	0.9315	1												
3	FORCED	-0.0624	-0.0198	1											
4	COMPL	-0.1345	-0.0754	0.5699	1										
5	REPLOUT	0.0826	0.0706	0.1505	-0.0985	1									
6	REPLFAM	0.2531	0.2316	-0.0595	-0.0005	-0.0863	1								
7	REPLFOUND	-0.0800	-0.0512	-0.0468	0.0487	-0.0679	-0.0187	1							
8	FORCED_F	0.3022	0.3019	0.4186	0.2386	0.1827	-0.0249	-0.0196	1						
9	FORCED_F2	0.3069	0.3299	0.3285	0.1872	0.1646	-0.0195	-0.0154	0.96	1					
10	COMPL_F	0.4231	0.4119	0.2441	0.3833	0.0614	0.2276	-0.0315	0.6922	0.6686	1				
11	COMPL_F2	0.4314	0.4638	0.2003	0.2739	0.0699	0.2527	-0.0225	0.676	0.7081	0.9466	1			
12	REPLOUT_F	0.4974	0.4695	0.1002	-0.0383	0.5385	-0.0465	-0.0366	0.4586	0.4626	0.2932	0.3081	1		
13	REPLOUT_F2	0.4970	0.5286	0.1055	-0.0079	0.3933	-0.0339	-0.0267	0.4753	0.514	0.3118	0.3508	0.9401	1	
14	LAGE	0.0110	0.0521	0.0066	-0.0132	-0.0958	0.1384	0.0860	-0.0123	-0.0014	0.067	0.0869	-0.1256	-0.1101	1
15	LFAGE	0.0984	0.1457	-0.0644	-0.0641	-0.0819	0.1296	0.0211	0.0076	0.0196	0.0382	0.0653	-0.0383	-0.0092	0.3282
16	LMKT	-0.0267	0.0071	-0.1074	-0.1084	-0.1153	0.0173	0.0478	-0.0803	-0.0602	-0.0838	-0.0595	-0.1108	-0.0723	0.0206
17	LEVER	-0.0240	0.0071	0.0660	0.0617	-0.0307	-0.0037	0.0227	0.0319	0.0574	0.0654	0.0837	-0.0114	0.0088	0.0605
18	RD	-0.0800	-0.0718	-0.0075	-0.0354	0.0176	-0.0314	-0.0184	-0.0097	-0.0191	-0.0309	-0.0323	-0.0419	-0.0384	-0.0103
19	RSDA	0.0249	-0.0061	0.0697	0.0718	0.1253	-0.0478	-0.0539	0.0378	0.0268	0.0391	0.0128	0.0783	0.0404	-0.1426
20	LTIPOR	-0.0057	0.0048	-0.0950	-0.0706	-0.0600	0.0516	-0.0539	-0.0143	-0.0044	0.0189	0.0275	-0.0752	-0.0574	0.1942

		15	16	17	18	19	20
15	LFAGE	1					
16	LMKT	0.1219	1				
17	LEVER	-0.0068	0.0783	1			
18	RD	-0.0763	-0.0426	0.0353	1		
19	RSDA	-0.2135	-0.4512	-0.0143	0.0911	1	
20	LTIPOR	0.3358	0.2186	0.0470	0.1035	-0.0078	1

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Table 5: Univariate event study results

The sample includes 905 resignation announcements between 1993 and 2004. The sample is obtained by identifying changes in the positions held by CEO, president, and / or chairman of the board for the 1,448 firms that went public between 1993 and 1996. Pre-announcement cumulative abnormal returns are calculated over 250 and 500 trading days ending on the 11th day before the announcement and are adjusted using CRSP value-weighted market index. Announcement period cumulative abnormal returns are calculated over the three day event window around the resignation announcement. The market model parameters are calculated over the 250-day period starting on the 11th day after the resignation announcement. We require at least 100 observations for the estimation of the market model parameters. For the announcement period cumulative abnormal returns, we exclude observations for which the news stories announcing an executive's departure contain any other announcements. All returns are winsorized at the 1st and 99th percentiles. An exit is classified as complete if the departing executive either has no connection to the firm after the resignation or remains a consultant. An exit is classified as forced if the departing executive is replaced by an outsider or if the announcement mentions a search for a replacement *and* the departing executive leaves the firm, *and* the departing executive is not between the ages of 64 and 66. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Full sample

	pre-announcement CARs (−260, −11)			pre-announcement CARs (−510, −11)			announcement CARs (−1, +1)		
	mean	median	n	mean	median	n	mean	median	n
founder	-0.213	-0.401	472	-0.353	-0.643	471	0.013	0.004	337
	(-6.43)***	(-8.45)***		(-7.28)***	(-9.54)***		(2.38)**	(1.72)*	
non-founder	-0.260	-0.432	388	-0.487	-0.686	387	-0.001	-0.008	280
	(-7.20)***	(-9.60)***		(-11.16)***	(-11.60)***		(-0.18)	(-0.79)	

