

**Corporate Communication and Shareholder Retention:
Evidence from Spin-Off Roadshows**

by

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Business Administration)
in the University of Michigan
2017

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Acknowledgements

I am grateful for the time and commitment of my dissertation committee members. In particular, I thank my committee chair, Greg Miller, for his patience and guidance in helping me grow as a researcher. I thank Cathy Shakespeare for the many insightful conversations we have shared and for always including me in her research and teaching. I thank Raffi Indjejikian for his thoughtful feedback and continued support of my work. I thank Amy Dittmar and Scott Page for joining my committee and for their valuable insights that greatly improved my work.

For their helpful comments and suggestions on my dissertation, I thank Ryan Ball, Thomas Bourveau, Roby Leheavy, Mihir Mehta, Mario Schabus, Christoph Sextroh, and workshop participants at Columbia University, Rutgers University, Southern Methodist University, the University of Illinois at Chicago, the University of Michigan, and the University of Texas at Austin. The accounting department at Ross—faculty, staff, and doctoral students alike—made my pursuit of a Ph.D. a fulfilling experience. I especially thank Nayana Reiter, Jordan Schoenfeld, and Jed Neilson for the countless conversations we had throughout our journey in the Ph.D. program.

I gratefully acknowledge and appreciate the generous financial support provided by the Ross School of Business, the University of Michigan's Rackham Merit Fellowship, and the Paton Accounting Fellowship.

Most importantly, I am indebted to my parents, my grandmother, my Aunt Jill, and my brothers (Kevin, Matt, Mike, and Tom) for their unwavering support.

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Abstract

In this paper, I ask whether corporate communication programs influence shareholder retention. I use the tax-free corporate spin-off setting to study the communication programs of business units that spin-off from their parent firms and, in the process, inherit their parent firms' shareholder base. When spin-off firms initiate a communication program in the pre-spin-off period, they maintain higher levels of post-spin-off institutional ownership and retain more of the inherited institutional shareholder base than when they do not communicate with investors. An important benefit of communication is that these firms avoid the stock price pressure commonly experienced by spin-off firms as a result of a sell-off by the inherited institutional shareholder base. This paper extends our understanding of corporate communication programs and the role of communication in retaining institutional ownership.

CHAPTER 1

Introduction

Publicly traded firms allocate considerable resources to communicating with their current and prospective shareholders (e.g., Brennan and Tamarowski, 2000; Karolyi and Liao, 2017). Firms communicate with the investment community, in part, to obtain the stock market benefits associated with attracting and retaining a stable, long-term institutional shareholder base (e.g., Bushee and Noe, 2000; Bushee and Miller, 2012; Beyer, Larcker, and Tayan, 2014). Although much of the existing literature focuses on the role of communication in attracting new institutional shareholders and the consequences associated with declines in institutional ownership, the link between communication and the retention of current institutional shareholders remains relatively unexplored. The goal of this study is to investigate whether corporate communication programs impact shareholder retention.

Improvements in communication can lead to increases in the proportion, number, and type of institutional investors holding long positions in a firm's stock (e.g., Healy, Hutton, and Palepu, 1999; Bradshaw, Bushee, and Miller, 2004; Bushee and Miller, 2012). The findings in the literature support the notion that communications with investors reduce information asymmetry and the frictions that impede firm visibility, thereby enabling firms to expand their shareholder base and obtain the corresponding capital market benefits, such as increased liquidity and higher stock

market valuations. Building on prior findings, I predict that communications with investors increase the retention of institutional shareholders.

To empirically test my hypothesis, I examine corporate restructurings accomplished through tax-free spin-offs. The spin-off setting provides a unique laboratory for exploring the implications of corporate communication programs on shareholder retention. In a typical spin-off, a single publicly held firm (the parent firm) splits into two publicly held firms by distributing to current parent firm shareholders the common stock of a wholly-owned business segment (the unit firm). Parent firms distribute unit firm common stock on a pro rata basis through a nontaxable stock dividend that has no cash flow consequences for the parent firm, the unit firm, or the shareholders. Parent firm shareholders receive proportional ownership stakes in the unit firm, such that each post-spin-off firm has identical ownership structures. In other words, standalone unit firms inherit their parent firms' shareholder base. I use the salient features of the spin-off setting and variation in communication programs initiated by unit firm management to study the role of communication in retaining institutional shareholders.

The sample consists of 319 tax-free spin-offs completed between 1994 and 2014. I find that spin-offs commonly destabilize a unit firm's shareholder base. Specifically, unit firms, on average, experience significant institutional shareholder selling pressure upon emerging from the spin-off as a standalone, publicly held firm. Additional analyses, however, suggest that unit firms can overcome institutional selling pressure by initiating a communication program in the pre-spin-off period (i.e., before ownership stakes in the unit firm can be traded). Approximately 35% of unit firms conduct a pre-spin-off roadshow to interact with the investment community in the weeks preceding the spin-off. To a much lesser extent, unit firms also use other communication channels, including conference calls, conference presentations, and management forecasts. However, only

the highly interactive roadshow presentations help firms maintain pre-spin-off institutional ownership levels and retain pre-spin-off institutional shareholders.

Both univariate and multivariate results suggest that unit firms that conduct a roadshow in the pre-spin-off period retain a greater proportion of the institutional ownership base they inherit from their parent firm than unit firms that do not communicate. For example, when a unit firm conducts a pre-spin-off roadshow, the level of inherited institutional ownership remains unchanged following the spin-off. In contrast, unit firms that do not conduct a roadshow before separating from their parent firm experience a 7% drop in institutional ownership after the split. Unit firms that communicate maintain institutional ownership levels by retaining, rather than by replacing, a larger portion of the institutional shareholder base inherited from the parent firm than unit firms that do not interact with the investment community. The findings remain qualitatively similar when examining the number of institutional shareholders. The results are also robust to controlling for various observable unit firm characteristics, such as size, growth, performance, payout policy, and index membership, as well as the extent to which the parent and unit firms differ along several dimensions. The evidence suggests that communication programs help firms retain institutional shareholders who otherwise may have sold their shares.

A fundamental concern of the results discussed in the preceding paragraph is the extent to which the statistical associations imply causality rather than being explained by unobserved characteristics of parent or unit firms. I conduct a variety of analyses to address endogeneity issues. For example, I find that the results are unaffected by shareholder base turnover in the pre-spin-off period. Specifically, institutional shareholders do not appear to systematically self-select into particular types of unit firms before a spin-off by purchasing shares of the parent firm. Other results suggest that the main findings are also not driven by unit firm quality or investors' reaction to the

spin-off announcement. Furthermore, parent firms' outcomes remain similar regardless of whether a unit firm's management team conducts a roadshow in the pre-spin-off period and, similarly, a unit firms' outcomes are not associated with parent firm communication choices. Finally, I also check to ensure the primary analyses are robust to the measurement of institutional holdings, the timing of the spin-off relative to fiscal quarter-end dates, and spin-offs confounded by other restructuring transactions. Together, the additional analyses help mitigate the possibility that the observed outcomes can be attributed to alternative explanations and provide additional support for the hypothesis that communication programs improve the retention of institutional shareholders.

I next consider an important motivation for initiating a corporate communication program. In particular, management commits resources to interacting with their firms' shareholder base in part because they believe the shareholder base can have a direct effect on firm value (e.g., Bushee and Miller, 2012; Beyer, Larcker, and Tayan, 2014). Consistent with this idea, prior research finds that institutional shareholder selling can exert downward pressure on stock prices, particularly when institutions with common investment objectives sell in concert (e.g., Chen, Noronha, and Singal, 2004; Greenwood and Thesmar, 2011). Similar to prior studies in the spin-off literature, I find that selling by institutional shareholders can result in downward pressure on unit firms' stock prices (Brown and Brooke, 1993; Vijh, 1994; Abarbanell, Bushee, and Raedy, 2003; Chemmanur and He, 2016). It remains an open question, however, whether firms can mitigate stock price pressure following a spin-off by increasing shareholder retention.

I find that unit firms conducting a pre-spin-off roadshow avoid post-spin-off stock price pressure. In contrast, unit firms that do not initiate a roadshow experience negative and statistically significant stock returns following the spin-off. The price pressure findings are robust to

controlling for observable parent and unit firm characteristics. The results highlight an important benefit that unit firms derive from retaining institutional ownership through communication.

The findings complement the literature in several ways. Prior studies suggest that investor relations programs help firms attract institutional investors (e.g., Brennan and Tamarowski, 2000; Bushee, 2004; Hong and Huang, 2005; Bushee and Miller, 2012; Kirk and Vincent, 2014). In this paper, I extend the results of prior studies by demonstrating the link between communications with investors and the retention of current institutional shareholders. Prior studies suggest retention is important by highlighting the negative consequences associated with blockholder exits and decreases in institutional ownership (e.g., King and Segal, 2009; Mehran and Peristiani, 2010).

The results also extend the research examining shareholder base turnover in post-spin-off firms (e.g., Brown and Brooke, 1993; Vijh, 1994; Abarbanell, Bushee, and Raedy, 2003; Chemmanur and He, 2016). In prior spin-off studies, researchers report that unit firms experience significant stock price pressure following their split from the parent firm, which is prompted by institutional shareholder selling. I find that communications with investors play an important role in spin-offs by helping unit firms improve the retention of institutional shareholders and avoid the negative consequences associated with sell-offs by those shareholders. Specifically, I show that drops in institutional ownership are concentrated in unit firms that do not communicate with the investment community through spin-off roadshows, and that unit firms can, to some extent, reduce the post-spin-off price pressure arising from preference-related selling by institutional shareholders.

One potential limitation of this study is that the results may not apply beyond the spin-off setting. Roadshows, however, are a ubiquitous communication channel used in all initial public offerings (IPOs), as well as in many seasoned equity offerings (SEOs). As a result, it is challenging

to study the economic consequences of roadshows in traditional IPO settings. An exception is Blankespoor, Hendricks, and Miller (2017), who use roadshow videos to examine patterns of investors' perceptions of management and how they map into IPO prices. In the SEO setting, Gao and Ritter (2010) find that SEO firms can influence demand for their firms' shares through fully marketed offers (i.e., through pre-SEO roadshows). By studying spin-off roadshows, I provide a unique perspective on the importance of roadshows for firms that are preparing to go public. More generally, however, this study enhances our understanding of the communication initiatives firms can pursue to retain institutional shareholder interest in their firm.

The remainder of the paper proceeds in the following manner. In Chapter 2, I review the prior literature, provide an overview of the spin-off setting, and develop hypotheses. In Chapter 3, I discuss data and descriptive statistics. In Chapters 4 and 5, I present the main results, conduct additional tests, and discuss the limitations of the findings. I conclude in Chapter 6.

CHAPTER 2

Related literature, institutional setting, and development of hypotheses

Why do firms communicate with the investment community? And why do firms care about the shareholder base? In this chapter, I first discuss the role of corporate communication activities in publicly held firms (Section 2.1). I then develop testable hypotheses within the context of the spin-off setting (Section 2.2).

2.1. Corporate communication and institutional investors

To reduce informational asymmetries between the management and the outside owners of a firm, management disseminates information about historical financial performance and forecasts of future performance through both mandatory and voluntary communication channels (e.g., Diamond and Verrecchia, 1991; Beyer, Cohen, Lys, and Walther, 2010). Firms regularly disseminate information to capital market participants through financial statements, management's discussion and analysis, SEC Form 8-K filings, press releases, and earnings forecasts.¹ Firms also use a broad range of complementary communication channels to enhance their interactions with

¹ In two seminal accounting studies, Ball and Brown (1968) and Beaver (1968) demonstrate the usefulness of accounting information to capital market participants. Clarkson, Kao, and Richardson (1999), Li (2010), and Loughran and McDonald (2011) provide evidence of the complementary role of forward-looking information contained in the MD&A section of the annual report. Form 8-K filings and press releases also convey valuable information to capital market participants (e.g., Carter and Soo, 1999; Lerman and Livnat, 2010; Francis, Schipper, and Vincent, 2002). Many studies examine the antecedents, consequences, and properties of management forecasts. See Hirst, Koonce, and Venkataraman (2008) for a comprehensive review of the management forecast literature.

the investment community. Additional platforms such as conference calls, conference presentations, one-on-one meetings, analyst and investor days, and social media enable management to participate in interactive discussions with institutional investors and analysts and to increase dissemination of information already provided through mandatory SEC filings.² Capital market interactions are important to both firms and institutional investors alike.

For instance, a firm's management team spends considerable time communicating with outside shareholders. In particular, in their survey of 138 investor relations professionals, Beyer, Larcker, and Tayan (2014) find that chief executive officers and chief financial officers spend nearly one workweek per calendar quarter managing their firms' shareholder base. Investor relations professionals spend approximately one-third of each calendar quarter managing their firms' shareholder base. According to the survey, nearly all of the survey respondents report discussing the shareholder base at the executive level, and a majority also report discussing the shareholder base at the board level. Given the responsibilities of corporate executives and directors, this finding is significant and suggests that managing the shareholder base through communications is an important task undertaken by management.

One of the key objectives of corporate communication programs is building and maintaining a stable, long-term institutional shareholder base (e.g., Brennan and Tamarowski, 2000; Beyer, Larcker, and Tayan, 2014). Corporate communication programs can help firms build and maintain their institutional shareholder base in several ways. For example, investors may

² Many studies examine the role and usefulness of conference calls, including, among others, Tasker (1998), Frankel, Johnson, and Skinner (1999), Bowen, Davis, and Matsumoto (2002), Bushee, Matsumoto, and Miller (2003, 2004), Kimbrough and Louis (2011), and Matsumoto, Pronk, and Roelofsen (2011). In addition to conference calls, conference presentations (e.g., Francis, Hanna, and Philbrick, 1997; Bushee, Jung, and Miller, 2011; Green, Jame, Markov, and Subasi, 2014a, 2014b), one-on-one private meetings (e.g., Soltes, 2014; Solomon and Soltes, 2015; Bushee, Jung, and Miller, 2017), analyst and investor days (Kirk and Markov, 2016), and social media (e.g., Blankespoor, Miller, and White, 2014; Lee, Hutton, and Shu, 2015) also provide important opportunities for communication and interaction between management and investors.

overlook some investment opportunities because they lack the resources to identify, track, and own all firms. A firm can overcome this visibility problem by initiating an investor relations program (e.g., Merton, 1987; Bushee and Miller, 2012). Similarly, investors may miss stocks that are not covered by information intermediaries, such as professional equity analysts, or stocks that do not fit into an investor's broad investment strategy. Effective communications with capital market participants can help improve firm visibility and increase analyst and investor following (e.g., Lang and Lundholm, 1996; Anantharaman and Zhang, 2011; Bushee and Miller, 2012; Kirk and Vincent, 2014). Furthermore, even if a firm is known to investors and satisfies their investment criteria, many institutional investors consider direct access to management an important and necessary activity before making an investment decision (e.g., Hong and Huang, 2005; Brown, Call, Clement, and Sharp, 2015, 2016, 2017).

While the evidence in the literature indicates a robust relation between corporate communication programs and the ability of management to attract new investors to their firm, it is important to note that management spends a substantial amount of time communicating and meeting with current shareholders. The prevalence of extensive investor relations programs suggests that maintaining relationships with current shareholders, rather than perpetually searching for new shareholders, is an important part of a firm's communication strategy. This paper aims to provide evidence of a link between corporate communications and shareholder retention.

2.2. Institutional spin-off setting and testable hypotheses

I employ tax-free corporate spin-offs to study whether corporate communications with investors improves institutional shareholder retention. The spin-off setting provides several advantages for addressing the research question. A spin-off transaction must satisfy the criteria described in Section 355 of the U.S. Internal Revenue Code to qualify for tax-free status. For

example, a parent firm must distribute at least 80% of the outstanding shares of a unit firm to current parent firm shareholders and must not retain control of the new independent unit firm.³ Spin-offs are, in essence, initial public offerings without the accompanying capital-raising and book-building activities. Instead, unit firms emerge as publicly held firms endowed with their parent firms' shareholder base. Parent firm shareholders do not get to choose whether to receive unit firm shares; specifically, investors are unable to purchase or sell shares of a unit firm in the pre-spin-off period without also purchasing or selling shares of its parent firm. As a result, parent firm shareholders do not initially select into unit firms, except for owning the parent firm. Furthermore, because (1) no cash changes hands, (2) no gain or loss is recognized by the firms or shareholders, and (3) spin-offs do not impose a tax cost on shareholders, parent firm shareholders most likely do not base their immediate post-spin-off trading decisions on cash or tax considerations (e.g., Blouin, Bushee, and Sikes, 2016).⁴

Following a spin-off, both the parent firm and the unit firm must remain engaged in the lines of business that they have been active in for at least the past five years. Therefore, institutional shareholders also most likely do not sell a unit firm because of a lack of awareness or familiarity with its operations, especially given that unit firms must be viable businesses (as opposed to shell companies) and must provide a substantial amount of information about its operations in regulatory filings at the time of the transaction. Furthermore, because unit firms do not have a history as a standalone firm, the spin-off can be viewed as a relatively clean starting point. Finally, the

³ The unit firm assembles its own board of directors and management team (e.g., Seward and Walsh, 1996; Wruck and Wruck, 2002; Ahn and Walker, 2007; Denis, Denis, and Walker, 2015; Feldman, 2016b, 2016c). The unit firm's management team makes operating, investment, and financing decisions (e.g., Gertner, Powers, and Scharfstein, 2002; Dittmar, 2004; Cronqvist, Low, and Nilsson, 2009; Chemmanur, Krishnan, and Nandy, 2014).