Panel B: Complete versus partial exits

	pre-announcement CARs (−260, −11)			pre-announcement CARs (−510, −11)			announcement CARs (−1, +1)		
	mean	median	n	mean	median	n	mean	median	n
complete exits									
founder	-0.235	-0.425	118	-0.420	-0.661	120	-0.007	-0.004	82
	(-3.48)***	(-4.87)***		(-4.67)***	(-5.67)***		(-0.57)	(-0.75)	
non-founder	-0.358	-0.519	159	-0.626	-0.715	160	-0.022	-0.025	115
	(-7.84)***	(-7.79)***		(-13.25)***	(-9.24)***		(-2.39)**	(-2.77)***	
partial exits									
founder	-0.206	-0.397	354	-0.331	-0.643	351	0.020	0.009	255
	(-5.40)***	(-6.97)***		(-5.75)***	(-7.76)***		(3.19)***	(2.49)**	
non-founder	-0.192	-0.380	229	-0.390	-0.648	227	0.014	0.003	165
	(-3.69)***	(-6.03)***		(-5.91)***	(-7.44)***		(1.82)*	(1.37)	

Panel C: By the type of succession

	pre-announcement CARs (−260, −11)			pre-announcement CARs (−510, −11)			announcement CARs (−1, +1)		
	mean	median	n	mean	median	n	mean	median	n
replaced by a non-family insider									
founder	-0.082	-0.285	249	-0.168	-0.499	246	0.014	0.004	189
	(-1.66)*	(-3.59)***		(-2.27)**	(-4.33)***		(2.07)**	(1.25)	
non-founder	-0.147	-0.323	199	-0.386	-0.549	198	0.001	-0.007	152
	(-2.66)***	(-5.18)***		(-5.87)***	(-7.50)***		(0.13)	(-0.55)	
replaced by an outsider									
founder	-0.363	-0.527	116	-0.601	-0.766	117	0.028	0.015	83
	(-6.98)***	(-6.27)***		(-7.86)***	(-7.55)***		(2.27)**	(2.25)**	
non-founder	-0.348	-0.571	85	-0.580	-0.813	84	0.017	0.021	57
	(-4.69)***	(-5.35)***		(-6.87)***	(-5.89)***		(1.49)	(1.28)	
replaced by a family member									
founder	-0.154	-0.147	23	-0.025	-0.265	23	0.005	-0.002	17
	(2.00)**	(-1.83)*		(-0.13)	(-1.07)		(0.32)	(-0.02)	
search									
founder	-0.513	-0.665	63	-0.675	-0.966	63	-0.010	-0.009	34
	(-8.06)***	(-5.62)***		(-6.22)***	(-5.06)***		(-0.43)	(-0.71)	
non-founder	-0.440	-0.563	81	-0.652	-0.860	81	-0.025	-0.029	55
	(-7.36)***	(-6.10)***		(-8.04)***	(-6.06)***		(-1.58)	(-1.73)*	

Panel D: By the type of exit

	pre-announcement CARs (−260, −11)			pre-announcement CARs (−510, −11)			announcement CARs (−1, +1)		
	mean	median	n	mean	median	n	mean	median	n
normal									
founder	-0.199	-0.396	426	-0.321	-0.636	425	0.016	0.004	309
	(-5.57)***	(-7.62)***		(-6.09)***	(-8.41)***		(2.79)***	(1.92)*	
non-founder	-0.223	-0.396	314	-0.447	-0.678	313	0.003	-0.004	232
	(-5.38)***	(-7.94)***		(-8.75)***	(-9.85)***		(0.45)	(-0.26)	
forced									
founder	-0.346	-0.509	46	-0.649	-0.817	46	-0.014	0.003	28
	(-4.34)**	(-3.95)***		(-7.70)***	(-5.10)***		(-0.60)	(-0.43)	
non-founder	-0.417	-0.566	74	-0.658	-0.747	74	-0.020	-0.027	48
	(-6.12)***	(-5.56)***		(-9.22)***	(-6.26)***		(-1.22)	(-1.21)	

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Table 6: Determinants of pre-resignation performance

The dependent variables, PRE1YEAR and PRE2YEAR, are 1-year (250-trading-day) and 2-year (500-trading-day) market-adjusted returns on the firm's stock, respectively. FAM_OWN is family ownership. FAM_OWN2 is family ownership squared. FORCED is a dummy variable that takes on a value of one if the departing executive is replaced by an outsider or if the announcement mentions a search for a replacement and the departing executive leaves the firm, and the departing executive is not between the ages of 64 and 66. . REPLNFAM is a dummy variable that takes on a value of one if the departing executive was replaced by non-family insider. REPLOUT is a dummy variable that takes on a value of one if the departing executive was replaced by an outsider. REPLFOUND is a dummy variable that takes on a value of one if the founder became a CEO after the resignation of a non-family executive. COMPL is a dummy variable that takes on a value of one if the executive left the firm completely. LAGE is the natural logarithm of the departing executive's age at the time of resignation. LMKT is the natural logarithm of the market value of the firm's equity on the 20th trading day preceding the resignation announcement LFAGE is the natural logarithm of one plus firm age, where firm age is defined as the number of years between the year of incorporation or start of operations (whichever is earlier), and the year of an executive's resignation. LTIPOR is the natural logarithm of the time (in days) between the IPO and the resignation announcement. FORCED_F is a product of FORCED and FAM_OWN. FORCED_F2 is a product of FORCED and FAM_OWN2. COMPL_F is a product of COMPL and FAM_OWN. COMPL_F2 is a product of COMPL and FAM_OWN2. REPLOUT_F is a product of REPLOUT and FAM_OWN. REPLOUT_F2 is a product of REPLOUT and FAM_OWN2. The dependent variables are winsorized at the 1st and 99th percentiles. Heteroskedasticity-adjusted (White) standard errors are used in calculation of t-statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Full sample

	(1) PRE1YEAR	(2) PRE1YEAR	(3) PRE1YEAR	(4) PRE1YEAR	(5) PRE2YEAR	(6) PRE2YEAR	(7) PRE2YEAR	(8) PRE2YEAR
FAM_OWN	0.391	0.294	0.265	0.041	0.668	0.730	0.571	0.627
	(1.03)	(0.72)	(0.60)	(0.09)	(1.28)	(1.28)	(0.93)	(0.99)
FAM_OWN2	-0.126	0.005	0.245	0.346	0.028	0.023	0.624	0.404
	(0.20)	(0.01)	(0.33)	(0.47)	(0.03)	(0.02)	(0.58)	(0.38)
FORCED	0.015	-0.019	0.024	0.025	-0.022	0.017	-0.002	-0.022
	(0.18)	(0.20)	(0.29)	(0.31)	(0.25)	(0.18)	(0.02)	(0.25)
REPLNFAM	0.198	0.192	0.202	0.201	0.163	0.173	0.175	0.152
	(3.38)***	(3.21)***	(3.42)***	(3.45)***	(2.15)**	(2.21)**	(2.27)**	(2.01)**
REPLOUT	0.054	0.047	0.059	0.049	-0.012	0.001	0.047	-0.010
	(0.93)	(0.78)	(0.78)	(0.85)	(0.17)	(0.02)	(0.52)	(0.13)
REPLFOUND	-0.050	-0.061	-0.043	-0.037	-0.189	-0.171	-0.161	-0.195
	(0.36)	(0.44)	(0.31)	(0.28)	(1.28)	(1.13)	(1.07)	(1.32)
COMPL	0.012	0.010	0.012	-0.054	0.000	0.004	0.003	0.030
	(0.19)	(0.15)	(0.19)	(0.82)	(0.00)	(0.05)	(0.04)	(0.38)
LAGE	0.172	0.176	0.153	0.164	0.391	0.385	0.345	0.412
	(1.38)	(1.42)	(1.22)	(1.30)	(2.48)**	(2.44)**	(2.18)**	(2.60)***
LMKT	0.182	0.182	0.182	0.183	0.271	0.270	0.269	0.269
	(10.54)***	(10.53)***	(10.49)***	(10.59)***	(12.79)***	(12.70)***	(12.80)***	(12.73)***
LFAGE	-0.003	-0.004	-0.004	-0.004	-0.052	-0.052	-0.054	-0.053
	(0.12)	(0.13)	(0.15)	(0.13)	(1.32)	(1.33)	(1.37)	(1.36)
LTIPOR	-0.034	-0.035	-0.032	-0.036	0.061	0.063	0.062	0.065
	(0.90)	(0.92)	(0.84)	(0.96)	(1.14)	(1.18)	(1.15)	(1.22)
FORCED_F		1.000				-0.385		
		(0.97)				(0.36)		
FORCED_F2		-1.492				-0.086		
		(0.88)				(0.05)		
REPLOUT_F			0.512				0.403	
			(0.68)				(0.40)	
REPLOUT_F2			-1.381				-2.115	
			(1.19)				(1.31)	
COMPL_F				1.486				0.501
				(1.79)*				(0.54)
COMPL_F2				-2.136				-2.098
				(1.55)				(1.39)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-3.004	-3.008	-2.932	-2.938	-5.363	-5.363	-5.187	-5.446
	(4.65)***	(4.64)***	(4.49)***	(4.48)***	(7.18)***	(7.18)***	(6.93)***	(7.24)***
Adj R-sq	0.27	0.27	0.27	0.27	0.31	0.31	0.32	0.32
Observations	849	849	849	849	847	847	847	847

Panel B: Family firms

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PRE1YEAR	PRE1YEAR	PRE1YEAR	PRE1YEAR	PRE2YEAR	PRE2YEAR	PRE2YEAR	PRE2YEAR
FAM_OWN	0.790	0.584	0.541	0.340	1.413	1.331	1.045	1.698
	(1.43)	(0.99)	(0.88)	(0.53)	(1.80)*	(1.57)	(1.16)	(1.84)*
FAM_OWN2	-0.676	-0.418	-0.129	-0.073	-0.951	-0.799	-0.024	-0.959
	(0.84)	(0.49)	(0.14)	(0.08)	(0.80)	(0.63)	(0.02)	(0.68)
FORCED	-0.022	-0.226	-0.007	-0.019	-0.147	-0.207	-0.117	-0.127
	(0.17)	(1.25)	(0.05)	(0.16)	(1.08)	(1.03)	(0.85)	(0.94)
REPLNFAM	0.207	0.194	0.209	0.216	0.227	0.226	0.234	0.200
	(2.76)***	(2.51)**	(2.75)***	(2.84)***	(2.33)**	(2.24)**	(2.35)**	(2.08)**
REPLOUT	0.038	0.023	-0.015	0.041	0.002	0.004	-0.042	0.002
	(0.50)	(0.30)	(0.10)	(0.54)	(0.02)	(0.04)	(0.26)	(0.02)
COMPL	0.104	0.101	0.102	-0.074	0.129	0.130	0.129	0.307
	(1.04)	(1.01)	(1.02)	(0.54)	(1.02)	(1.02)	(1.00)	(1.67)*
LAGE	0.001	0.023	-0.031	0.002	0.300	0.307	0.237	0.334
	(0.00)	(0.13)	(0.19)	(0.01)	(1.35)	(1.37)	(1.06)	(1.49)
LMKT	0.200	0.203	0.200	0.202	0.323	0.324	0.323	0.321
	(9.71)***	(9.72)***	(9.63)***	(9.76)***	(11.42)***	(11.38)***	(11.57)***	(11.53)***
LFAGE	0.081	0.077	0.077	0.074	-0.002	-0.004	-0.010	-0.003
	(1.60)	(1.55)	(1.52)	(1.49)	(0.03)	(0.06)	(0.15)	(0.05)
LTIPOR	-0.006	-0.014	0.001	-0.004	0.127	0.127	0.138	0.133
	(0.10)	(0.22)	(0.01)	(0.07)	(1.43)	(1.41)	(1.55)	(1.51)
FORCED_F		2.187				1.081		
		(1.53)				(0.71)		
FORCED_F2		-2.935				-1.904		
		(1.39)				(0.85)		
REPLOUT_F			1.073				1.581	
			(1.01)				(1.21)	
REPLOUT_F2			-2.146				-3.548	
			(1.47)				(1.85)*	
COMPL_F				1.999				-0.731
				(1.81)*				(0.56)
COMPL_F2				-2.789				-0.592
				(1.69)*				(0.31)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-2.303	-2.316	-2.202	-2.282	-6.218	-6.235	-5.976	-6.376
	(3.03)***	(3.05)***	(2.87)***	(2.95)***	(6.28)***	(6.28)***	(5.99)***	(6.40)***
Adj R-sq	0.27	0.27	0.27	0.27	0.33	0.33	0.34	0.34
Observations	465	465	465	465	464	464	464	464