⁴ In particular, the original cost basis of a shareholder's pre-spin-off parent firm shares is carried over and allocated to the post-spin-off shares of the parent and unit firms. Shareholders allocate the pre-spin-off cost basis in accordance with the relative fair market values of the post-spin-off parent and unit firms' shares. Shareholders use the closing stock prices on the first full day of trading as standalone firms to estimate fair market values.

transaction must not be used to avoid dividend taxation, and there must be a valid business purpose for the spin-off other than tax savings, so the spin-offs included in the final sample are relatively standard firms.

A salient feature of the spin-off setting is that unit firms inherit their parent firms' shareholder base. In particular, parent firm shareholders receive proportional equity stakes in the standalone unit firm. However, the unit firm will typically have an investment profile that differs markedly from the pre-spin-off parent firm's investment profile. The shock to the investment profile, while holding constant the shareholder base, provides a novel laboratory for examining the link between communications with investors and shareholder retention because the parent firm shareholders have, to varying degrees, incentives to sell their stakes in the unit firm.⁵ At the same time, however, unit firm management has incentives to retain those shareholders to avoid large post-spin-off stock price declines.

Corporate communication programs may help to attenuate parent firm shareholders' incentives to sell their unit firm shares by reducing information asymmetry and by establishing a commitment to communication (e.g., Diamond Verrecchia, 1991). In addition to potentially retaining a relatively large proportion of inherited parent firm shareholders by initiating a communication program in the pre-spin-off period, unit firms can also potentially attract prospective shareholders to replace the shareholders forced by their investment policies to sell

⁵ Professional institutional investment managers typically consider broad groups of stocks based on size, growth, payout policy, index membership, exchange listing, etc., in the process of developing an equity portfolio allocation strategy. They then decide whether and how to allocate their funds across different types of stocks (e.g., Barberis and Shleifer, 2003; Nagel, 2005). Gompers and Metrick (2001) report that institutions prefer relatively large and liquid stocks. In addition to Gompers and Metrick (2001), many prior studies examine the relation between firms' fundamental characteristics and institutional investors' investment decisions (e.g., Badrinath, Gay, and Kale, 1989; Del Guercio, 1996; Falkenstein, 1996; Bushee, 1998; Bushee, 2001; Bushee, Carter, and Gerakos, 2014).

their stakes (e.g., index fund investors), thereby maintaining pre-spin-off levels of institutional ownership. Accordingly, Hypothesis 1 is as follows (stated in alternative form):

Hypothesis 1: *Unit firm communications with investors is positively associated with the change in unit firm institutional ownership from pre- to post-spin-off and the retention of pre-spin-off institutional ownership.*

There are two reasons why unit firm communication programs may not be effective for retaining institutional ownership following a spin-off. First, standalone unit firms typically lack analyst coverage, so retaining institutional ownership can be particularly difficult.⁶ Second, because (1) spin-off events often garner significant media attention, (2) firms are required to furnish lengthy documents to regulators concerning the terms of the spin-off and pertinent information about the firms involved, and (3) firms are not permitted to provide material private information to select market participants, it is possible that any additional communication is redundant.

As predicted by the investor clientele hypothesis (i.e., that shareholders have preferences for certain types of firms), parent firm shareholders may be guided by their investment policies toward holding shares of firms more similar to the parent firms than to the standalone unit firms,

⁶ Gilson, Healy, Noe, and Palepu (2001) examine analysts' decisions to cover a firm's stock after the firm splits from a conglomerate firm. They evaluate the three years following a stock breakup, which includes spin-offs as well as equity carve-outs and targeted stock offerings. They do not report the extent to which the new stocks are covered by analysts immediately following a stock breakup. Anecdotal accounts and my review of the analyst data suggest that unit firms typically emerge from spin-offs without immediate analyst coverage. In the rare cases in which unit firms do emerge from a spin-off with analyst coverage, it is significantly positively correlated with firm size, index membership, and other observable unit firm characteristics that are accounted for in the regression analyses discussed in Section 4.2. Feldman, Gilson, and Villalonga (2014) find that pre-spin-off parent firm analysts typically offer only limited, if any, insights into soon-to-be-standalone unit firms. Similarly, Krishnaswami and Subramaniam (1999) find improvements in earnings forecast accuracy and lower dispersion in analysts' forecasts (for parent firm analysts) following spin-offs, consistent with the idea that there is relatively high information asymmetry pre-spin-off. Feldman (2016a) examines analyst coverage decisions in the parent firms that spin-off a business segment, but does not consider unit firm analysts' initiation decisions.

particularly if a unit firm's characteristics differ substantially from its parent firm's characteristics. For instance, index fund investors may be required to sell their shares of unit firms that are not included in a particular stock index (e.g., the S&P 500), especially if the pre-spin-off firm was included in that index. Similarly, but to a lesser extent, if a unit firm is much smaller and operates in a different industry than its pre-spin-off parent firm, shareholders may be more likely to exit their position in a unit firm. Institutional shareholders' investment preferences may lead them to sell their shares of the unit firm immediately after the spin-off, and anecdotal accounts suggest that unit firms commonly experience intense selling pressure upon emerging as a publicly held, standalone firm.⁷ As a result, communication may matter less when a unit firm is similar to the pre-spin-off parent firm. Thus, I expect that unit firm communication has a bigger impact when there are stark differences between the pre-spin-off parent firm and the post-spin-off, standalone unit firm. Accordingly, Hypothesis 2 is as follows (stated in alternative form):

Hypothesis 2: The association between unit firm communication and retention of institutional ownership is stronger when the parent and unit firms differ more markedly.

Institutional shareholders' trades can move stock prices (e.g., Coval and Stafford, 2007; Frazzini and Lamont, 2008; Duffie, 2010). Greenwood and Thesmar (2011), for instance, examine the link between shareholder base composition and stock price volatility. They find that shareholder base fragility can lead to greater stock price volatility. A shareholder base is fragile when there is a large shareholder, or a group of shareholders with similar trading patterns, who

⁷ Market commentators often note that once a unit firm's shares are distributed to parent firm shareholders, the institutional shareholders often immediately sell their shares of the unit firm without regard to price or fundamentals. The reasons commonly provided for why this phenomenon occurs include the following: the unit firm is too small (in absolute terms and as a percentage of a large investor's portfolio) for an institutional investor to want to continue owning the stock, index-driven selling by index funds, and the prospects of the unit firm are poorly understood because of insufficient communication and a lack of analyst coverage.

might sell their long position in a firm's stock with little notice, thus putting downward pressure on stock price. Therefore, one reason a firm's management cares about retaining institutional shareholders and maintaining a stable shareholder base is to avoid downward stock price pressure induced by institutional shareholder selling. Downward stock price pressure is a concern to corporate executives who care about the value of their stock options, retaining their job, raising capital, having their firm become the target of a corporate takeover (e.g., Edmans, Goldstein, and Jiang, 2012), shareholder lawsuits, losing customers or suppliers, and maintaining relationships with analysts and shareholders.

Prior studies use the corporate spin-off setting to examine whether institutional shareholders' trading behavior moves stock prices (e.g., Huson and MacKinnon, 2003). Price pressure can arise in spin-offs because of intense selling by institutional shareholders, as discussed above and in footnote seven, and because of a lack of interest from potential investors. Potential investors often overlook spin-off firms because of low or no analyst coverage and because spin-off firms are often not included in financial databases until several months after a spin-off. The studies, however, offer mixed evidence. For instance, using a sample of 113 spin-offs between 1964 and 1990, Vijh (1994) conjectures that excess stock returns around spin-offs result from investor clienteles. Similarly, Brown and Brooke (1993) find in their sample of 74 spin-offs that unit firms experience stock price declines in the 30 days following a spin-off. They attribute the stock price declines to preference-induced, non-informational trades by institutional shareholders and a lack of liquidity in unit firms' shares. Greenwood (2006) also links variation in post-spin-off stock returns to changes in the level and composition of institutional ownership. In contrast, while Abarbanell, Bushee, and Raedy (2003) also find abnormal stock returns in a sample of 169 spin-offs, they argue that the relation between preference-induced trading by institutional

shareholders and post-spin-off stock returns is only weakly significant. None of the studies, however, consider the role of corporate communication programs in shaping the evolution of the institutional shareholder base and, by extension, post-spin-off stock returns.

Consistent with Diamond and Verrecchia (1991), I expect that, by reducing information asymmetry and, thus, retaining large institutional shareholders, communication programs help unit firms avoid post-spin-off downward stock price pressure. Hypothesis 3 is, therefore, as follows (stated in alternative form):

Hypothesis 3: *Unit firm communications with investors is positively associated with post-spin-off unit firm stock returns, after controlling for changes in institutional ownership and other unit firm and spin-off characteristics.*

CHAPTER 3

Sample selection and descriptive statistics

In this chapter, I provide details on the data sources and the criteria used to construct the sample of tax-free corporate spin-off transactions (Section 3.1). I also discuss descriptive information about the firms involved and their shareholder bases (Sections 3.2 and 3.3). Finally, I review the voluntary corporate communication activities that occur in the months preceding and following the spin-offs and examine the determinants of a unit firm's choice to communicate (Sections 3.4 and 3.5).

3.1. Spin-off sample: 1994-2014

The sample consists of tax-free spin-off transactions completed by publicly held U.S. firms from January 1, 1994 to December 31, 2014. I collect information about the spin-offs from the Center for Research in Security Prices (CRSP) and the Thomson Reuters Securities Data Corporation Platinum Mergers and Acquisitions (SDC) databases.

I search the CRSP database for tax-free spin-off distributions (i.e., database records with a CRSP distribution code of 3763 or 3764) during the sample period, generating a total of 323 unique stock distributions. I also search the SDC database for spin-off transactions completed during the sample period, generating a total of 731 transactions. After I merge the CRSP and SDC data and drop duplicate observations and observations with missing firm identifiers, 426 transactions

remain: 77 unique to CRSP, 104 SDC-only observations, and 245 contained in both databases. I search regulatory filings on the Securities and Exchange Commission's (SEC's) EDGAR website and firm-issued press releases on Factiva to verify transaction details and to fill in or modify spin-off announcement and completion dates when necessary. I drop five tracking stock issues, seven equity carve-outs, 16 transactions confounded by a unit firm immediately merging with another firm (e.g., as part of a Reverse Morris Trust transaction), and 79 observations with missing financial, institutional investor, or stock price information (see Table 1).

The final sample contains 319 spin-off transactions. The 319 transactions involve 309 parent firms, with eight parent firms simultaneously spinning-off two standalone unit firms and one parent firm simultaneously spinning-off three unit firms.⁸ In Panel A of Table 2, I present the distribution of spin-offs by completion year. On average, 15 spin-offs occur each year, although the number varies from a minimum of five in 2009 to a maximum of 27 in 2014. The sample is relatively large compared to the samples used in prior studies. For example, Chemmanur and He (2016) examine spin-offs from 1999 through 2004 and report an average of 11 spin-offs per year. Denis, Denis, and Walker (2015) examine the 1994-2010 period and arrive at a sample containing an average of 8.5 spin-offs per year, which is similar to the sample used by Abarbanell, Bushee, and Raedy (2003). Earlier studies tend to have even smaller samples, in part because spin-off data are less reliable before the mid-1990s. In addition to the sample size differences resulting from the different sample periods, I collect spin-off transactions from both the CRSP and the SDC databases, while many other studies rely on the SDC data alone.

⁸ I define the parent firm as the firm that retains the same CRSP Permanent Issue Identifier (PERMNO) from pre- to post-spin-off. Unit firms receive a PERMNO when their shares begin trading publicly. If the unit firm has publicly traded equity before the tax-free spin-off is completed, it will already have had a PERMNO assigned. 51 unit firms (i.e., 16% of the unit firm sample) have publicly traded equity before the spin-off. In robustness tests, I confirm that excluding unit firms with pre-spin-off publicly traded equity does not affect the results (see Section 4.4.3). I also find that if I define the parent firm as the larger of the post-spin-off entities and the unit firm as the smaller of the post-spin-off entities, I obtain similar results (see Section 4.4.4).

3.2. Firm characteristics

I match the pre-spin-off combined parent firms and the post-spin-off standalone parent and unit firms with data from the Compustat, CRSP, Bloomberg Corporate Events, I/B/E/S, and Thomson Reuters Institutional Holdings (13F) databases. When necessary, I hand-collect information from firm-issued press releases, corporate websites, and SEC regulatory filings to fill-in missing data entries. I provide a detailed description of variable definitions and data sources in Appendix A.

In Panel B of Table 2, I report the primary U.S. stock exchange listing for parent and unit firms. 74.8% (24.3%) of parent firms and 63.3% (32.3%) of unit firms list on the NYSE (Nasdaq). Stock exchange differences typically occur when a NYSE-listed parent firm spins-off a business unit that lists on the Nasdaq or AMEX. Unit firms emerging from Nasdaq- and AMEX-listed parent firms tend to list on the same stock exchange. In Panel C, I report the distribution of firms by their industry assignment. Both the parent and the unit firms span all 12 Fama and French industry categories. In Panel D, I report the distribution of firms by Standard and Poor's (S&P) index membership. More than 50% of parent firms (both pre- and post-spin-off) belong to either the S&P 500 or 400 indexes, while only 33% of unit firms belong to the S&P 500 or 400. The remaining unit firms belong to either the S&P 600 small capitalization index (13.5%) or no major S&P index (53.2%). Some unit firms may not be included in an index immediately after a spin-off because they do not satisfy one or more of S&P's index inclusion requirements or because, at the time of the spin-off, there are no available spots in the index.⁹

⁹ Standard and Poor's considers firms' market capitalization, liquidity, performance, exchange listing, public float, and domicile. See: <https://us.spindices.com/documents/methodologies/methodology-sp-us-indices.pdf>.

In Table 3, I report descriptive statistics for various firm and shareholder base characteristics. In Panel A, I focus on the financial, payout, index, industry, and exchange characteristics of the pre- and post-spin-off firms. Parent firms are considerably larger than the unit firms. For instance, the mean (median) *Market Value of Equity* of pre- and post-spin-off parent firms is \$13.8 (\$3.2) billion and \$11.2 (\$2.4) billion, respectively. Unit firms, in contrast, have a mean (median) *Market Value of Equity* of \$2.4 (\$0.7) billion. *Assets* and *Sales* indicate similarly significant size difference between the parent and unit firms. For example, the mean (median) book value of assets of pre- and post-spin-off parent firms is \$16.6 (\$3.9) billion and \$14.1 (\$3.1) billion, respectively. Unit firms' mean (median) book value of assets is \$4.4 (\$0.9) billion. Similarly, pre- and post-spin-off parent firms generate, on average, \$9.9 billion and \$7.7 billion in annual sales, respectively, while unit firms generate \$2.7 billion in annual sales (untabulated). Unit firms are typically one-quarter to one-third the size of the combined firm (mean *Relative Size* = 0.28). Pre-spin-off parent firms have a lower *Book-to-Market* than post-spin-off parent and unit firms. *Book Leverage* remains stable across pre- and post-spin-off firms, although slightly higher, on average, in the post-spin-off parent firms than in the pre-spin-off parent firms and the post-spin-off unit firms, consistent with Dittmar (2004), who examines the capital structure of spin-off firms. Unit firms, on average, have considerably worse financial performance than their pre- and post-spin-off parent firms, as measured by *Return on Assets*. Only 31% of unit firms pay a dividend, compared to slightly more than 70% of pre- and post-spin-off parent firms. Fewer than 10% of the 99 dividend-paying unit firms (i.e., 8 unit firms) emerge from a parent firm that does not pay a dividend.

In Panel A, I also present evidence of differences in index membership, industry assignment, and exchange listing between the parent and unit firms. 43% of unit firms change from

one major S&P index to another, compared to 11% of parent firms.¹⁰ Furthermore, 21% of unit firms do not belong to a major S&P index after the spin-off but emerge from a parent firm that was included in an index (denoted by *Index Drop*), compared to only 3% of parent firms that change index inclusion status. *Different Industry*, which proxies for the extent to which the parent and unit firms differ operationally, indicates whether the parent and unit firms have different industry assignments. I use 2-digit SIC codes to measure *Different Industry* and find that 64% of unit firms operate in a different industry than their parent firm's industry. In untabulated results, I find that parent and unit firm industries differ in 76% (83%) of spin-offs when using 3-digit (4-digit) SIC codes.¹¹ Note that even when a parent and corresponding unit firm have the same SIC code, the firms' operations often differ along important dimensions, such as geographic focus, product offerings, or customer base. *Different Exchange* denotes whether the parent and unit firms list on different primary U.S. stock exchanges; 19% of unit firms list on a different exchange than their parent firm. The mean (median) spin-off *Distribution Ratio* is 6.1 (3.0). Specifically, to receive one share of the unit firm, parent firm shareholders must own, on average, about six shares of the parent firm. 25% of the spin-offs have a one-to-one *Distribution Ratio*.

3.3. Shareholder base composition

In Panel B of Table 3, I describe the composition of the parent and unit firms' institutional shareholder bases. I focus on institutional shareholders because they hold a remarkably large portion of U.S. equities. Blume and Keim (2012), for example, report that in 2010, institutional

¹⁰ When a pre-spin-off combined firm is not included in a major S&P index, it is uncommon for the post-spin-off standalone firms to be included in an S&P index. This is the case for only four post-spin-off parent firms and five post-spin-off unit firms. In addition, when a pre-spin-off combined firm is not in the S&P 500 index, it is uncommon for the post-spin-off firms to be included in the S&P 500. This is the case for only one post-spin-off unit firm.

¹¹ I obtain similar results when using the North American Industry Classification System (NAICS). Notwithstanding the concerns raised by Kahle and Walkling (1996), I also obtain similar results using CRSP SIC codes.

investment firms owned 67% of the total market capitalization of U.S. stocks. In addition, management and investor relations professionals consider institutional investment firms a prominent part of the shareholder base (e.g., Graham, Harvey, and Rajgopal, 2005; Bushee and Miller, 2012; Beyer, Larcker, and Tayan, 2014).

In Panel B, I report that the mean (median) *Institutional Ownership* of the relatively large pre-spin-off parent firms is 60% (63%), as of the calendar quarter-end immediately before a spin-off. During the most recent ten years (2005 to 2014) of the sample, the mean pre-spin-off *Institutional Ownership* is even higher at 67% (untabulated), consistent with the findings reported by Blume and Keim (2012). The mean (median) number of institutional investment firms holding shares of pre-spin-off parent firms is 292 (202). Parent firms' *Institutional Ownership* and *Institutional Owners* does not change significantly from pre- to post-spin-off. In contrast, unit firms experience significant decreases in *Institutional Ownership* and *Institutional Owners*. In particular, the mean (median) *Institutional Ownership* of unit firms is 56% (59%). Decreases in *Institutional Ownership* correspond to significant decreases in *Institutional Owners*. The decline in the number of unique *Institutional Owners*, however, is partially offset by a mean (median) increase in *Institutional Blockholders* in post-spin-off unit firms of 0.32 (1.00). The increase in *Institutional Blockholders* is consistent with the findings in Patro (2008), who also reports a post-spin-off increase in block ownership of unit firms.

The results reported in Panel B show that *Large Value Ownership*, *Large Growth Ownership*, and *Index Fund Ownership* remain unchanged in the parent firms from pre- to post-spin-off. Unit firms, however, experience mean (median) decreases in *Large Value Ownership*, *Large Growth Ownership*, and *Index Fund Ownership* of 4% (5%), 2% (2%), and 5% (7%), respectively. In contrast, *Small Value Ownership* and *Small Growth Ownership* (as well as *Short*

Term Ownership and *Long Term Ownership*, which are not tabulated) remain stable, on average, from pre- to post-spin-off for both parent and unit firms. In fact, unit firms experience a slight inflow of *Small Growth Ownership* following the spin-off.

The key takeaway from Table 3 is that the post-spin-off parent firms remain broadly similar to the pre-spin-off combined firms, while the standalone unit firms tend to differ dramatically. From a shareholder's perspective, the spin-off represents a shock to their equity portfolio with one post-spin-off firm remaining similar to the pre-spin-off firm and the other post-spin-off firm having significantly different characteristics than the pre-spin-off firm. As Abarbanell, Bushee, and Raedy (2003, p. 238) note, "these differences make [unit firms] relatively less attractive to institutions facing strict prudence standards or following large-value strategies and more attractive to institutions following small-growth strategies." Since unit firms typically split from relatively large parent firms, they inherit an institutional shareholder base with investment preferences for large-value type firms and firms included in major S&P indexes, consistent with Table 3. Indeed, while the shareholder base of parent firms tends to remain stable before and after a spin-off, the inherited shareholder base of unit firms becomes volatile following a spin-off. The descriptive evidence of a volatile post-spin-off unit firm shareholder base reported in Table 3 comports well with Abarbanell, Bushee, and Raedy's (2003) findings and remains broadly consistent whether evaluated at the means or medians of total institutional ownership or institutional ownership by type. The goal of this study is to extend prior findings by examining whether unit firms' communication programs mitigate the volatility in their post-spin-off shareholder base and, if so, whether unit firms maintain stability through the retention of institutional shareholders or by attracting new shareholders.

3.4. Corporate communication activities around spin-offs

In this section, I discuss the communication programs that occur during the months before a spin-off. The SEC requires all unit firms to provide a substantial amount of information in their mandatory Form 10 Registration Statements. I control for important financial information provided in SEC filings and focus on the voluntary communication programs undertaken in addition to the mandatory filings. Naturally, however, I am limited to examining only publicly available information and thus cannot speak to the possibility or prevalence of private communications between investors and management. I assume that if firms are privately providing material information to investors, then it is occurring randomly across firms in the sample, as there is no reason to believe that the firms conducting communication programs are more or less likely than firms not conducting communication programs to privately communicate material information.

I identify and code four voluntary communications channels using the Bloomberg Corporate Events and I/B/E/S Guidance databases. I focus on spin-off roadshow presentations because anecdotal and survey evidence indicates that roadshows are considered among the most important channels of communication for conveying a firm's message to institutional investors (Green, Jame, Markov, and Subasi, 2014b; Brown, Call, Clement, and Sharp, 2017). However, I also take into account a firm's decision to host a spin-off conference call, make a conference presentation, and issue a management forecast. In light of the concerns raised by Chuk, Matsumoto, and Miller (2013), I supplement data from the I/B/E/S Guidance and Bloomberg databases with hand-collected presentation notifications, presentation materials, and management forecasts available through Factiva and the SEC's EDGAR database.

As Panel A of Table 4 indicates, spin-off *Roadshow* presentations account for nearly all of the pre-spin-off unit firm communication activity; 35% of unit firms conduct these highly interactive, face-to-face investor relations events. The prevalence of *Roadshow* presentations is consistent with unit firm management attempting to interact with current and prospective shareholders to help them better understand the unit firm before the spin-off is completed.¹² The *Roadshow* presentations occur in the weeks before a spin-off and include an overview of the transaction terms, an introduction to the management team, highlights of the business strategy and competitive advantage, a discussion of historical financial performance, and projections of future performance.

In the pre-spin-off period, less than 5% of unit firms use the *Spin-off Conference Call* and *Management Forecast* communication channels—perhaps the least costly and interactive forms of voluntary communication considered in this study. I do not include earnings conference calls when identifying and coding conference calls related to a spin-off. Many parent firms originally announce restructuring plans during an earnings conference call; however, that announcement typically occurs 6-12 months before a spin-off, and I focus on communications with investors in the 90 days before a spin-off.¹³ The *Spin-off Conference Call* and *Management Forecast* channels are used predominantly among the 51 unit firms with pre-spin-off publicly traded equity. Finally, the *Conference Presentation* channel is also uncommon in the pre-spin-off period (i.e., 4% of unit firms make a *Conference Presentation*).

¹² Corporate executives and Investor Relations Officers conduct roadshows to educate the investment community about their company and to build and maintain relationships with shareholders (e.g., Bragg, 2014).

¹³ Extending the communication window beyond 90 days before a spin-off distribution does not affect the results. In particular, nearly all unit firm communication occurs in the month immediately before a spin-off. Furthermore, including unit firms' earnings conference calls in the post-spin-off period also does not affect the results.

In contrast to unit firms, parent firm management teams tend to use the *Conference Presentation* and *Management Forecast* channels more often. Less than 7% of parent firms conduct a *Roadshow* in the pre-spin-off period. Despite the differences in communication channel choices, the percentage of unit firms (37.9%) that communicate with investors in the pre-spin-off period is similar to the percentage of parent firms (41.4%) that communicate during the same period. The difference in communication channels may be because unit firms have yet to establish an ongoing earnings guidance policy or because they are not invited to as many industry and investor conferences due to a lack of analyst coverage.

I do not include press releases as a form of communication. Unit firms rarely issue a press release in the pre-spin-off period; parent firms generate most press releases related to the spin-off. While pre-spin-off press releases contain vital information (e.g., key personnel decisions, general business updates, and transaction terms), I exclude them from subsequent analyses because I require that all spin-off transactions have press releases to remain in the sample. In particular, I collect from pre-spin-off parent firm press releases the timing and transaction terms of all spin-offs in the sample.

3.5. Determinants of the decision to conduct a spin-off roadshow

Before examining the economic consequences of spin-off communication programs, I first examine the decision to communicate. Given that nearly all of the communication relates to pre-spin-off *Roadshow* presentations, I focus on understanding the determinants of conducting a *Roadshow*.

In Panel B of Table 4, I compute Pearson's correlation coefficients to explore the factors associated with unit firms' decision to conduct a pre-spin-off *Roadshow*. *Roadshow* is significantly and positively correlated with unit firm size, as measured by *Assets*, the number of parent firm

Institutional Owners (i.e., the expected number of inherited institutional owners), parent firm index membership (*S&P 4/5/600*), and *Parent Communication*. *Roadshow* is significantly and negatively correlated with *Book Leverage* and *Different Exchange*.

In Panel C of Table 4, I estimate the following logistic regression model to examine unit firms' decision to conduct a pre-spin-off *Roadshow*:

$$Roadshow_i = \beta_0 + \sum \beta_k Unit\ Characteristics_i + \sum \gamma_k Parent\ Characteristics_i + \varepsilon_i \quad (1)$$

Roadshow, as defined in Appendix A, is an indicator variable that takes the value of one or zero. The results reported in Panel C from estimating equation (1) largely confirm the takeaway from the correlation coefficients reported in Panel B. In particular, unit firm *Assets* (coefficient = 0.31, t-stat = 1.75), *Parent Communication* (coefficient = 0.42, t-stat = 2.86), and parent firm *S&P 4/5/600 Index* (coefficient = 1.60, t-stat = 3.68), are positively associated with *Roadshow*, while unit firm *Book-to-Market* (coefficient = -0.64, t-stat = -1.77), unit firm *Book Leverage* (coefficient = -1.80, t-stat = -2.23), and inherited *Institutional Ownership* (coefficient = -2.09, t-stat = -2.25), are negatively associated with *Roadshow*. Together, the evidence reported in Panels B and C suggest that larger unit firms, unit firms with parents that communicate, and unit firms likely moving out of a major stock index (or into a different industry, although the correlation coefficient on *Different Industry* is not statistically significant) are more likely to conduct a spin-off *Roadshow*, while unit firms saddled with debt and facing low growth opportunities are less likely to conduct a spin-off *Roadshow*.

I next examine the link between unit firm *Roadshow* and trading by institutional shareholders in the post-spin-off unit firms. Though I cannot identify exogenous variation in the *Roadshow* variable, I control for *Roadshow* determinants in the subsequent analyses intended to

explore the economic consequences of spin-off communication programs, and I also conduct a variety of additional tests to help rule out alternative explanations. In Section 4.3, I discuss endogeneity concerns in greater detail.

CHAPTER 4

Changes in institutional ownership around spin-offs

In this chapter, I examine institutional shareholder trading in the quarters before and after a spin-off. I first discuss univariate statistics related to the time series changes in institutional ownership, as well as the retention of institutional shareholder ownership around spin-offs (Section 4.1). I then consider, in a multivariate framework, the relation between institutional shareholder trading in the quarters around spin-offs and unit firm communication (Section 4.2). I conclude this chapter with a discussion of additional analyses conducted to mitigate endogeneity concerns (Section 4.3) and to assess the sensitivity of the results to potential measurement issues (Section 4.4).

4.1. Univariate evidence

In Panels A-C of Table 5, I present the results from tracking *Institutional Ownership* of the parent and unit firms in the quarters before and after a spin-off. In Panels A and B, I begin tracking *Institutional Ownership* four quarters before a spin-off and end four quarters after a spin-off. The results in Panel A demonstrate that the parent firms' institutional shareholder base remains stable across the eight quarters. None of the quarter-to-quarter changes are statistically significant and, regarding economic magnitudes, the level of *Institutional Ownership* never changes by more than 0.5%. Note that spin-off announcements typically occur within 6-12 months of the spin-off (see

Appendix B.1 and B.2). Thus, the impending spin-off does not appear to significantly influence the institutional shareholder base of parent firms. This is consistent with the findings of Abarbanell, Bushee, and Raedy (2003), who find that neither total institutional ownership nor the composition of the institutional shareholder base change significantly from the spin-off announcement date to the spin-off completion date. In contrast to the parent firms' shareholder base, Panel A presents evidence of a significant drop in *Institutional Ownership* in unit firms immediately after a spin-off (i.e., the same drop noted in Table 3). *Institutional Ownership* in unit firms, however, increases slightly in the quarters after the initial drop.

In Panel B of Table 5, I examine the same time series changes in *Institutional Ownership*, but I split the sample based on whether a unit firm interacts with shareholders through *Roadshow* presentations in the pre-spin-off period (i.e., *Roadshow* unit firms and *Non-Roadshow* unit firms). A different story emerges when *Roadshow* presentations are considered. In Panel B, I show that drops in *Institutional Ownership* are concentrated in unit firms that do not communicate with the investment community through a spin-off *Roadshow*; these firms experience an average drop in *Institutional Ownership* of approximately 7%. In contrast, the unit firms that conduct a *Roadshow* experience only a small drop, though their institutional holdings are not statistically different from those of their parent firms. While the unit firms that conduct a *Roadshow* maintain and even experience increases in *Institutional Ownership* over the subsequent four quarters, *Institutional Ownership* in the *Non-Roadshow* unit firms remains relatively depressed.

In Panel C of Table 5, I highlight changes in institutional holdings from the calendar quarter-end before a spin-off to the quarter-end after a spin-off. Unit firms that conduct a spin-off *Roadshow* retain a larger percentage of their inherited institutional shareholder base—i.e., the same institutional shareholders who held equity stakes in the pre-spin-off parent firm. In particular, in

Roadshow unit firms, more than 78% of the inherited institutional shareholder stakes are retained as of the first post-spin-off quarter-end. In contrast, less than 62% of the inherited institutional shareholder stakes are retained as of the first post-spin-off quarter-end for unit firms that do not conduct a *Roadshow*. Furthermore, relative to *Non-Roadshow* unit firms, I find that *Roadshow* unit firms have better outcomes across all types of institutional shareholders, with the notable exception of index funds, as expected. In other words, communication does not help to retain inherited index fund investors who typically do not have discretion over which firms to own (note that communication and non-communication unit firms are equally likely to change S&P indices). Communication does, however, help to retain institutional shareholders who likely have more discretion over their portfolio holdings. *Roadshow* unit firms retain 70-80% of their inherited institutional shareholder base. In contrast, *Non-Roadshow* unit firms retain 60-70%. For comparison purposes, note that both groups of parent firms retain 80-90% of their pre-spin-off institutional shareholder base—there are no statistical differences between the two groups of parent firms. In untabulated tests, I find that the results are similar when examining the number of institutional shareholders (*Institutional Owners*) rather than the percentage of institutional ownership (*Institutional Ownership*).

In sum, unit firms' spin-off *Roadshow* presentations appear to play a central role in the retention and trading behavior of the inherited institutional shareholder base. Specifically, unit firms that conduct a spin-off *Roadshow* retain more of the inherited institutional shareholder base than unit firms that do not conduct a spin-off *Roadshow*. The results presented in Table 5 provide initial support for Hypothesis 1.

4.2. Main regression results

In Tables 6 and 7, I examine the relation between unit firm communication and institutional ownership in more detail than in the analyses presented in Table 5. In Table 6, I relate measures of communication with changes in institutional ownership from pre- to post-spin-off—specifically, from the first pre-spin-off quarter-end to the first post-spin-off quarter-end—after controlling for a variety of parent and unit firm characteristics. To test Hypothesis 1 in a multivariate framework, I estimate the following OLS regression model:

$$\Delta Institutional\ Ownership_i = \beta_0 + \beta_1 Communication_i + \sum \beta_k Controls_i + Year\ FE_i + \varepsilon_i \quad (2)$$

The change in *Institutional Ownership* is the pre-spin-off (inherited) *Institutional Ownership* minus the post-spin-off *Institutional Ownership* of the unit firm. The communication variable is either one indicator variable, *Unit Communication*, or two indicator variables, *Roadshow* and *Non-Roadshow*. I control for several observable characteristics of the unit firm (e.g., size, growth, leverage, performance, dividends, and index inclusion), as well as differences between the unit and parent firms (e.g., differences in industry, index, and exchange listing). When estimating equation (2), I include year fixed effects, and I cluster standard errors by spin-off year.