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Table 7: Determinants of announcement effects

The dependent variables, CAR11 and CAR0, are the cumulative abnormal returns calculated over the three- and one-day event windows, respectively. The market model parameters are calculated over the 250-day period starting on the 11th day after the resignation announcement. We require at least 100 observations for the estimation of the market model parameters. We exclude observations for which the news stories announcing an executive's departure contain any other announcements. FAM_OWN is family ownership. FAM_OWN2 is family ownership squared. FORCED is a dummy variable that takes on a value of one if the departing executive is replaced by an outsider or if the announcement mentions a search for a replacement and the departing executive leaves the firm, and the departing executive is not between the ages of 64 and 66. REPLNFAM is a dummy variable that takes on a value of one if the departing executive was replaced by non-family insider. REPLOUT is a dummy variable that takes on a value of one if the departing executive was replaced by an outsider. REPLFOUND is a dummy variable that takes on a value of one if the founder became a CEO after the resignation of a non-family executive. COMPL is a dummy variable that takes on a value of one if the executive left the firm completely. LAGE is the natural logarithm of the departing executive's age at the time of resignation. LMKT is the natural logarithm of the market value of the firm's equity on the 20th trading day preceding the resignation announcement. LFAGE is the natural logarithm of one plus firm age, where firm age is defined as the number of years between the year of incorporation or start of operations (whichever is earlier), and the year of an executive's resignation. LTIPOR is the natural logarithm of the time (in days) between the IPO and the resignation announcement. FORCED_F is a product of FORCED and FAM_OWN. FORCED_F2 is a product of FORCED and FAM_OWN2. COMPL_F is a product of COMPL and FAM_OWN. COMPL_F2 is a product of COMPL and FAM_OWN2. REPLOUT_F is a product of REPLOUT and FAM_OWN. REPLOUT_F2 is a product of REPLOUT and FAM_OWN2. The dependent variables are winsorized at the 1st and 99th percentiles. Heteroskedasticity-adjusted (White) standard errors are used in calculation of t-statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Full sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CAR11	CAR0	CAR11	CAR0	CAR11	CAR0	CAR11	CAR0
FAM_OWN	0.144	0.067	0.145	0.066	0.143	0.065	0.119	0.045
	(2.42)**	(1.81)*	(2.33)**	(1.76)*	(2.17)**	(1.69)*	(1.73)*	(1.15)
FAM_OWN2	-0.184	-0.076	-0.190	-0.078	-0.178	-0.063	-0.163	-0.042
	(2.11)**	(1.43)	(2.10)**	(1.45)	(1.89)*	(1.17)	(1.63)	(0.77)
FORCED	0.003	0.002	0.003	0.001	0.003	0.002	0.004	0.002
	(0.19)	(0.15)	(0.14)	(0.09)	(0.20)	(0.16)	(0.25)	(0.19)
REPLNFAM	0.018	0.001	0.018	0.001	0.018	0.001	0.020	0.000
	(1.51)	(0.10)	(1.47)	(0.08)	(1.51)	(0.12)	(1.57)	(0.06)
REPLOUT	0.031	0.015	0.030	0.014	0.031	0.016	0.031	0.014
	(2.24)**	(1.61)	(2.17)**	(1.58)	(1.93)*	(1.52)	(2.23)**	(1.53)
REPLFOUND	0.051	0.023	0.050	0.023	0.051	0.024	0.053	0.024
	(1.26)	(0.98)	(1.24)	(0.97)	(1.25)	(1.01)	(1.31)	(1.00)
COMPL	-0.026	-0.014	-0.026	-0.014	-0.026	-0.014	-0.032	-0.017
	(2.55)**	(1.98)**	(2.54)**	(1.98)**	(2.53)**	(1.96)*	(2.59)***	(2.19)**
LAGE	-0.008	0.008	-0.008	0.008	-0.008	0.007	-0.010	0.008
	(0.34)	(0.54)	(0.38)	(0.53)	(0.35)	(0.42)	(0.45)	(0.53)
LMKT	-0.002	-0.000	-0.002	-0.000	-0.002	-0.000	-0.002	-0.000
	(0.74)	(0.15)	(0.70)	(0.12)	(0.74)	(0.17)	(0.66)	(0.13)
LFAGE	-0.002	0.003	-0.002	0.003	-0.002	0.003	-0.002	0.003
	(0.31)	(0.86)	(0.34)	(0.83)	(0.31)	(0.87)	(0.32)	(0.88)
LTIPOR	0.010	-0.001	0.010	-0.001	0.010	-0.001	0.010	-0.001
	(1.88)*	(0.37)	(1.85)*	(0.38)	(1.88)*	(0.36)	(1.81)*	(0.37)
FORCED_F			-0.104	-0.029				
			(0.46)	(0.15)				
FORCED_F2			0.264	0.086				
			(0.70)	(0.24)				
REPLOUT_F					0.009	0.011		
					(0.06)	(0.12)		
REPLOUT_F2					-0.028	-0.056		
					(0.12)	(0.41)		
COMPL_F							0.093	0.109
							(0.69)	(1.05)
COMPL_F2							-0.070	-0.183
							(0.36)	(1.15)
Constant	-0.024	-0.032	-0.020	-0.031	-0.022	-0.026	-0.013	-0.031
	(0.27)	(0.55)	(0.23)	(0.53)	(0.24)	(0.44)	(0.15)	(0.51)
Adj R-sq	0.03	0.02	0.03	0.01	0.03	0.01	0.03	0.02
Inflection point	0.391	0.441	0.382	0.423	0.402	0.516	0.365	0.536
Observations	616	614	616	614	616	614	616	614