I report the results from estimating equation (2) in Panels A-C of Table 6. In Panel A, I find in columns (1) and (2) that *Unit Communication* is positively and significantly associated with changes in *Institutional Ownership* following a spin-off (coefficients = 0.031-0.033; t-stats = 1.911-2.184). In columns (3) and (4), I report the results from regressing the change in *Institutional Ownership* on *Roadshow* and *Non-Roadshow*. I find that *Roadshow* presentations drive the positive association between changes in *Institutional Ownership* after a spin-off and pre-spin-off unit firm

communication (coefficients = 0.039-0.044; t-stats = 2.384-2.525). In Panel B, I regress changes in *Institutional Ownership* on changes in firm characteristics and report results that are similar to the findings presented in Panel A. This is consistent with unit firm management teams attempting to manage the shareholder base of their new standalone firm by increasing the retention of institutional shareholders after the spin-off. The other variables that are significantly associated with changes in *Institutional Ownership* are *Relative Size*, *Book-to-Market*, *Return on Assets*, and *Index Drop*.

In Panel C of Table 6, I explore changes in *Institutional Ownership* in more detail. In particular, I again regress the change in *Institutional Ownership* on *Roadshow* and *Non-Roadshow*. However, for the results reported in Panel C, I use different dependent variables to examine the changes in the different types of *Institutional Ownership*. I find a positive association between changes in all institutional ownership types (i.e., *Large Value Ownership*, *Large Growth Ownership*, *Small Value Ownership*, and *Small Growth Ownership*) and spin-off *Roadshow* presentations (coefficients = 0.008-0.015; t-stats = 1.586-2.103). As in Panel C of Table 5, I do not find a statistically significant association between *Roadshow* and changes in *Index Fund Ownership*.

I next regress the percentage of retained institutional shareholder ownership on an indicator variable equal to 1 if the unit firm initiates a corporate communication program in the pre-spin-off period. In particular, to further test Hypothesis 1, I estimate the following OLS regression model:

$$Retained\ Instit.\ Ownership_i = \beta_0 + \beta_1 Communication_i + \sum \beta_k Controls_i + Year\ FE_i + \varepsilon_i \quad (3)$$

Retained Institutional Ownership represents the percentage of the inherited pre-spin-off institutional shareholder base continuing to hold shares of the unit firm in the post-spin-off period.

The communication variable is either one indicator variable, *Unit Communication*, or two indicator variables, *Roadshow* and *Non-Roadshow*. As in equation (2), I control for several observable characteristics of the unit firm (e.g., size, growth, leverage, performance, dividends, and index inclusion), as well as differences between the unit and parent firms (e.g., differences in industry, index, and exchange listing). When estimating equation (3), I include year fixed effects, and I cluster standard errors by spin-off year.

I report the results from estimating equation (3) in Panels A-C of Table 7. As columns (1) and (2) of Panel A demonstrate, pre-spin-off communication by unit firm management is positively and significantly associated with the percentage of retained institutional shareholder ownership inherited from the pre-spin-off parent firm (coefficients = 0.047-0.064; t-stats = 1.733-1.886). In columns (3) and (4), I report the results from regressing *Retained Institutional Ownership* on *Roadshow* and *Non-Roadshow*. I find that *Roadshow* presentations drive the positive association between *Retained Institutional Ownership* and pre-spin-off unit firm communication (coefficients = 0.057-0.073; t-stats = 1.797-1.832). In Panel B, I regress *Retained Institutional Ownership* on changes in firm characteristics and report results that are similar to the findings presented in Panel A. These results are consistent with the results reported in Panels A and B of Table 6. The other variables significantly associated with *Retained Institutional Ownership* are *Market Value of Equity*, *Relative Size*, *Book-to-Market*, and *Different Exchange*.

In Panel C of Table 7, I explore the retention of institutional ownership by investor type. In particular, I again regress *Retained Institutional Ownership* on *Roadshow* and *Non-Roadshow*. However, for the results reported in Panel C, I use different dependent variables to examine the changes in the different types of *Retained Institutional Ownership*. I find a positive association between changes in all institutional ownership types (i.e., *Large Value Ownership*, *Large Growth*

Ownership, *Small Value Ownership*, and *Small Growth Ownership*) and spin-off *Roadshow* presentations (coefficients = 0.055-0.113; t-stats = 1.758-1.894). As in Panel C of Table 5, I do not find a statistically significant association between *Roadshow* and the retention of *Index Fund Ownership*.

In sum, the results in Tables 6 and 7 provide consistent results that confirm the univariate findings in Table 5 and demonstrate a more granular nature to the changes in unit firms' post-spin-off shareholder base, as documented in Table 3 and prior studies. Specifically, unit firms that initiate a communication program in the pre-spin-off period retain a greater proportion of their inherited institutional shareholder base and maintain a higher level of total institutional ownership than unit firms that do not communicate. The evidence reported in Tables 6 and 7 provide additional support for Hypothesis 1 and suggests that communication programs reduce volatility in the shareholder base through an increase in the retention of institutional shareholders.

4.3. Discussion of endogeneity and additional analyses

In this section, I discuss several additional analyses conducted to provide more texture to the results discussed in previous sections and to help rule out alternative explanations. I also discuss some caveats and limitations in regards to interpreting the results in a causal manner.

4.3.1. Cross-sectional tests

In Table 8, I examine whether the relation between unit firm communication and *Retained Institutional Ownership* varies with the extent to which a unit firm differs from its pre-spin-off parent firm. If the parent and unit firms are very similar, then communication may not be necessary such that the incremental impact of communication is closer to zero than when a unit firm is significantly different from the parent firm. In contrast, if the parent and unit firms are too different,

then it may be the case that unit firm communication is unable to overcome shareholders' incentives to sell.

I first split the sample by industry relatedness (i.e., if *Different Industry* = 1 than the parent and unit firms are "Unrelated," as in Desai and Jain, 1999) and present the results in Panel A. If shareholders have a preference for the parent firm's industry, then *Unit Communication* and *Roadshow* may not be associated with shareholder retention when *Different Industry* is equal to 1. I find that the estimated regression coefficients for *Unit Communication* and *Roadshow* are positive and significant, regardless of industry relatedness. Differences in coefficients are indistinguishable from zero.

I next split the sample by *Relative Size* (i.e., if the unit firm is relatively small compared to the parent firm based on the median *Relative Size* in the sample, then there is a "Big Diff") and present the results in Panel B. If shareholders have a preference for firms that are similar in size to the parent firm, then *Unit Communication* and *Roadshow* may not be associated with shareholder retention when there is a big size difference between the unit and parent firms. In contrast, if shareholders do not have incentives to sell when there is a small size difference, then communication may not matter much when there is a small size difference. In Panel B, I report positive and statistically significant coefficients in all regressions, but I find that the estimated regression coefficients for *Unit Communication* and *Roadshow* are larger when there is a relatively large size difference between the parent and unit firms.

Finally, I split the sample based on whether the unit firm pays a dividend—in particular, if the parent firm pays a dividend and the unit firm does not, then the unit firm is a "Dividend Stopper." If shareholders have a strict preference for dividends, then *Unit Communication* and *Roadshow* may not be associated with shareholder retention when a unit firm is a dividend stopper.

In contrast, if shareholders do not have incentives to sell when there is no change in payout policy, then communication may not have an impact except when a unit firm is a dividend stopper. In Panel C, I report positive and statistically significant coefficients in all regressions, but I find that the estimated regression coefficients for *Unit Communication* and *Roadshow* are larger when the unit firm is a dividend stopper.

Overall, I find some evidence to support the idea that communication is more effective when the parent and unit firms differ more drastically. However, *Unit Communication* and *Roadshow* are positively associated with *Retained Institutional Ownership* in all the regressions reported in Table 8. The results reported in Table 8, nonetheless, provide some support for Hypothesis 2. There are, however, potentially limits in regards to the impact of communication, consistent with the idea that communication cannot, for example, help firms retain index fund investors who have a mandate to sell.

4.3.2. Parent firm and post-spin-off communication

In Table 9, I re-estimate the regressions reported in Table 7 but include indicator variables to capture whether a parent firm communicates with investors in the pre-spin-off period and also whether a unit or parent firm communicates with investors in the post-spin-off period. My goal is to mitigate the possibility that the main results can be attributed to an underlying omitted factor that accounts for both the corporate communication efforts undertaken by unit and parent firms and a unit firm's post-spin-off institutional shareholder ownership. In particular, one possibility is that unit firms are more likely to communicate with the investment community when management expects their firm to perform well after the spin-off. Therefore, to provide additional evidence that communications with investors are important for managing the shareholder base and retaining institutional shareholder ownership, I consider unit firms that initiate communication programs

within one quarter after the spin-off. I assume that these unit firms are similar to the unit firms that communicate in the quarter preceding the spin-off, except they commence communications a month or two later. Another possibility is that parent firm communication is driving the results, so I control for pre- and post-spin-off parent firm communication as well.

Pre-spin-off communication activities are reported in Panel A of Table 4, and post-spin-off communication activities are reported in Panel A of Table 9 (see Sections 3.4 and 3.5 for a discussion of pre-spin-off communication activities). Parent firm communication activities are relatively similar in the pre- and post-spin-off periods. Parent firm management teams tend to use the *Conference Presentation* and *Management Forecast* channels more than unit firm management teams use those communication channels. Less than 7% (2%) of parent firms conduct a *Roadshow* in the pre-spin-off (post-spin-off) period. Unit firms shift from using *Roadshow* presentations in the pre-spin-off period (i.e., 35.1% pre-spin-off vs. 2.6% post-spin-off) to the *Conference Presentation* and *Management Forecast* channels in the post-spin-off period, with more than 12% of unit firms making a *Conference Presentation* and more than 13% of unit firms providing earnings forecasts in the post-spin-off period.

While the percentage of unit firms (37.9%) that communicate with investors in the pre-spin-off period is similar to the percentage of parent firms (41.4%) that communicate during the same period, the difference is much greater in the post-spin-off period. In particular, 40.1% of parent firms communicate in the post-spin-off period, while only 25.1% of unit firms do so. Recall that I limit my examination of communication activities to the 90-day window preceding and following a spin-off because I am interested in the effect of communications with investors on shareholder retention immediately following a spin-off. Extending the communication window to

one year after the spin-off reveals that more than 25% of unit firms initiate post-spin-off communication programs.

As documented in Panel B of Table 9, I do not find a statistically significant relation between post-spin-off communication by unit firms and the retention of pre-spin-off institutional shareholder ownership. Furthermore, I find no relation between the communication activities of parent firms and a unit firm's shareholder base, suggesting that parent firm communication does not imply a low-quality unit firm, nor does it deter institutional shareholders from staying with the unit firm. The relation between pre-spin-off *Unit Communication* and *Retained Institutional Ownership* survives the various regression specifications presented in Panel B (coefficients = 0.050-0.062; t-stats = 1.700-1.886). These results provide additional support for Hypothesis 1 by helping to rule out alternative explanations.

4.3.3. Discussion

As discussed previously, I use the spin-off setting as a laboratory for examining the link between corporate communication and shareholder retention. Notwithstanding the advantages of the spin-off setting, there are also some drawbacks that could limit my ability to draw causal inferences from the results.

For instance, it is difficult to pinpoint the motive for a spin-off and whether it is correlated with the decision to initiate a pre-spin-off communication program.¹⁴ If the purpose of some spin-

¹⁴ One challenge in identifying, coding, and controlling for the motive behind a spin-off is that, in their spin-off-related press releases, parent firm executives often cite multiple motives and tend to cast the spin-off in a positive yet vague manner. Common, non-mutually exclusive reasons to undertake a spin-off include to improve corporate focus, to reduce risk, to improve the compensation incentives of key employees through stock ownership plans tied to the performance of specific business segments, cost-savings initiatives, and occasionally to facilitate an acquisition (although, as discussed in Section 3.1, I drop spin-offs that are undertaken for the purpose of facilitating a merger or acquisition). Furthermore, Fich, Starks, and Yore (2014) and Feldman (2016b) find that parent firm CEOs benefit from spin-offs through increased compensation, despite managing a smaller post-spin-off parent firm.

offs is to divest low-quality assets, in these situations a unit firm would likely not undertake a costly communication program, which could explain variation in both the communication decision and post-spin-off outcomes. However, recall that for a spin-off to qualify for tax-free status, there must be a valid business purpose for the spin-off that is not motivated by tax considerations. Thus, I assume that the decision to spin-off a business unit is uncorrelated with the unit firm's choice to communicate with investors in the pre-spin-off period (i.e., the motivation for the spin-off is relatively constant across firms). Also note that I control for levels of and differences in performance, risk, leverage, and other factors that are likely picking up various dimensions of the decision to spin-off a business unit. The results related to the spin-off *Roadshow* presentations are incremental to the firm characteristics that I explicitly control for in my regression analyses.

A related concern, however, is that a unit firm's choice to communicate may proxy for management's belief that the firm will perform better than expected as a standalone business (i.e., another correlated omitted variable concern).¹⁵ As noted above, I control for performance, but that does not completely eliminate the concern about expectations being impounded in the communication decision. Even if this were the case, however, the results would still imply that communications with investors are an important and necessary condition for retaining

¹⁵ Despite potential concerns that standalone unit firms tend to be relatively low quality assets, prior research generally finds that corporate spin-offs are associated with beneficial capital market outcomes for the firms involved, which may stem from improvements in internal capital allocation. A large literature examines the link between corporate diversification and firm value (e.g., Palepu, 1985; Lang and Stulz, 1994; Berger and Ofek, 1995; Comment and Jarrell, 1995; Whited, 2001; Campa and Kedia, 2002; Villalonga, 2004a, 2004b). Within this research stream, many studies focus on the corporate spin-off setting to assess the effect of diversification on firm performance and valuation. Studies focusing on the spin-off setting include Hite and Owers (1983), Miles and Rosenfeld (1983), Schipper and Smith (1983), Cusatis, Miles, and Woolridge (1993), Daley, Mehrotra, and Sivakumar (1997), Parrino (1997), Berger and Ofek (1999), Desai and Jain (1999), Burch and Nanda (2003), Dittmar and Shivdasani (2003), Maxwell and Rao (2003), Ahn and Denis (2004), Chemmanur and Yan (2004), McNeil and Moore (2005), and Colak and Whited (2007). The general takeaway from this literature is that conglomerates, on average, trade at a discount (i.e., the "diversification discount") and that focusing initiatives, such as spin-offs, are associated with increases in firm value. However, prior studies offer mixed results regarding whether and to what extent improvements in firm value are caused by improvements in investment efficiency.

shareholders. I would not, however, be able to claim that all firms should communicate or that all firms would necessarily obtain the same benefits.

It is also possible that pre-spin-off shareholders decide whether to remain owners of a unit firm even before a unit firm chooses to communicate with investors. These shareholders could, in turn, influence the unit firm's decision to communicate with investors in the pre-spin-off period (i.e., a reverse causality concern).¹⁶ Although I cannot rule out this explanation completely, it is inconsistent with the prevailing anecdotal evidence, which suggests that a major challenge for unit firms is the retention of the inherited shareholder base.

Together, the additional analyses help to mitigate, but do not completely eliminate, the possibility that the results presented in Tables 5-8 can be attributed to an omitted variable, such as the perceived quality of a unit firm, that explains both the communication decision and the level or retention of institutional ownership, or that institutional shareholders influence the decision of unit firm management to communicate in the pre-spin-off period. Although I attempt to mitigate the possibility that a variety of omitted factors are driving the results, I recognize that endogeneity remains an issue, given that I lack exogenous variation in the corporate communication strategies used by unit firm management teams.

4.4. Sensitivity analyses

In this section, I discuss the possibility that the results are sensitive to the measurement of key variables. For instance, the nature of 13F institutional shareholder reporting requirements gives rise to several measurement issues in this study. Furthermore, some spin-offs are potentially

¹⁶ Alternatively, index fund managers, who know they will need to exit their position in the post-spin-off unit firm, may push unit firms to increase disclosure in the pre-spin-off period to help minimize their trading costs by increasing liquidity in the post-spin-off trading environment (Boone and White, 2015).

confounded by other restructuring decisions. Finally, I assess the sensitivity of the results to my definition of parent and unit firm, as well as to industry adjustments.

4.4.1. Institutional investor reporting requirements

Institutional investment firms are required to report holdings of a given firm only if the holdings are greater than 10 thousand shares or \$200 thousand in market value. This can cause a problem in my tests. For instance, an institution could own 5,000 shares of the pre-spin-off combined firm. Those shares might have a market value of, for example, \$400,000. However, when that institutional shareholder receives shares of the standalone unit firm, those shares may only be worth, for example, 20% of the \$400,000 (depending on the terms of the distribution). This would mean that, even if the institutional shareholder did not sell the shares of the unit firm, the data might suggest otherwise. In this sense, the findings in Tables 5-8 can be thought of as lower bounds, as long as the measurement error in institutional holdings is spread randomly across communication and non-communication unit firms. I consider this issue by examining the ownership stakes in the pre-spin-off parent firms that would not need to be reported for the post-spin-off unit firm under the 13F reporting requirements. I then delete these from the institutional shareholder base of the pre-spin-off parent firm and re-examine the relation between unit firm communications with investors and the retention of pre-spin-off institutional shareholders. Previous findings are unaffected by this measurement issue.

4.4.2. Timing of spin-offs

Spin-offs are typically completed between calendar quarter ends, which means that for some firms, institutional holdings data may be reported shortly after the spin-off, and for others, the data will first be reported more than two months after the spin-off. In my sample, the

transactions are spread relatively evenly across months, so this is unlikely to cause a problem in my tests. However, I also split the sample in half based on the number of weeks to the calendar quarter-end, and I find that the joint timing of the spin-off and the 13F reporting dates does not alter the results. I also find that the results remain consistent if I measure retention at subsequent quarters (i.e., +2Q, +3Q, and +4Q).

4.4.3. Carve-outs and other activities

13 parent firms also sell assets or undertake other restructuring activities in addition to the tax-free spin-off considered in this study (i.e., *Other Restructuring* = 4.08%; untabulated). The results are unaffected by the exclusion of these 13 observations. Furthermore, in a two-step spin-off, the parent firm typically first sells between 10% and 20% of the equity in the unit firm in a carve-out IPO to raise cash, and then subsequently distributes its remaining interest in the unit firm through a nontaxable stock distribution to shareholders of the parent (not the unit) firm (e.g., Lamont and Thaler, 2003). Controlling for or dropping observations for which the spin-off occurs after an equity carve-out does not change the results.

4.4.4. Parent and unit firm definitions

In this section, I consider the possibility that the unit firms that communicate are the better quality firm, and the parent firm is, in essence, the unit firm. This is unlikely, however, given that I find that parent firm outcomes are similar regardless of unit firms' communication choices. Specifically, I find that, regardless of a unit firm's communication choices, institutional shareholder retention in the parent firms remains constant during the four pre-spin-off quarters, from the pre-spin-off quarter-end (-1Q) to the post-spin-off quarter-end (+1Q) (as reported in Table 5), and during the four post-spin-off quarters. Shareholder retention in parent firms does not

depend on shareholder retention in the unit firm. In particular, the evolution of a parent firm's shareholder base is not associated with unit firm communication or institutional shareholders' decision to remain with the unit firm.

To further address this issue, I redefine the parent and unit firms. In particular, I label the parent firm as the larger of the two post-spin-off firms and the unit firm as the smaller of the two post-spin-off firms. This occurs in less than 15% of the sample. The results remain qualitatively similar (i.e., the results have the same sign and similar magnitudes) after making this adjustment and, interestingly, the results are slightly stronger in terms of the size of t-statistics.

4.4.5. Industry adjustments

I have, thus far, compared communication unit firms (i.e., “treatment” firms) with non-communication unit firms (i.e., “control” firms). For robustness, I assess whether the results are sensitive to industry-adjustments. In particular, in conducting unit-firm-level analyses, my goal now is to assess whether the results are impacted by first removing common industry factors (e.g., the average level of institutional ownership in a unit firm's industry). In untabulated tests, I find that the results remain qualitatively similar whether benchmarked against industry averages or not. Specifically, the sign and significance of the regression coefficients remain the same, and the coefficient magnitudes remain similar.

CHAPTER 5

Stock returns around spin-offs

Corporate executives care about managing their firms' shareholder base because they believe the shareholder base can have a direct effect on firm value (e.g., Beyer, Larcker, and Tayan, 2014). In this chapter, I examine unit firm stock returns following the announcement and completion of a spin-off. I first provide a univariate analysis of stock returns (Section 5.1) and then examine the relation between unit firm roadshows and post-spin-off stock returns in a multivariate framework (Section 5.2).

5.1. Univariate evidence

In Table 10, I summarize unit firm stock returns following the announcement and completion of a spin-off. I define abnormal returns as $AR_{it} = R_{it} - R_{MKT}$, where R_{it} denotes the return on stock i at time t , and R_{MKT} denotes the CRSP value-weighted portfolio return. Cumulative abnormal returns (CAR) are the sum of abnormal returns over various intervals from one day after a spin-off through 90 days after a spin-off. These CAR s are summarized in Panel A of Table 10.

The mean (median) CAR_{ANN} for the full sample is 3.12% (2.28%), which is consistent with prior studies examining market reactions to spin-off announcements. The mean (median) CAR_{ANN} for the parents of the communication unit firms is 3.41% (1.94%) and the mean (median) CAR_{ANN}

for the parents of the non-communicating unit firms is 2.97% (2.39%). These differences, however, are not distinguishable from zero at conventional levels of statistical significance.

Note that the abnormal returns for the full sample of unit firms are negative through the 45-day horizon (however, the returns are not statistically different from zero past the 15-day horizon). The first column shows that abnormal returns are -1.92% over the 15-day interval following a spin-off. These returns turn positive after 60 days, consistent with the long-run performance documented by Cusatis, Miles, and Woolridge (1993), Vijh (1994), McConnell, Ozbilgin, and Wahal (2001), Abarbanell, Bushee, and Raedy (2003), McConnell and Ovtchinnikov (2004), and McConnell, Sibley, and Xu (2015).

In contrast to the full sample, the sample of non-communicating unit firms has *CARs* that are negative and statistically significant through the 45-day interval. For these firms, *CARs* never become positive over the 90-day window examined. Note also that these non-communicating unit firms have *CARs* of -4.36% after the first ten days following a spin-off. In contrast, the unit firms that communicate with capital market participants before the spin-off have *CARs* that are mostly positive, never negative, and statistically significant. These unit firms have positive *CARs* of 5.13% after the first 90 days following a spin-off.

5.2. Main regression results

In this section, I discuss the results reported in Table 10, Panel B. In Panel B, I examine the relation between unit firm communications with investors and cumulative abnormal returns over various cumulative abnormal return windows. In particular, to test Hypothesis 3 in a multivariate framework, I estimate the following OLS regression model:

$$CAR [0, k]_i = \beta_0 + \beta_1 Communication_i + \sum \beta_k Controls_i + Year FE_i + \varepsilon_i \quad (4)$$

In columns (1)-(4) of Panel B, I use two indicator variables to capture different modes of communications with investors: (1) *Roadshow* and (2) *Non-Roadshow*. I regress *CARs* over various windows (i.e., I use [0, 10], [0, 30], [0, 90], and [0, 180] day time horizons) on the indicator variables for each type of unit firm communication channel. The results in columns (1)-(4) in Panel B of Table 10 suggest that *Roadshow* is positively associated with *CARs* after the spin-off, consistent with Hypothesis 3. Note, however, that the estimated coefficients on *Roadshow* are only weakly significant, and not significant when I consider the 180-day window. Nonetheless, the results are broadly consistent with the evidence reported in Tables 5-9 and Panel A of Table 10. In particular, unit firm communication is positively associated with the extent to which unit firms emerging from spin-offs retain institutional ownership and avoid the stock price pressure commonly experienced by post-spin-off unit firms. Avoiding stock price pressure is an important consideration for executives with equity-based compensation such as stock option awards.

5.3. Sensitivity analyses

In the tests reported in Table 10, I compute CRSP value-weighted market returns, which assumes a market beta of one. For robustness, I also compute equal-weighted returns, returns from a Fama-French three-factor model, and buy-and-hold returns. The results remain qualitatively similar in terms of regression coefficient signs and significance when using alternative stock return models.

Finally, for some of the spin-offs, a when-issued market is set up by the stock exchange on which the firm chooses to list a few weeks before the distribution date. When-issued securities

allow investors to trade the claims to their stakes in the unit firm before the spin-off is completed (their positions are settled after the distribution of shares on the spin-off completion date). Consistent with Abarbanell, Bushee, and Raedy (2003), I find that the when-issued market does not seem to experience much trading activity in the pre-spin-off period. Including the when-issued period in the returns analysis does not change the results shown in Table 10.

CHAPTER 6

Conclusion

Corporate management teams spend considerable resources building and maintaining their firms' institutional shareholder base. Much of the prior research focuses on how firms attract new shareholders to their firms and the negative impact associated with blockholder exits, declines in institutional investor ownership after an IPO (e.g., Mehran and Peristiani, 2010), and declines in institutional investor ownership after a cross-listing (e.g., King and Segal, 2009). Although anecdotal and survey evidence suggests that corporate management teams and investor relations professionals allocate a significant portion of a firm's communication resources to current equity analysts and institutional shareholders (e.g., by providing access to management, private call backs, and prompt responses to inquiries), rather than to potential analysts and investors, relatively little is known about whether and to what extent these communication events are beneficial in terms of helping to retain a firm's institutional shareholder base. The goal of this study is to examine whether corporate communication programs have an impact on institutional shareholder retention.

I study business units that split from their parent firms and, in the process, inherit their parent firms' shareholder base. I investigate whether and to what extent unit firm management can influence the retention of their firms' inherited institutional shareholder base through their pre-spin-off communication programs. I find that unit firm management teams who initiate

communication programs in the pre-spin-off period are better able to retain the institutional shareholder base inherited from the parent firm. These firms also avoid the stock price pressure commonly experienced by standalone unit firms, as documented in prior studies.

This study extends prior empirical evidence demonstrating the role of corporate communication in attracting new institutional investors. In particular, this study illustrates the importance of communications with investors for retaining current institutional ownership positions and maintaining the stability of the shareholder base, especially around major corporate events. Prior studies suggest retention is important by highlighting the negative consequences associated with shareholder selling pressure and declines in institutional ownership.

This study also extends the prior literature examining institutional shareholder trading around spin-off transactions. In particular, I find that communications with investors play an important role in spin-offs by helping unit firms improve the retention of institutional shareholders and avoid the negative consequences associated with sell-offs by those shareholders. Specifically, I show that drops in institutional ownership are concentrated in unit firms that do not communicate with the investment community through spin-off roadshows, and that unit firms can, to some extent, reduce the post-spin-off price pressure arising from preference-related selling by institutional shareholders.

Although I attempt to mitigate the possibility that a variety of omitted factors are driving the results, I recognize that endogeneity remains an issue, given that I lack exogenous variation in the corporate communication strategies used by unit firm management teams. Future research can help address these issues, in addition to developing a better understanding of the most important facets of communication. The results nevertheless suggest that communications with investors are an important and necessary condition for retaining shareholders.

Tables

Table 1. Sample selection

This table provides an overview of the sample selection process. Refer to Chapter 3 for a discussion of the data sources, the spin-off sample, and the sample selection process.

Details	Observations
CRSP tax-free spin-off distributions plus SDC spin-offs completed between 1994 and 2014, less duplicates and observations with missing firm identifiers	426
Less: Tracking stock issues	(5)
Less: Equity carve-outs	(7)
Less: Acquisition-related spin-offs	(16)
Less: Observations with missing financial, investor, or stock price information	(79)
Spin-offs used in analyses	319

Table 2. Composition of spin-off sample

Panel A presents the distribution of tax-free spin-offs by year. In each transaction, parent firms distribute at least 80% of the unit firm's equity through a *pro rata* stock dividend to their shareholders. Sometimes a single parent firm divests multiple divisions in simultaneous, but unique spin-off transactions; eight parent firms spun-off two unit firms and one parent firm spun-off three unit firms. Panel B presents the distribution of spin-off firms by the firms' U.S. stock exchange listing. Panel C presents the distribution of spin-off firms by industry assignment, which is based on 12 Fama and French industry classifications. Panel D presents the distribution of spin-off firms by inclusion in a major Standard and Poor's stock market index. Refer to Chapter 3, Section 3.2 for a discussion of Panels A-D.

Panel A: Distribution of sample firms by year of spin-off completion

Completion Year	Parent Firms		Unit Firms	
	n	%	n	%
1994	14	4.5	15	4.3
1995	18	5.8	19	5.5
1996	17	5.5	17	4.9
1997	19	6.1	19	5.8
1998	13	4.2	13	4.0
1999	23	7.4	26	8.4
2000	24	7.8	24	7.8
2001	20	6.5	20	6.1
2002	18	5.8	18	6.9
2003	10	3.2	10	3.2
2004	11	3.6	11	3.7
2005	11	3.6	11	3.7
2006	7	2.3	8	3.2
2007	12	3.9	13	4.3
2008	18	5.8	20	6.1
2009	5	1.6	5	1.4
2010	7	2.3	7	2.0
2011	10	3.2	11	3.2
2012	12	3.9	12	4.0
2013	13	4.2	13	3.7
2014	27	8.7	27	7.8
Total	309	100.0	319	100.0

Panel B: Distribution of sample firms by major U.S. stock exchange listing

U.S. Exchange Listing	Parent Firms		Unit Firms	
	n	%	n	%
AMEX	3	1.0	14	4.4
Nasdaq	75	24.3	103	32.3
NYSE	231	74.8	202	63.3
Total	309	100.0	319	100.0

Table 2 (continued)

Panel C: Distribution of sample firms by primary industry assignment

Fama-French Classification	Industry Examples	Parent Firms		Unit Firms	
		n	%	n	%
Business Equipment	Computers, Electronics, Software	49	15.9	50	15.7
Chemicals	Cleaning Supplies, Paints, Perfumes	10	3.2	12	3.8
Consumer Durables	Appliances, Cars, Furniture	13	4.2	6	1.9
Consumer Non-Durables	Food, Tobacco, Apparel	21	6.8	20	6.3
Energy	Oil, Gas, Extraction	18	5.8	11	3.4
Finance	Banks, Insurance, REITs	43	13.9	50	15.7
Healthcare	Medical Equipment, Pharmaceuticals	20	6.5	28	8.8
Manufacturing	Machinery, Paper, Trucks	38	12.3	41	12.9
Other	Services, Hotels, Transportation	38	12.3	45	14.1
Telecommunications	Telephone, TV/Radio Broadcasting	32	10.4	21	6.6
Utilities	Electric, Natural Gas	7	2.3	6	1.9
Wholesale and Retail	Parts/Supplies, Stores, Restaurants	20	6.5	29	9.1
Total		309	100.0	319	100.0

Panel D: Distribution of sample firms by major Standard and Poor's stock market index

Standard and Poor's Index	Parent Firms				Unit Firms	
	Pre-Spin-Off		Post-Spin-Off		Post-Spin-Off	
	n	%	n	%	n	%
S&P 500 Large Cap	143	46.3	124	40.1	56	17.6
S&P 400 Mid Cap	37	12.0	42	13.6	50	15.7
S&P 600 Small Cap	21	6.8	29	9.4	43	13.5
Not included in major S&P index:						
- Market Cap > \$1 billion	46	14.9	42	13.6	33	10.3
- Market Cap ≤ \$1 billion	62	20.1	72	23.3	137	42.9
Total	309	100.0	309	100.0	319	100.0

Table 3. Summary statistics

Panels A and B present descriptive statistics for the 309 pre- and post-spin-off parent firms and the 319 unit firms. Panel A presents univariate statistics related to various firm attributes. Panel B presents univariate statistics related to shareholder base characteristics. Recall that immediately after a spin-off, both parent and unit firms inherit the shareholder base of the pre-spin-off combined firm. Refer to Appendix A for variable definitions and to Chapter 3, Sections 3.2 and 3.3 for a discussion of the results reported in Panels A and B.

The superscripts ***, **, and * denote statistically significant differences at the 1%, 5%, and 10% level, respectively, using two-tailed (Wilcoxon signed-ranks) tests of differences in means (medians) between pre-spin-off parent firms and post-spin-off parent or unit firms.

The superscripts †††, ††, and † denote statistically significant differences at the 1%, 5%, and 10% level, respectively, using two-tailed (Wilcoxon signed-ranks) tests of differences in means (medians) between post-spin-off parent firms and post-spin-off unit firms.