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Panel B: Family firms

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CAR11	CAR0	CAR11	CAR0	CAR11	CAR0	CAR11	CAR0
FAM_OWN	0.211	0.085	0.198	0.080	0.211	0.093	0.166	0.053
	(2.44)**	(1.75)*	(2.18)**	(1.59)	(2.28)**	(1.81)*	(1.72)*	(1.01)
FAM_OWN2	-0.254	-0.089	-0.244	-0.086	-0.242	-0.088	-0.210	-0.045
	(2.30)**	(1.45)	(2.11)**	(1.37)	(2.07)**	(1.36)	(1.69)*	(0.70)
FORCED	-0.015	-0.001	-0.031	-0.007	-0.015	-0.001	-0.017	-0.002
	(0.58)	(0.08)	(0.77)	(0.31)	(0.57)	(0.07)	(0.66)	(0.10)
REPLNFAM	0.016	0.010	0.014	0.009	0.016	0.010	0.019	0.010
	(0.97)	(0.96)	(0.86)	(0.91)	(0.98)	(1.01)	(1.12)	(0.96)
REPLOUT	0.031	0.023	0.029	0.022	0.034	0.030	0.032	0.022
	(1.56)	(1.78)*	(1.43)	(1.71)*	(1.01)	(1.59)	(1.61)	(1.74)*
COMPL	-0.015	-0.009	-0.015	-0.009	-0.015	-0.008	-0.036	-0.021
	(0.97)	(0.90)	(1.00)	(0.92)	(0.96)	(0.86)	(1.31)	(1.52)
LAGE	-0.050	0.022	-0.049	0.023	-0.053	0.019	-0.052	0.022
	(1.52)	(1.09)	(1.48)	(1.11)	(1.55)	(0.91)	(1.59)	(1.10)
LMKT	-0.003	0.000	-0.003	0.000	-0.003	-0.000	-0.003	0.000
	(0.90)	(0.04)	(0.80)	(0.10)	(0.93)	(0.05)	(0.81)	(0.06)
LFAGE	-0.001	-0.004	-0.001	-0.004	-0.001	-0.004	-0.002	-0.004
	(0.06)	(0.52)	(0.12)	(0.56)	(0.07)	(0.51)	(0.15)	(0.58)
LTIPOR	0.020	0.002	0.020	0.002	0.020	0.002	0.020	0.002
	(2.31)**	(0.39)	(2.19)**	(0.33)	(2.30)**	(0.45)	(2.30)**	(0.44)
FORCED_F			0.039	0.014				
			(0.12)	(0.05)				
FORCED_F2			0.072	0.032				
			(0.16)	(0.07)				
REPLOUT_F					0.009	-0.030		
					(0.04)	(0.23)		
REPLOUT_F2					-0.053	-0.006		
					(0.17)	(0.03)		
COMPL_F							0.183	0.155
							(0.94)	(1.21)
COMPL_F2							-0.177	-0.229
							(0.71)	(1.26)
Constant	0.077	-0.107	0.079	-0.106	0.086	-0.097	0.087	-0.106
	(0.61)	(1.31)	(0.63)	(1.31)	(0.68)	(1.16)	(0.70)	(1.29)
Adj R-sq	0.03	0.00	0.03	-0.00	0.03	0.00	0.03	0.00
Inflection point	0.415	0.478	0.406	0.465	0.436	0.528	0.395	0.589
Observations	336	331	336	331	336	331	336	331

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Table 8: Determinants of post-resignation operating performance changes