Panel A: Descriptive statistics for measures of and differences in firm attributes

Measures of Firm Attributes		Parent Firms (n = 309)		Unit Firms (n = 319)
		Pre-Spin-Off	Post-Spin-Off	Post-Spin-Off
<i>Market Value of Equity</i>	Mean	13,759.25	11,239.23	2,413.40 *** †††
	Median	3,178.95	2,374.26 ***	716.19 *** †††
	St. Dev.	25,213.41	21,809.23	4,370.63
<i>Assets</i>	Mean	16,550.27	14,149.52	4,390.73 *** †††
	Median	3,944.00	3,106.70 ***	981.53 *** †††
	St. Dev.	31,243.39	25,744.69	9,570.97
<i>Relative Size</i>	Mean			0.28 †††
	Median			0.23 †††
	St. Dev.			0.20
<i>Book-to-Market</i>	Mean	0.48	0.53 **	0.60 *** †
	Median	0.41	0.46 **	0.52 *** †
	St. Dev.	0.29	0.41	0.50
<i>Book Leverage</i>	Mean	0.28	0.30	0.29
	Median	0.25	0.27 ***	0.24
	St. Dev.	0.18	0.20	0.23
<i>Return on Assets</i>	Mean	0.04	0.03	-0.01 *** †††
	Median	0.04	0.04	0.03 *** ††
	St. Dev.	0.07	0.09	0.19
<i>Dividends</i>	Mean	0.72	0.71	0.31 *** †††
<i>Different Index</i>	Mean		0.11	0.43 †††
<i>Index Drop</i>	Mean		0.03	0.21 †††
<i>Different Industry</i>	Mean			0.64
<i>Different Exchange</i>	Mean			0.19
<i>Distribution Ratio</i>	Mean			6.15

Table 3 (continued)*Panel B: Descriptive statistics for measures of and differences in shareholder base composition*

Shareholder Base Composition		Parent Firms (n = 309)		Unit Firms (n = 319)
		Pre-Spin-Off	Post-Spin-Off	Post-Spin-Off
<i>Institutional Owners (N)</i>	Mean	291.99	274.72	174.02 *** †††
	Median	202.00	181.00 ***	121.00 *** †††
	St. Dev.	271.63	261.08	161.47
<i>Institutional Ownership (%)</i>	Mean	0.60	0.60	0.56 ** ††
	Median	0.63	0.63	0.59 *** †††
	St. Dev.	0.21	0.21	0.21
<i>Institutional Blockholders (N)</i>	Mean	1.55	1.69	1.87 *** †
	Median	1.00	1.00	2.00 *** †††
	St. Dev.	1.30	1.39	1.31
<i>Large Value Ownership (%)</i>	Mean	0.19	0.19	0.15 *** †††
	Median	0.20	0.20	0.15 *** †††
	St. Dev.	0.11	0.10	0.09
<i>Large Growth Ownership (%)</i>	Mean	0.13	0.13	0.11 *** †††
	Median	0.12	0.12 *	0.10 *** †††
	St. Dev.	0.08	0.08	0.08
<i>Small Value Ownership (%)</i>	Mean	0.14	0.14	0.15
	Median	0.12	0.11	0.14 **
	St. Dev.	0.10	0.11	0.11
<i>Small Growth Ownership (%)</i>	Mean	0.11	0.12	0.13 *
	Median	0.09	0.09	0.10 ****
	St. Dev.	0.09	0.09	0.10
<i>Index Fund Ownership (%)</i>	Mean	0.37	0.37	0.32 *** †††
	Median	0.39	0.39	0.32 *** †††
	St. Dev.	0.14	0.14	0.14

Table 4. Communication choices around spin-offs

This table provides an overview of the communication activities initiated by the parent and unit firms involved in the 319 spin-off transactions. Panel A provides a breakdown of the communication channels used by parent and unit firm management teams in the pre-spin-off period. The communication activities reported in Panel A are in addition to mandatory SEC filings (e.g., SEC Form 10 Registration Statements) related to spin-off transactions. In Panel B, I report Pearson correlation coefficients for associations between pre-spin-off unit firm *Roadshow* and other select parent and unit firm characteristics (note: boldface correlation coefficients indicate statistical significance at the 10% level). In Panel C, I estimate the following logistic regression model to examine more closely unit firms' decision to conduct a pre-spin-off roadshow:

$$Roadshow_i = \beta_0 + \sum \beta_k Unit\ Characteristics_i + \sum \gamma_k Parent\ Characteristics_i + \varepsilon_i$$

Refer to Appendix A for variable definitions and to Chapter 3, Sections 3.4 and 3.5 for a discussion of the results reported in Panels A-C.

The superscripts ***, **, and * denote statistically significant differences at the 1%, 5%, and 10% level, respectively, using two-tailed t-tests.

Panel A: Percentage of parent and unit firms using various communication channels in the pre-spin-off period

Communication Channel	Pre-Spin-Off		Difference
	Parent Firms (%)	Unit Firms (%)	
<i>Roadshow</i>	6.5	35.1	***
<i>Spin-off Conference Call</i>	3.9	0.9	***
<i>Conference Presentation</i>	19.1	3.5	***
<i>Management Forecast</i>	29.5	4.1	***
At Least One Communication Channel	41.4	37.9	—

Table 4 (continued)

Panel B: Pearson correlation coefficients

Variables	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
[1] Unit: <i>Roadshow</i>	1.00													
[2] Unit: <i>Log(Assets)</i>	0.20	1.00												
[3] <i>Relative Size</i>	-0.03	0.24	1.00											
[4] Unit: <i>Book-to-Market</i>	-0.04	0.11	0.07	1.00										
[5] Unit: <i>Book Leverage</i>	-0.12	0.15	0.00	-0.26	1.00									
[6] Unit: <i>Return on Assets</i>	0.00	0.22	0.00	-0.14	0.13	1.00								
[7] Unit: <i>Dividends</i>	0.05	0.32	0.12	-0.07	0.06	0.24	1.00							
[8] Pre: <i>Institutional Owners</i>	0.22	0.71	-0.21	-0.06	0.10	0.25	0.22	1.00						
[9] Pre: <i>Institutional Ownership</i>	0.00	0.26	0.02	0.00	0.07	0.20	0.11	0.51	1.00					
[10] <i>Different Exchange</i>	-0.10	-0.23	-0.16	0.08	-0.08	-0.01	-0.14	-0.17	-0.05	1.00				
[11] <i>Different Industry</i>	-0.05	-0.02	-0.01	0.11	-0.07	0.12	0.09	-0.03	0.02	-0.03	1.00			
[12] <i>Distribution Ratio</i>	-0.04	0.01	-0.31	0.15	0.09	-0.02	-0.11	0.18	-0.07	0.06	0.06	1.00		
[13] <i>Parent Communication</i>	0.24	0.25	-0.06	0.04	0.02	0.05	0.13	0.37	0.28	-0.19	-0.11	0.05	1.00	
[14] Parent: <i>S&P 4/5/600 Index</i>	0.20	0.37	-0.14	-0.06	0.05	0.21	0.12	0.65	0.44	-0.06	0.02	0.01	0.18	1.00

Table 4 (continued)*Panel C: Logistic regression model examining unit firms' decision to conduct a pre-spin-off roadshow*

Independent Variables	Dependent Variable: Roadshow (1/0)
Unit Characteristics	
<i>Log(Assets)</i>	0.311 * [1.754]
<i>Relative Size</i>	-0.411 [-0.446]
<i>Book-to-Market</i>	-0.637 * [-1.774]
<i>Book Leverage</i>	-1.802 ** [-2.234]
<i>Return on Assets</i>	-0.608 [-0.745]
<i>Dividends</i>	-0.145 [-0.508]
<i>Different Exchange</i>	-0.190 [-0.536]
<i>Different Industry</i>	-0.074 [-0.268]
<i>Distribution Ratio</i>	-0.012 [-0.675]
Pre-spin Parent Characteristics	
<i>Parent Communication</i>	0.418 *** [2.862]
<i>S&P 4/5/600 Index</i>	1.603 *** [3.684]
<i>Institutional Owners</i>	0.056 [0.158]
<i>Institutional Ownership</i>	-2.087 ** [-2.247]
<i>CAR_{ANN}</i>	3.147 [1.315]
Constant	-0.633 [-0.831]
Industry and Year Indicators	Included
McFadden's R^2	0.211
Observations	319

Table 5. Evolution of the institutional shareholder base around spin-offs

This table presents time series changes in the institutional shareholder bases of the 309 parent firms and the 319 standalone unit firms involved in the sample of spin-off transactions. Panel A presents the trend in total institutional ownership during the four quarters before and the four quarters after a spin-off. Panel B also examines time series changes in total institutional ownership, but conditions on whether a unit firm conducts a *Roadshow* (1/0 indicator variable). Panel C zooms into the pre- and post-spin-off quarter-ends and examines the link between roadshows and the retention of the inherited pre-spin-off institutional shareholder base. Refer to Appendix A for variable definitions and to Chapter 4, Section 4.1 for a discussion of the results reported in Panels A-C.

The superscripts ***, **, and * denote statistically significant differences at the 1%, 5%, and 10% level, respectively, using a two-tailed t-test of the difference in current quarter and prior quarter means.

Panel A: Evolution of total institutional shareholder ownership of parent and unit firms around spin-offs

Mean Institutional Ownership	Calendar Quarter Before Spin-Off				Calendar Quarter After Spin-Off			
	-4Q	-3Q	-2Q	-1Q	+1Q	+2Q	+3Q	+4Q
Parent Firms	0.60	0.60	0.60	0.60	0.59	0.60	0.61	0.61
Unit Firms					0.56 **	0.56	0.57	0.57

Panel B: Evolution of total institutional shareholder ownership of parent and unit firms around spin-offs, conditional on unit firm roadshow

Mean Institutional Ownership	Calendar Quarter Before Spin-Off				Calendar Quarter After Spin-Off			
	-4Q	-3Q	-2Q	-1Q	+1Q	+2Q	+3Q	+4Q
<i>Unit Firm Roadshow = 1 (n = 112)</i>								
Parent Firms	0.61	0.61	0.60	0.60	0.61	0.61	0.61	0.62
Unit Firms					0.59	0.61	0.62	0.62
<i>Unit Firm Roadshow = 0 (n = 207)</i>								
Parent Firms	0.60	0.59	0.60	0.60	0.59	0.59	0.60	0.61
Unit Firms					0.53 ***	0.53	0.54	0.54

Table 5 (continued)

Panel C: Type and source of inherited and retained institutional shareholder ownership of unit firms, conditional on unit firm roadshow

	Roadshow Unit Firms (n = 112)			Non-Roadshow Unit Firms (n = 207)			
	“Inherited”	“Retained”		“Inherited”	“Retained”		
Shareholder Base	-1Q	+1Q	Percent Retained	-1Q	+1Q	Percent Retained	Diff.
Parent Firms							
<i>Institutional Ownership</i>	0.60	0.52	85.8%	0.60	0.51	85.0%	—
<i>Large Value Ownership</i>	0.21	0.19	90.5%	0.18	0.16	89.4%	—
<i>Large Growth Ownership</i>	0.13	0.12	90.7%	0.13	0.12	90.3%	—
<i>Small Value Ownership</i>	0.13	0.11	83.0%	0.15	0.12	83.3%	—
<i>Small Growth Ownership</i>	0.10	0.09	86.3%	0.11	0.10	87.0%	—
<i>Index Fund Ownership</i>	0.38	0.33	88.2%	0.37	0.32	87.6%	—
Unit Firms							
<i>Institutional Ownership</i>	0.60	0.47	78.2%	0.60	0.37	61.7%	***
<i>Large Value Ownership</i>	0.21	0.16	78.4%	0.18	0.11	61.1%	***
<i>Large Growth Ownership</i>	0.13	0.10	79.7%	0.13	0.09	65.3%	***
<i>Small Value Ownership</i>	0.13	0.10	79.0%	0.15	0.10	63.8%	**
<i>Small Growth Ownership</i>	0.10	0.08	81.5%	0.11	0.07	61.6%	***
<i>Index Fund Ownership</i>	0.38	0.28	72.4%	0.37	0.26	71.2%	—

Table 6. Impact of pre-spin-off communication on changes in institutional ownership

This table reports estimated coefficients from the following OLS regression model:

$$\Delta Institutional\ Ownership_i = \beta_0 + \beta_1 Communication_i + \sum \beta_k Controls_i + Year\ FE_i + \varepsilon_i$$

$\Delta Institutional\ Ownership$ is computed as the inherited pre-spin-off institutional ownership minus the post-spin-off institutional ownership of the unit firm. The communication variable is either one indicator variable, *Unit Communication*, or two indicator variables, *Roadshow* and *Non-Roadshow*. In Hypothesis 1, I predict a positive coefficient on β_1 (i.e., the coefficient on *Unit Communication* or *Roadshow*). In Panel C, LVA denotes *Large Value Ownership*, LGR denotes *Large Growth Ownership*, SVA denotes *Small Value Ownership*, and SGR denotes *Small Growth Ownership*. Refer to Appendix A for variable definitions and to Chapter 4, Section 4.2 for a discussion of the results reported in Panels A and B.

The superscripts ***, **, and * indicate regression coefficients that are significantly different from zero at the 1%, 5%, and 10% level, respectively, using two-tailed tests. I report t-statistics in brackets beneath the regression coefficients. Standard errors are robust to heteroskedasticity and clustered by spin-off completion year.

Panel A: Regressions of Δ Institutional Ownership on communication and firm characteristics

Independent Variables	Dependent Variable: Δ Institutional Ownership			
	[1]	[2]	[3]	[4]
<i>Unit Communication</i>	0.031 ** [2.184]	0.033 ** [1.911]		
<i>Roadshow</i>			0.039 ** [2.525]	0.044 ** [2.384]
<i>Non-Roadshow</i>			-0.007 [-1.069]	-0.011 [-0.994]
Unit firm characteristics:				
<i>Log(Market Value of Equity)</i>	0.004 [0.460]	-0.000 [-0.011]	0.003 [0.299]	-0.001 [-0.074]
<i>Log(Assets)</i>	0.011 [1.112]	0.013 [1.322]	0.012 [1.242]	0.014 [1.423]
<i>Relative Size</i>	0.037 [1.037]	0.025 [0.602]	0.044 [1.250]	0.031 [0.738]
<i>Book-to-Market</i>	-0.026 [-1.434]	-0.029 * [-1.782]	-0.029 [-1.555]	-0.032 * [-1.875]
<i>Book Leverage</i>	-0.021 [-0.669]	-0.028 [-0.916]	-0.027 [-0.865]	-0.034 [-1.107]
<i>Return on Assets</i>	0.057 [1.186]	0.072 [1.451]	0.059 [1.197]	0.073 [1.448]
<i>Dividends</i>	-0.001 [-0.054]	-0.002 [-0.159]	0.000 [0.020]	-0.001 [-0.068]
<i>S&P 4/5/600 Index</i>		-0.001 [-0.054]		-0.003 [-0.188]
<i>Different Exchange</i>		-0.024 [-1.371]		-0.025 [-1.375]
<i>Different Index</i>		-0.026 [-1.641]		-0.025 [-1.562]
<i>Different Industry</i>		-0.007 [-0.473]		-0.008 [-0.591]
<i>Distribution Ratio</i>		0.001 [0.695]		0.001 [0.606]
<i>Two-Step Spin</i>		-0.004 [-0.141]		-0.011 [-0.378]
<i>CAR_{ANN}</i>		0.033 [0.223]		0.053 [0.366]
Constant	-0.139 *** [-4.385]	-0.105 ** [-2.480]	-0.140 *** [-4.544]	-0.106 ** [-2.594]
Year Fixed Effects	Included	Included	Included	Included
Adjusted R ²	0.105	0.122	0.125	0.142
Observations	319	319	319	319

Panel B: Regressions of Δ Institutional Ownership on communication and changes in firm characteristics

Independent Variables	Dependent Variable: Δ Institutional Ownership			
	[1]	[2]	[3]	[4]
<i>Unit Communication</i>	0.038 *** [2.902]	0.035 ** [2.045]		
<i>Roadshow</i>			0.047 *** [3.233]	0.046 ** [2.558]
<i>Non-Roadshow</i>			-0.006 [-1.060]	-0.008 [-1.035]
Unit firm characteristics:				
$\Delta \text{Log}(\text{Market Value of Equity})$	0.003 [0.501]	0.003 [0.402]	0.001 [0.225]	0.001 [0.181]
$\Delta \text{Log}(\text{Assets})$	0.006 [0.845]	0.005 [0.634]	0.008 [1.169]	0.007 [0.904]
<i>Relative Size</i>	0.099 ** [2.332]	0.072 [1.614]	0.110 *** [2.963]	0.083 * [2.019]
$\Delta \text{Book-to-Market}$	-0.009 [-0.686]	-0.003 [-0.245]	-0.011 [-0.871]	-0.005 [-0.421]
$\Delta \text{Book Leverage}$	-0.024 [-0.825]	-0.019 [-0.667]	-0.027 [-0.956]	-0.023 [-0.774]
$\Delta \text{Return on Assets}$	0.066 * [1.750]	0.063 [1.676]	0.066 [1.647]	0.063 [1.571]
$\Delta \text{Dividends}$	0.004 [0.366]	-0.003 [-0.280]	0.004 [0.400]	-0.002 [-0.237]
<i>Index Drop</i>		-0.053 ** [-2.714]		-0.050 ** [-2.460]
<i>Different Exchange</i>		-0.024 [-1.265]		-0.025 [-1.288]
<i>Different Index</i>		-0.001 [-0.072]		-0.002 [-0.081]
<i>Different Industry</i>		-0.008 [-0.599]		-0.009 [-0.699]
<i>Distribution Ratio</i>		0.000 [0.342]		0.000 [0.248]
<i>Two-Step Spin</i>		0.002 [0.067]		-0.004 [-0.158]
CAR_{ANN}		0.024 [0.179]		0.042 [0.325]
Constant	-0.143 *** [-3.054]	-0.112 ** [-2.199]	-0.151 *** [-3.499]	-0.119 ** [-2.539]
Year Fixed Effects	Included	Included	Included	Included
Adjusted R^2	0.074	0.110	0.093	0.128
Observations	319	319	319	319

Panel C: Regressions of Δ Institutional Ownership, by type, on communication and changes in firm characteristics

Independent Variables	Dependent Variable: Δ Institutional Ownership_TYPE			
	LVA	LGR	SVA	SGR
Roadshow	0.010 *	0.004	0.004	0.015 **
	[1.748]	[1.446]	[1.345]	[2.103]
Non-Roadshow	-0.002	-0.001	-0.002	0.045
	[-1.270]	[-0.626]	[-0.084]	[1.331]
Unit firm characteristics:				
Δ Log(Market Value of Equity)	-0.002	-0.007 **	0.007 **	-0.001
	[-0.633]	[-2.786]	[2.837]	[-0.424]
Δ Log(Assets)	-0.000	0.008 ***	-0.001	0.004
	[-0.123]	[2.980]	[-0.240]	[1.007]
Relative Size	0.056 ***	0.034 *	0.014	0.009
	[3.052]	[1.861]	[0.719]	[0.473]
Δ Book-to-Market	-0.009	-0.003	0.021 **	-0.013
	[-1.390]	[-0.384]	[2.687]	[-1.416]
Δ Book Leverage	-0.029 *	0.011	0.031 *	-0.022
	[-2.044]	[0.731]	[1.809]	[-1.472]
Δ Return on Assets	0.019	0.040 **	-0.027	0.043 **
	[1.213]	[2.256]	[-1.406]	[2.588]
Δ Dividends	0.007	0.002	-0.003	-0.006
	[1.225]	[0.424]	[-0.410]	[-0.837]
Index Drop	-0.032 **	-0.018	-0.022	0.022 *
	[-2.361]	[-1.368]	[-1.273]	[1.772]
Different Exchange	0.000	-0.021 *	-0.016	0.004
	[0.019]	[-1.855]	[-1.334]	[0.486]
Different Index	-0.037 ***	-0.009	0.034 ***	-0.002
	[-4.081]	[-0.960]	[3.228]	[-0.217]
Different Industry	-0.012 *	-0.007	0.002	0.006
	[-2.085]	[-1.118]	[0.240]	[0.936]
Distribution Ratio	-0.001	-0.000	0.001	0.000
	[-1.099]	[-0.024]	[1.314]	[0.218]
Two-Step Spin	-0.004	0.008	-0.015	0.000
	[-0.406]	[0.727]	[-1.682]	[0.012]
CAR_{ANN}	0.042	-0.047	-0.011	-0.002
	[0.616]	[-1.320]	[-0.146]	[-0.055]
Constant	-0.005	-0.015	-0.059 **	-0.024
	[-0.254]	[-1.157]	[-2.829]	[-1.318]
Year Fixed Effects	Included	Included	Included	Included
Adjusted R ²	0.350	0.181	0.200	0.093
Observations	319	319	319	319

Table 7. Impact of pre-spin-off communication on shareholder retention

This table reports estimated coefficients from the following OLS regression model:

$$Retained\ Institutional\ Ownership_i = \beta_0 + \beta_1 Communication_i + \sum \beta_k Controls_i + Year\ FE_i + \varepsilon_i$$

Retained Institutional Ownership is the percentage of inherited pre-spin-off institutional ownership retained by the unit firm as of the first post-spin-off quarter-end date. The communication variable is either one indicator variable, *Unit Communication*, or two indicator variables, *Roadshow* and *Non-Roadshow*. In Hypothesis 1, I predict a positive coefficient on β_1 (i.e., the coefficient on *Unit Communication* or *Roadshow*). In Panel C, LVA denotes *Large Value Ownership*, LGR denotes *Large Growth Ownership*, SVA denotes *Small Value Ownership*, and SGR denotes *Small Growth Ownership*. Refer to Appendix A for variable definitions and to Chapter 4, Section 4.2 for a discussion of the results reported in Panels A and B.

The superscripts ***, **, and * indicate regression coefficients that are significantly different from zero at the 1%, 5%, and 10% level, respectively, using two-tailed tests. I report t-statistics in brackets beneath the regression coefficients. Standard errors are robust to heteroskedasticity and clustered by spin-off completion year.

Panel A: Regressions of Retained Institutional Ownership on communication and firm characteristics

Independent Variables	Dependent Variable: Retained Institutional Ownership			
	[1]	[2]	[3]	[4]
<i>Unit Communication</i>	0.064 *	0.047 *		
	[1.733]	[1.886]		
<i>Roadshow</i>			0.073 *	0.057 *
			[1.832]	[1.797]
<i>Non-Roadshow</i>			-0.010	-0.009
			[-0.705]	[-0.733]
Unit firm characteristics:				
<i>Log(Market Value of Equity)</i>	0.033 *	0.012	0.031 *	0.011
	[1.852]	[0.517]	[1.816]	[0.508]
<i>Log(Assets)</i>	0.020	0.027	0.021	0.028
	[1.412]	[1.603]	[1.517]	[1.693]
<i>Relative Size</i>	0.007	-0.048	0.014	-0.043
	[0.076]	[-0.383]	[0.154]	[-0.341]
<i>Book-to-Market</i>	-0.049 *	-0.020	-0.052 *	-0.048
	[-1.772]	[-1.509]	[-1.856]	[-1.582]
<i>Book Leverage</i>	0.024	0.020	0.018	0.014
	[0.413]	[0.305]	[0.318]	[0.220]
<i>Return on Assets</i>	0.034	0.065	0.036	0.066
	[0.355]	[0.625]	[0.373]	[0.636]
<i>Dividends</i>	-0.001	-0.011	0.000	-0.010
	[-0.027]	[-0.368]	[0.011]	[-0.322]
<i>S&P 4/5/600 Index</i>		0.048		0.046
		[1.038]		[0.993]
<i>Different Exchange</i>		-0.087 *		-0.088 *
		[-1.855]		[-1.882]
<i>Different Index</i>		-0.033		-0.032
		[-0.925]		[-0.899]
<i>Different Industry</i>		-0.007		-0.009
		[-0.245]		[-0.298]
<i>Distribution Ratio</i>		-0.000		-0.001
		[-0.165]		[-0.205]
<i>Two-Step Spin</i>		0.031		0.025
		[0.884]		[0.718]
<i>CAR_{ANN}</i>		0.039		0.059
		[0.018]		[0.285]
Constant	0.320 ***	0.443 ***	0.319 ***	0.442 ***
	[5.806]	[5.356]	[5.754]	[5.379]
Year Fixed Effects	Included	Included	Included	Included
Adjusted R ²	0.140	0.160	0.144	0.164
Observations	319	319	319	319

Panel B: Regressions of Retained Institutional Ownership on communication and changes in firm characteristics

Independent Variables	Dependent Variable: Retained Institutional Ownership			
	[1]	[2]	[3]	[4]
<i>Unit Communication</i>	0.077 * [1.996]	0.052 * [1.730]		
<i>Roadshow</i>			0.086 ** [1.991]	0.063 * [2.016]
<i>Non-Roadshow</i>			-0.008 [-0.529]	-0.009 [-0.614]
Unit firm characteristics:				
$\Delta \text{Log}(\text{Market Value of Equity})$	0.029 ** [2.228]	0.028 ** [2.253]	0.027 * [2.018]	0.026 * [2.045]
$\Delta \text{Log}(\text{Assets})$	0.014 [1.068]	0.013 [0.979]	0.016 [1.191]	0.015 [1.097]
<i>Relative Size</i>	0.259 ** [2.594]	0.168 [1.527]	0.272 ** [2.781]	0.179 [1.632]
$\Delta \text{Book-to-Market}$	-0.076 ** [-2.601]	-0.060 * [-2.017]	-0.078 ** [-2.660]	-0.063 * [-2.064]
$\Delta \text{Book Leverage}$	-0.062 [-0.880]	-0.061 [-0.821]	-0.067 [-0.917]	-0.065 [-0.855]
$\Delta \text{Return on Assets}$	0.086 [1.202]	0.080 [0.990]	0.086 [1.185]	0.080 [0.996]
$\Delta \text{Dividends}$	0.035 [1.073]	0.020 [0.595]	0.035 [1.084]	0.020 [0.606]
<i>Index Drop</i>		-0.057 [-1.084]		-0.053 [-1.043]
<i>Different Exchange</i>		-0.095 * [-1.960]		-0.096 * [-1.994]
<i>Different Index</i>		-0.011 [-0.270]		-0.011 [-0.281]
<i>Different Industry</i>		-0.009 [-0.309]		-0.010 [-0.363]
<i>Distribution Ratio</i>		-0.002 [-0.501]		-0.002 [-0.547]
<i>Two-Step Spin</i>		0.038 [0.991]		0.031 [0.830]
CAR_{ANN}		0.015 [0.075]		0.035 [0.171]
Constant	0.273 *** [3.645]	0.354 *** [4.303]	0.264 *** [3.474]	0.347 *** [4.133]
Year Fixed Effects	Included	Included	Included	Included
Adjusted R^2	0.126	0.157	0.131	0.161
Observations	319	319	319	319

Panel C: Regressions of Retained Institutional Ownership, by type, on communication and changes in firm characteristics

Independent Variables	Dependent Variable: Δ Institutional Ownership_TYPE			
	LVA	LGR	SVA	SGR
Roadshow	0.055 * [1.758]	0.075 * [1.808]	0.060 * [1.797]	0.113 * [1.894]
Non-Roadshow	-0.005 [-0.727]	-0.010 [-0.226]	-0.007 [-0.597]	0.015 ** [2.589]
Unit firm characteristics:				
$\Delta \text{Log}(\text{Market Value of Equity})$	0.044 ** [2.546]	0.034 ** [2.454]	0.027 ** [2.096]	0.025 [1.220]
$\Delta \text{Log}(\text{Assets})$	0.001 [0.073]	-0.004 [-0.259]	0.012 [0.664]	0.026 [1.221]
Relative Size	0.267 ** [2.298]	0.126 [1.011]	0.151 [1.020]	0.108 [0.909]
$\Delta \text{Book-to-Market}$	-0.061 * [-1.994]	-0.027 [-0.521]	-0.022 [-0.687]	-0.104 *** [-2.860]
$\Delta \text{Book Leverage}$	-0.048 [-0.609]	-0.081 [-0.900]	0.102 [1.119]	-0.067 [-0.823]
$\Delta \text{Return on Assets}$	0.200 ** [2.731]	0.271 ** [2.710]	-0.077 [-0.655]	0.010 [0.074]
$\Delta \text{Dividends}$	0.009 [0.280]	0.020 [0.594]	0.008 [0.211]	0.021 [0.427]
Index Drop	-0.101 ** [-2.092]	-0.041 [-0.664]	-0.067 [-1.378]	0.029 [0.491]
Different Exchange	-0.075 [-1.428]	-0.106 * [-1.879]	-0.073 [-1.306]	-0.070 [-1.138]
Different Index	-0.031 [-0.818]	0.010 [0.219]	0.065 * [1.855]	-0.082 [-1.452]
Different Industry	-0.025 [-0.857]	-0.034 [-0.868]	0.033 [1.063]	0.016 [0.309]
Distribution Ratio	-0.003 [-0.782]	-0.003 [-0.895]	-0.003 [-1.063]	-0.006 ** [-2.319]
Two-Step Spin	-0.004 [-0.078]	0.069 [1.451]	-0.056 [-0.946]	-0.025 [-0.492]
CAR_{ANN}	0.075 [0.225]	0.185 [0.709]	-0.025 [-0.115]	0.013 [0.044]
Constant	0.275 *** [3.296]	0.425 *** [4.134]	0.285 * [2.055]	0.254 * [1.911]
Year Fixed Effects	Included	Included	Included	Included
Adjusted R^2	0.189	0.137	0.097	0.138
Observations	319	319	319	319

Table 8. Variation in the impact of pre-spin-off communication on shareholder retention

This table reproduces the analyses from Table 7, Panel B. In Panel A, the regressions are run on subsamples of unit firms sharing the same industry as their parent firm's industry ("Related") or having a different industry ("Unrelated"). In Panel B, the regressions are split on *Relative Size* (i.e., unit firms above and below the median). In Panel C, I split on unit firms that changed their payout policy relative to the parent firms' pre-spin-off payout policy.

Retained Institutional Ownership is the percentage of inherited pre-spin-off institutional ownership retained by the unit firm as of the first post-spin-off quarter-end date. Refer to Appendix A for variable definitions and to Chapter 4, Section 4.3 for a discussion of the results reported in Panels A-C.

The superscripts ***, **, and * indicate regression coefficients that are significantly different from zero at the 1%, 5%, and 10% levels, respectively, using two-tailed tests. I report t-statistics in brackets beneath the regression coefficients. Standard errors are robust to heteroskedasticity and clustered by spin-off completion year.

Panel A: Splits on industry relatedness

Independent Variables	Dependent Variable: <i>Retained Institutional Ownership</i>			
	[1a] Related	[1b] Unrelated	[2a] Related	[2b] Unrelated
<i>Communication [1a and 1b] or Roadshow [2a and 2b]</i>	0.054 * [1.752]	0.029 * [1.695]	0.049 * [1.715]	0.049 * [1.743]
Controls	Included	Included	Included	Included
Year Fixed Effects	Included	Included	Included	Included
<i>Adjusted R²</i>	0.191	0.2111	0.192	0.222
Observations	115	204	115	204

Panel B: Splits on size differences

Independent Variables	Dependent Variable: <i>Retained Institutional Ownership</i>			
	[1a] Big Diff.	[1b] Small Diff.	[2a] Big Diff.	[2b] Small Diff.
<i>Communication [1a and 1b] or Roadshow [2a and 2b]</i>	0.104 *** [3.105]	0.014 * [1.755]	0.111 *** [3.397]	0.018 * [1.719]
Controls	Included	Included	Included	Included
Year Fixed Effects	Included	Included	Included	Included
<i>Adjusted R²</i>	0.323	0.119	0.330	0.120
Observations	160	159	160	159

Panel C: Splits on changes in payout policy

Independent Variables	Dependent Variable: <i>Retained Institutional Ownership</i>			
	[1a] No Change	[1b] Div. Stopper	[2a] No Change	[2b] Div. Stopper
<i>Communication [1a and 1b] or Roadshow [2a and 2b]</i>	0.016 * [1.699]	0.113 ** [2.436]	0.015 * [1.731]	0.138 ** [2.779]
Controls	Included	Included	Included	Included
Year Fixed Effects	Included	Included	Included	Included
<i>Adjusted R²</i>	0.181	0.245	0.184	0.264
Observations	175	144	175	144

Table 9. Impact of other communication on shareholder retention

This table reproduces the analyses from Table 7, Panel B. However, I now consider whether pre-spin-off parent firm communication, as well as post-spin-off communication by both parent and unit firms, impact a unit firm's shareholder base outcomes. Panel A provides a breakdown of the communication channels used by parent and unit firm managers in the post-spin-off period. In Panel B, I control for pre-spin-off parent firm communication, which was first reported in Table 4, and post-spin-off unit and parent firm communication.

Retained Institutional Ownership is the percentage of inherited institutional ownership retained by the unit firm as of the post-spin-off quarter-end date. Refer to Appendix A for variable definitions and to Chapter 4, Section 4.3 for a discussion of the results reported in Panels A and B.

The superscripts ***, **, and * indicate regression coefficients that are significantly different from zero at the 1%, 5%, and 10% level, respectively, using two-tailed tests. I report t-statistics in brackets beneath the regression coefficients. Standard errors are robust to heteroskedasticity and clustered by spin-off completion year.

Panel A: Percentage of parent and unit firms communicating with investors in the post-spin-off period

Communication Channel	Post-Spin-Off		Difference
	Parent Firms (%)	Unit Firms (%)	
Roadshow	1.6	2.6	—
Spin-off Conference Call	1.0	1.3	—
Conference Presentation	18.1	12.4	***
Management Forecast	33.3	13.2	***
At Least One Communication Channel	40.1	25.1	***

Panel B: Controlling for pre-spin-off parent firm communication and post-spin-off communication

Independent Variables	Dependent Variable: Retained Institutional Ownership			
	[1]	[2]	[3]	[4]
Unit Communication (Pre)	0.050 *	0.056 *	0.061 *	0.062 *
	[1.736]	[1.886]	[1.700]	[1.759]
Parent Communication (Pre)	0.018			0.011
	[0.430]			[0.256]
Unit Communication (Post)		-0.024		-0.031
		[-0.647]		[-0.322]
Parent Communication (Post)			-0.039	-0.025
			[-0.865]	[-0.664]
Controls	Included	Included	Included	Included
Year Fixed Effects	Included	Included	Included	Included
Adjusted R ²	0.158	0.158	0.160	0.162
Observations	319	319	319	319

Table 10. Stock returns around spin-offs

Panel A presents cumulative abnormal returns (*CAR*) for the parent firm on the announcement date and the unit firm after the spin-off is completed ($t = 0$). Abnormal stock returns are the raw returns minus the returns on a control portfolio, which is the CRSP value-weighted index. Panel B reports estimated coefficients from the following OLS regression model:

$$CAR[0, k]_i = \beta_0 + \beta_1 Roadshow_i + \sum \beta_k Controls_i + Year FE_i + \varepsilon_i$$

The dependent variables are cumulative abnormal returns (*CAR*) over a 10-day, 30-day, 90-day, and 180-day horizon. Refer to Appendix A for variable definitions and to Chapter 5, Sections 5.1 and 5.2 for a discussion of the results in Panels A and B.