The dependent variable, ROA1, is the returns on assets, defined as the ratio of EBITDA to the book value of total assets for first full the fiscal year after an executive's resignation. FAM_OWN is family ownership. FAM_OWN2 is family ownership squared. FORCED is a dummy variable that takes on a value of one if the departing executive is replaced by an outsider or if the announcement mentions a search for a replacement and the departing executive leaves the firm, and the departing executive is not between the ages of 64 and 66. REPLNFAM is a dummy variable that takes on a value of one if the departing executive was replaced by non-family insider. REPLOUT is a dummy variable that takes on a value of one if the departing executive was replaced by an outsider. REPLFOUND is a dummy variable that takes on a value of one if the founder became a CEO after the resignation of a non-family executive. COMPL is a dummy variable that takes on a value of one if the executive left the firm completely. LAGE is the natural logarithm of the departing executive's age at the time of resignation. LMKT is the natural logarithm of the market value of the firm's equity on the 20th trading day preceding the resignation announcement. LTIPOR is the natural logarithm of the time (in days) between the IPO and the resignation announcement. ROAX1 is the returns on assets, defined as the ratio of EBITDA to the book value of total assets for the fiscal year before an executive's resignation. LEVER is the ratio of long-term debt to the book value of total assets at the end of the 1st fiscal year after the resignation announcement. RD is the ratio of R&D expenses to the book value of total assets at the end of the 1st fiscal year after the resignation announcement. RSDA is the standard deviation of the residuals from the market model, estimated over the 250 trading days starting on the 11th trading day after the resignation announcement. FORCED_F is a product of FORCED and FAM_OWN. FORCED_F2 is a product of FORCED and FAM_OWN2. COMPL_F is a product of COMPL and FAM_OWN. COMPL_F2 is a product of COMPL and FAM_OWN2. REPLOUT_F is a product of REPLOUT and FAM_OWN. REPLOUT_F2 is a product of REPLOUT and FAM_OWN2. The dependent variables are winsorized at the 1st and 99th percentiles. Heteroskedasticity-adjusted (White) standard errors are used in calculation of t-statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Full sample

	(1)	(2)	(3)	(4)
	ROA1	ROA1	ROA1	ROA1
FAM_OWN	0.374	0.361	0.374	0.409
	(2.06)**	(1.98)**	(2.06)**	(2.21)**
FAM_OWN2	-0.684	-0.599	-0.698	-0.615
	(1.98)**	(1.87)*	(1.95)*	(1.75)*
FORCED	0.026	0.040	0.026	0.026
	(0.56)	(0.92)	(0.56)	(0.55)
REPLNFAM	-0.039	-0.032	-0.039	-0.042
	(1.31)	(1.12)	(1.32)	(1.36)
REPLOUT	-0.107	-0.098	-0.110	-0.104
	(2.91)***	(2.82)***	(2.42)**	(2.85)***
REPLFOUND	0.071	0.080	0.070	0.066
	(1.22)	(1.39)	(1.19)	(1.10)
COMPL	-0.009	-0.007	-0.009	0.013
	(0.28)	(0.23)	(0.28)	(0.44)
LAGE	0.081	0.079	0.083	0.091
	(1.36)	(1.31)	(1.36)	(1.54)
LMKT	0.012	0.012	0.012	0.011
	(1.64)	(1.57)	(1.65)	(1.51)
LTIPOR	0.020	0.021	0.020	0.022
	(0.81)	(0.85)	(0.81)	(0.90)
ROAX1	0.350	0.351	0.350	0.349
	(4.26)***	(4.26)***	(4.25)***	(4.22)***
LEVER	-0.016	-0.010	-0.017	-0.009
	(0.28)	(0.19)	(0.29)	(0.15)
RD	-0.032	-0.032	-0.032	-0.032
	(4.04)***	(4.04)***	(4.02)***	(4.04)***
RSDA	-2.531	-2.529	-2.530	-2.555
	(4.35)***	(4.35)***	(4.29)***	(4.35)***
FORCED_F		0.406		
		(0.39)		
FORCED_F2		-1.148		
		(0.50)		
REPLOUT_F			-0.001	
			(0.00)	
REPLOUT_F2			0.045	
			(0.04)	
COMPL_F				-0.066
				(0.13)
COMPL_F2				-0.381
				(0.35)
Year dummies	Yes	Yes	Yes	Yes
Constant	-0.401	-0.406	-0.409	-0.452
	(1.16)	(1.16)	(1.17)	(1.35)
Adj R-sq	0.44	0.44	0.44	0.44
Inflection point	0.273	0.301	0.268	0.333
Observations	647	647	647	647