In Panel A, the superscripts ***, **, and * denote a statistically significant difference from zero at the 1%, 5%, and 10% level, respectively, using a two-tailed t-test. In Panel B, the superscripts ***, **, and * indicate a regression coefficient that is significantly different from zero at the 1%, 5%, and 10% level, respectively, using two-tailed tests. I report t-statistics in brackets beneath the regression coefficients. Standard errors are robust to heteroskedasticity and clustered by spin-off completion year.

Panel A: Cumulative abnormal returns around the spin-off announcement and completion dates

Abnormal Return Period	All Unit Firms (n = 319) Mean CAR (%)	Communication Unit Firms (n = 112) Mean CAR (%)	Non-Communication Unit Firms (n = 207) Mean CAR (%)
Pre-Spin-Off Period (Parent Stock):			
CAR_{ANN}	3.12 ***	2.97 ***	3.41 ***
Post-Spin-Off Period (Unit Stock):			
$CAR [0, +1]$	-1.02 ***	0.15	-1.67 ***
$CAR [0, +5]$	-3.27 ***	-0.38	-4.49 ***
$CAR [0, +10]$	-2.71 ***	0.06	-4.36 ***
$CAR [0, +15]$	-1.92 **	0.75	-3.75 ***
$CAR [0, +30]$	-1.23	1.24	-2.87 **
$CAR [0, +45]$	-1.07	3.21 *	-3.14 **
$CAR [0, +60]$	1.13	3.08 *	-0.19
$CAR [0, +90]$	2.68 *	5.13 *	0.16

Table 10 (continued)

Panel B: OLS regressions of cumulative abnormal returns on communication and controls

Independent Variables:	Dependent Variables: CAR [0, k]			
	[0, +10]	[0, +30]	[0, +90]	[0, +180]
<i>Roadshow</i>	0.005 *	0.013 *	0.011 *	0.010
	[1.732]	[1.805]	[1.785]	[1.341]
<i>Non-Roadshow</i>	0.005	-0.004	-0.008	-0.002
	[0.100]	[-0.078]	[-1.093]	[-1.027]
Δ Institutional Ownership	0.028	0.070	0.075	0.029 *
	[1.145]	[0.911]	[1.609]	[1.756]
Unit firm characteristics:				
Δ Log(Market Value of Equity)	-0.006	0.006	-0.002	0.030
	[-1.222]	[0.612]	[-0.115]	[1.534]
Δ Log(Assets)	0.003	-0.014	-0.013	-0.038
	[0.681]	[-1.547]	[-0.775]	[-1.709]
<i>Relative Size</i>	0.022	0.063	0.185 *	0.133
	[0.745]	[1.022]	[2.029]	[1.166]
Δ Book-to-Market	0.005	0.010	0.035	0.023
	[0.389]	[0.461]	[1.143]	[0.415]
Δ Book Leverage	0.040 *	0.100 ***	0.136	0.166
	[1.854]	[2.982]	[1.419]	[1.101]
Δ Return on Assets	-0.042	-0.052	0.172	0.186
	[-1.123]	[-0.898]	[1.519]	[1.488]
Δ Dividends	-0.004	-0.035 **	-0.076 **	-0.027
	[-0.352]	[-2.647]	[-2.811]	[-0.855]
<i>Index Drop</i>	0.009	-0.038	-0.096	-0.127
	[0.414]	[-1.089]	[-1.362]	[-1.274]
<i>Different Exchange</i>	0.008	0.017	-0.074	-0.133 *
	[0.491]	[0.602]	[-1.635]	[-1.884]
<i>Different Index</i>	-0.004	0.017	0.035	0.071
	[-0.264]	[0.562]	[0.719]	[1.268]
<i>Different Industry</i>	-0.017	-0.036	-0.053	-0.086
	[-1.208]	[-1.664]	[-1.441]	[-1.487]
<i>Distribution Ratio</i>	0.002 **	0.004 ***	0.002	0.003
	[2.389]	[3.199]	[0.694]	[0.501]
<i>Two-Step Spin</i>	0.021	0.039 *	0.038	0.021
	[1.075]	[1.837]	[1.178]	[0.379]
CAR_{ANN}	-0.067	0.104	0.273	-0.151
	[-0.642]	[0.669]	[0.927]	[-0.364]
Constant	-0.011	0.043	0.147	0.202
	[-0.419]	[0.860]	[1.511]	[1.605]
Year Fixed Effects	Included	Included	Included	Included
Adjusted R ²	0.043	0.096	0.106	0.072
Observations	319	319	319	319

Appendices

Appendix A

Description of variables

In this appendix, I provide a detailed description of the sources from which data are obtained and the procedures followed to transform raw data into the variables used in the analyses. To reduce the influence of potentially spurious outliers, all of the continuous variables are winsorized in the outside 2.5% of each tail of their distributions.

A.1. Corporate communication activities

Parent and unit firm communication activities are retrieved from the Bloomberg Corporate Events and I/B/E/S Guidance databases. Following the recommendations of Chuk, Matsumoto, and Miller (2013), I supplement the I/B/E/S Guidance data with hand-collected management forecasts available through Factiva. To verify and add to the Bloomberg Corporate Events data, I search Factiva, the Securities and Exchange Commission's EDGAR database, and company websites for presentation announcements and materials. The communication variables are measured in the pre- and post-spin-off periods for both the parent and unit firms. The pre-spin-off period spans the 90 days preceding a spin-off, beginning with the day immediately before a spin-off is completed, i.e., [-91, -1]. The post-spin-off period ranges from the spin-off completion date to 90 days after a spin-off is completed, i.e., [0, 90].

Variable Label	Variable Definition
<i>Unit Communication</i>	An indicator variable equal to 1 if a unit firm's management team communicates with investors through any of the communication channels (i.e., roadshow, spin-off conference calls, industry or investor conference presentations, and earnings forecasts), and 0 otherwise.
<i>Roadshow</i>	An indicator variable equal to 1 if a unit firm's management team conducts a roadshow, and 0 otherwise. Roadshows include investor presentations made at firm-hosted analyst/investor days. Analyst/investor days are not common in the sample and presentation materials are not distinguishable from the materials used during roadshow presentations.
<i>Non-Roadshow</i>	An indicator variable equal to 1 if a unit firm's management team communicates through any of the communication channels other than a roadshow, and 0 otherwise. The other communication channels include spin-off conference calls, industry and investor conference presentations, and earnings forecasts.
<i>Parent Communication</i>	An indicator variable equal to 1 if a parent firm's management team communicates with investors through any of the communication channels (i.e., roadshow, spin-off conference calls, industry or investor conference presentations, and earnings forecasts), and 0 otherwise.

A.2. Shareholder base composition

The following variables capture different aspects of the parent and unit firm shareholder bases, and specifically the portion of the firms' outstanding shares held by institutional investment firms. According to the SEC's Rule 13F, all institutional investors managing more than \$100 million in equity must file a quarterly report listing all equity holdings greater than 10 thousand shares or \$200 thousand in market value. Thus, for each firm, total institutional investor ownership is the sum of all end-of-calendar-quarter holdings by institutional investment managers filing a Form 13F with a link to the firm. Institutional investors include banks, insurance companies, investment companies and advisors, public and corporate pension funds, and endowment funds. I obtain institutional holdings from the Thomson Reuters 13F database. I then match institutional investor data with the classification data made available through Brian

Bushee's website.¹⁷ The classification schemes are discussed in Bushee (1998), Bushee and Noe (2000), Bushee (2001), and Abarbanell, Bushee, and Raedy (2003).

Institutional investor ownership variables for the pre-spin-off combined firms are measured at each of the four quarter-end dates preceding the spin-off date. These variables are also measured at each of the four quarter-end dates following a spin-off for both the standalone parent and unit firms. In addition, pre-spin-off institutional shareholders are tracked from the pre-spin-off combined firms to the post-spin-off standalone firms to assess the extent to which institutional shareholders are retained from pre- to post-spin-off.

Variable Label	Variable Definition
<i>Institutional Owners</i>	The number of institutional investors holding shares of a firm.
<i>Institutional Ownership</i>	The percentage of a firm's outstanding shares held by institutional investors, measured as: $\frac{\text{Number of shares owned by institutional investors}}{\text{Total number of shares outstanding}}$
<i>Retained Institutional Ownership</i>	The percentage of a firm's post-spin-off outstanding shares held by institutional investors who held shares of the firm in the pre-spin-off period, measured as: $\frac{\text{Number of shares owned by pre – spin – off institutional investors}}{\text{Total number of shares outstanding}}$ Pre-spin-off institutional investors are identified based on the quarter-end immediately preceding the spin-off. However, alternative measurement dates are used in sensitivity analyses.
<i>Institutional Blockholders</i>	The number of institutional investors holding 5% or more of the outstanding shares of a firm.
<i>Large Value Ownership</i>	The percentage of a firm's outstanding shares held by institutional investors focusing on large capitalization value stocks. The Abarbanell, Bushee, and Raedy (2003) classifications are used to identify institutional investors following a large-value investment style.
<i>Large Growth Ownership</i>	The percentage of a firm's outstanding shares held by institutional investors focusing on large capitalization growth stocks. The Abarbanell, Bushee, and Raedy (2003) classifications are used to identify institutional investors following a large-growth investment style.
<i>Small Value Ownership</i>	The percentage of a firm's outstanding shares held by institutional investors focusing on small capitalization value stocks. The Abarbanell, Bushee, and Raedy (2003) classifications are used to identify institutional investors following a small-value investment style.
<i>Small Growth Ownership</i>	The percentage of a firm's outstanding shares held by institutional investors focusing on small capitalization growth stocks. The Abarbanell, Bushee, and Raedy (2003) classifications are used to identify institutional investors following a small-growth investment style.
<i>Index Fund Ownership</i>	The percentage of a firm's outstanding shares held by institutional investors focusing on stocks included in a stock market index. The Bushee and Noe (2000) and Bushee (2001) classifications are used to identify quasi-indexer institutional investors.

¹⁷ I thank Brian Bushee for making his institutional investor classifications available. The classification variables are publicly available at <http://acct.wharton.upenn.edu/faculty/bushee/IIclass.html>.

A.3. Market valuation

Parent and unit firm stock prices and shares outstanding are retrieved from the Center for Security Prices (CRSP) database and are used to compute market values, and stock returns at various points in time and over various measurement windows, as described in the following table.

Variable Label	Variable Definition
<i>Market Value of Equity</i>	The price of a firm's outstanding shares multiplied by the total number of shares outstanding (in millions of U.S. dollars), in particular: <i>Stock Price x Total Number of Shares Outstanding.</i> <i>Market Value of Equity</i> is measured on the first trading day preceding a spin-off for pre-spin-off parent firms and is measured on the first day the parent and unit firms trade as separate entities (i.e., $t = 0$) for the post-spin-off parent and unit firms. In regression analyses, the natural logarithm of <i>Market Value of Equity</i> is used.
CAR_{Ann}	A firm's cumulative abnormal stock return calculated as the sum of the logged daily returns over the two days adjacent to the spin-off announcement—i.e., the [Announcement Day, +1] window around the day a spin-off is first announced—minus the corresponding return on a size-matched market portfolio.
$CAR_{[0, k]}$	A firm's cumulative abnormal stock return calculated as the sum of the logged daily returns over various post-spin-off measurement windows minus the corresponding return on a size-matched market portfolio. Returns are measured over the [0, 10], [0, 30], [0, 60], and [0, 90] day windows.

A.4. Financial and other firm and spin-off characteristics

Financial data, industry assignment, and Standard and Poor's (S&P) index inclusion for the parent and unit firms are retrieved from the Compustat database. Exchange listings are retrieved from the CRSP database. Financial variables are measured at the fiscal quarter-end or the fiscal year-end immediately preceding or following a spin-off. Index inclusion is based on the several days immediately before and after the completion of a spin-off, although expanding this window to a week, month, or even quarter does not alter the results. Other terms of the spin-off agreement are identified in press releases and regulatory filings.

Variable Label	Variable Definition
<i>Assets</i>	The total book value of assets (in millions of U.S. dollars). This variable is measured as of the fiscal quarter-end date preceding a spin-off transaction for pre-spin-off parent firms and is measured as of the fiscal quarter-end date following a spin-off transaction for the post-spin-off parent and unit firms. In regression analyses, the natural logarithm of <i>Assets</i> is used.
<i>Book-to-Market</i>	The book value of equity divided by the market value of equity, measured at the fiscal quarter-end date preceding or following a spin-off transaction for the pre-spin-off combined parent, or post-spin-off parent and unit firms, respectively.
<i>Book Leverage</i>	The book value of debt divided by the book value of assets, measured at the fiscal quarter-end date preceding or following a spin-off transaction for the pre-spin-off combined parent, or post-spin-off parent and unit firms, respectively.

<i>Return on Assets</i>	Income before extraordinary items divided by the average book value of assets. This variable is measured at the fiscal year-end date preceding a spin-off transaction for pre-spin-off parent firms and is measured at the fiscal year-end date following a spin-off transaction for the post-spin-off parent and unit firms.
<i>Dividends</i>	An indicator variable equal to 1 if the firm pays a dividend and 0 if the firm does not pay a dividend.
<i>S&P 4/5/600 Index</i>	An indicator variable equal to 1 if the firm is included on the S&P 400, 500, or 600 index, and 0 otherwise.
<i>S&P 500 Index</i>	An indicator variable equal to 1 if the firm is included in the S&P 500 index, and 0 otherwise. In untabulated regression analyses, <i>S&P 500 Index</i> is used in place of <i>S&P 4/5/600 Index</i> . The results are not affected by this swap.
<i>Different Index</i>	An indicator variable equal to 1 if, after the spin-off, the firm is included in an S&P index that is different from the index of the pre-spin-off combined firm, and 0 otherwise.
<i>Index Drop</i>	An indicator variable equal to 1 if the pre-spin-off combined firm is included in an S&P index, but the post-spin-off firm is not included in an S&P index, and 0 otherwise.
<i>Different Industry</i>	An indicator variable equal to 1 if the unit firm operates in an industry (as measured using 2-digit SIC codes) that is different from the parent firm's industry, and 0 otherwise.
<i>Different Exchange</i>	An indicator variable equal to 1 if the unit firm is listed on a different U.S. stock exchange than the parent firm, and 0 otherwise.
<i>Relative Size</i>	The total book value of unit firm assets divided by the sum of the total book value of unit and parent firm assets.
<i>Exchange Ratio</i>	The number of shares of the pre-spin-off parent firm a shareholder is required to own to be entitled to one share of the post-spin-off unit firm.
<i>Two-Step Spin</i>	An indicator variable equal to 1 for tax-free spin-off transactions preceded by a carve-out initial public offering of less than 20% of the unit firm, and 0 otherwise.
<i>Other Restructuring</i>	An indicator variable equal to 1 if the parent company completed any other restructuring activities in conjunction with the tax-free spin-off, and 0 otherwise.

Appendix B

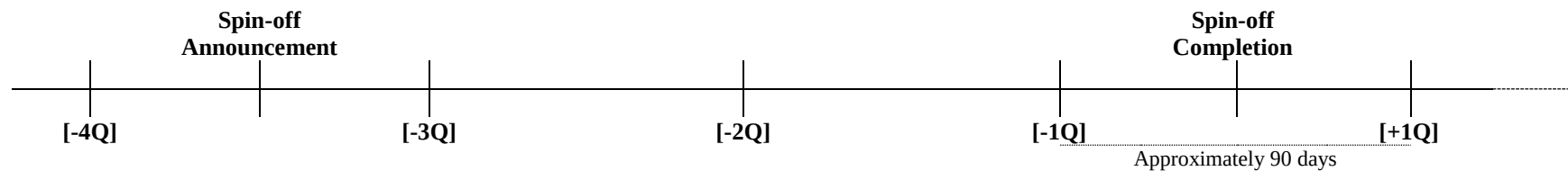
Representative spin-off timeline and mapping to sample transactions

This appendix provides a brief overview of the timeline for a representative spin-off transaction. To identify announcement dates, I search Factiva for parent firm-initiated press releases announcing plans to spin-off a business segment. The spin-off completion date is the date on which shares of the standalone unit firm begin to trade publicly.

B.1. Representative timeline

I measure communication activities during the 90-days preceding and following the separation of the parent and unit firms. Institutional investor ownership is measured at, among other dates, -1Q and +1Q. These calendar quarter-end dates align with the measurement dates for many of the financial variables, given that 75% (90%) of firms have December 31 fiscal year-ends (calendar quarter fiscal year-ends).

Figure B.1. Spin-off timeline



B.2. Mapping of representative timeline to spin-off sample

Table B.2. Key spin-off dates

Time period	Mean	P10	Median	P90
Announcement to Completion	216.22	99.00	207.00	393.00
-1Q to Completion	38.89	2.00	34.00	82.00
Completion to +1Q	58.21	16.00	60.00	91.00

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