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Panel B: Family firms

	(1) ROA1	(2) ROA1	(3) ROA1	(4) ROA1
FAM_OWN	0.477	0.401	0.471	0.455
	(1.81)*	(1.45)	(1.70)*	(1.81)*
FAM_OWN2	-0.778	-0.646	-0.810	-0.661
	(2.00)**	(1.68)*	(1.95)*	(1.67)*
FORCED	-0.033	-0.100	-0.039	-0.021
	(0.35)	(0.73)	(0.43)	(0.22)
REPLNFAM	-0.054	-0.054	-0.056	-0.058
	(1.23)	(1.24)	(1.24)	(1.25)
REPLOUT	-0.106	-0.106	-0.125	-0.105
	(2.06)**	(2.09)**	(1.16)	(2.04)**
COMPL	-0.019	-0.021	-0.020	-0.012
	(0.33)	(0.36)	(0.33)	(0.18)
LAGE	0.128	0.127	0.137	0.138
	(1.63)	(1.60)	(1.68)*	(1.78)*
LMKT	0.023	0.023	0.023	0.022
	(1.99)**	(2.01)**	(1.99)**	(1.90)*
LTIPOR	0.061	0.059	0.060	0.062
	(1.58)	(1.53)	(1.56)	(1.63)
ROAX1	0.301	0.303	0.302	0.300
	(3.27)***	(3.27)***	(3.29)***	(3.23)***
LEVER	-0.137	-0.124	-0.139	-0.125
	(1.25)	(1.18)	(1.26)	(1.15)
RD	-0.024	-0.024	-0.023	-0.024
	(2.99)***	(3.06)***	(2.94)***	(3.06)***
RSDA	-2.364	-2.340	-2.351	-2.392
	(3.99)***	(3.91)***	(3.93)***	(3.96)***
FORCED_F		1.238		
		(0.84)		
FORCED_F2		-2.021		
		(0.77)		
REPLOUT_F			0.045	
			(0.05)	
REPLOUT_F2			0.071	
			(0.06)	
COMPL_F				0.253
				(0.34)
COMPL_F2				-0.730
				(0.60)
Year dummies	Yes	Yes	Yes	Yes
Constant	-1.032	-1.021	-1.064	-1.064
	(2.23)**	(2.19)**	(2.25)**	(2.42)**
Adj R-sq	0.40	0.40	0.40	0.40
Inflection point	0.307	0.310	0.291	0.344
Observations	352	352	352	352

Table 9: Likelihood of various types of resignations

REPLFAM is a dummy variable that takes on a value of one if the departing executive was replaced by family member. COMPL is a dummy variable that takes on a value of one if the executive left the firm completely. FAM_OWN is family ownership. FAM_OWN2 is family ownership squared. LAGE is the natural logarithm of the departing executive's age at the time of resignation. LMKT is the natural logarithm of the market value of the firm's equity on the 20th trading day preceding the resignation announcement. LFAGE is the natural logarithm of one plus firm age, where firm age is defined as the number of years between the year of incorporation or start of operations (whichever is earlier), and the year of an executive's resignation. LTIPOR is the natural logarithm of the time (in days) between the IPO and the resignation announcement. Heteroskedasticity-adjusted (White) standard errors are used in calculation of t-statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	full sample		family firms	
	REPLFAM	COMPL	REPLFAM	COMPL
FAM_OWN	18.280	-5.912	14.442	-4.154
	(4.95)***	(4.66)***	(3.38)***	(2.32)**
FAM_OWN2	-18.474	7.421	-14.573	5.408
	(3.53)***	(3.65)***	(2.75)***	(2.18)**
LAGE	4.803	0.155	4.644	0.580
	(2.17)**	(0.37)	(2.06)**	(0.95)
LMKT	0.132	-0.163	0.119	-0.215
	(1.09)	(3.45)***	(0.97)	(2.94)***
LFAGE	0.319	-0.086	0.443	-0.218
	(0.70)	(0.77)	(0.85)	(1.00)
LTIPOR	0.078	-0.166	0.047	0.121
	(0.18)	(1.59)	(0.11)	(0.69)
Constant	-28.521	2.184	-27.043	-0.808
	(3.34)***	(1.30)	(3.12)***	(0.34)
Pseudo R-sq	0.35	0.04	0.27	0.03
Observations	863	863	472	472

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Table 10: Implied probabilities of various types of resignations by family ownership

REPLFAM is a dummy variable that takes on a value of one if the departing executive was replaced by family member. COMPL is a dummy variable that takes on a value of one if the executive left the firm completely. Probabilities are calculated using the results of regressions reported in Panel A of Table 9. Variables other than family ownership are held constant at their respective means.

	Family ownership						
	0	0.05	0.10	0.25	0.50	0.75	0.90
REPLFAM	0.0012	0.0029	0.0063	0.0362	0.1019	0.0330	0.0054
COMPL	0.3897	0.3341	0.2904	0.2171	0.2334	0.4580	0.7088

Figure 1: Relationship between resignation announcement effects and family ownership

We present the relationship between family ownership and cumulative abnormal returns upon founder resignation announcements. Our sample consists of 905 resignation announcements between 1993 and 2004. The sample is obtained by identifying changes in the positions held by CEO, president, and / or chairman of the board for the 1,448 firms that went public between 1993 and 1996. The vertical axis measures the cumulative abnormal returns over the three-day event window surrounding the resignation announcement. The horizontal axis measures family ownership.
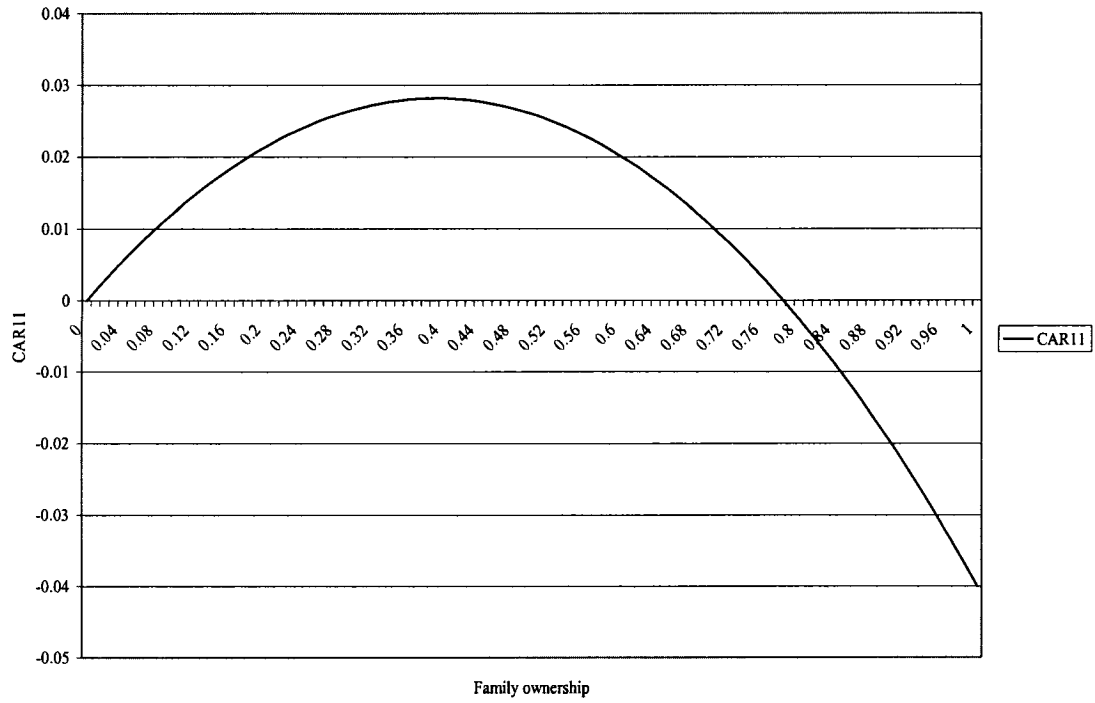

Family ownership

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Figure 2: Relationship between changes in the post-resignation operating performance and family ownership

We present the relationship between family ownership and changes in the post-resignation operating performance. Our sample consists of 905 resignation announcements between 1993 and 2004. The sample is obtained by identifying changes in the positions held by CEO, president, and / or chairman of the board for the 1,448 firms that went public between 1993 and 1996. The vertical axis measures the change in the return on assets between the year after and the year before the resignation announcement. The horizontal axis measures family ownership.
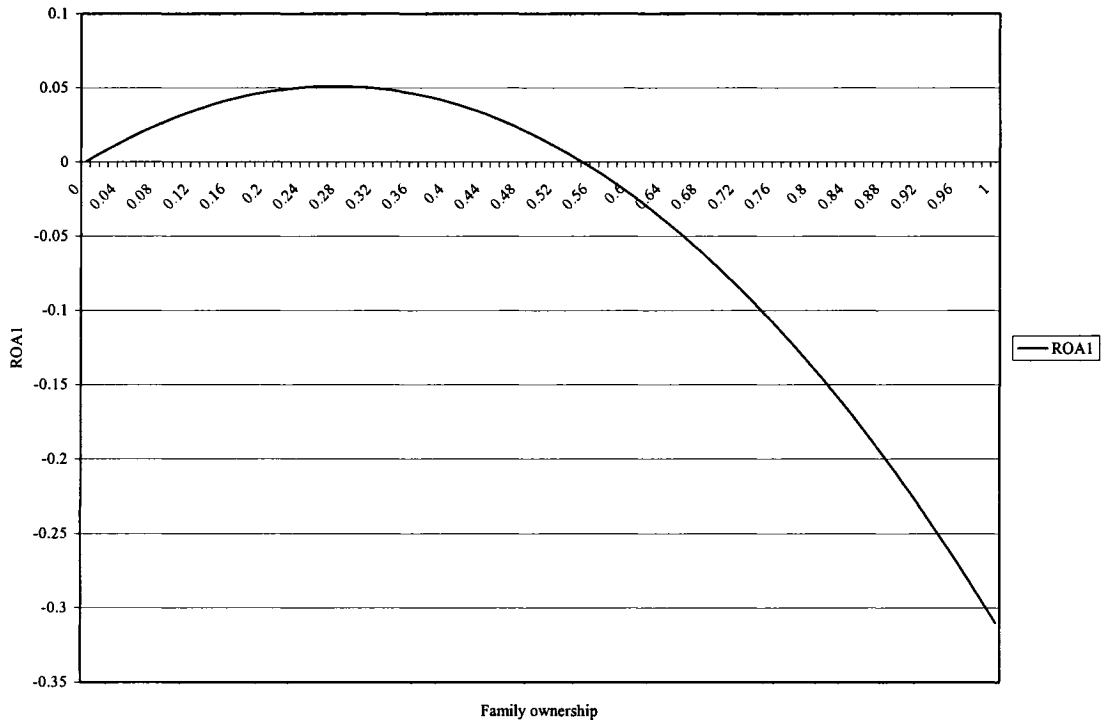

Family ownership

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Figure 3: Relationship between family ownership and the probabilities of a family succession and a complete exit

We present the relationship between family ownership and the probabilities of a family succession and a complete exit. Our sample consists of 905 resignation announcements between 1993 and 2004. The sample is obtained by identifying changes in the positions held by CEO, president, and / or chairman of the board for the 1,448 firms that went public between 1993 and 1996. The vertical axis measures the probability of a particular type of exit. The horizontal axis measures family ownership.