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Properties of management earnings forecasts following mergers and acquisitions

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PROPERTIES OF MANAGEMENT EARNINGS FORECASTS FOLLOWING MERGERS AND ACQUISITIONS

by

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CERTIFICATE OF APPROVAL

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PH.D. THESIS

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This is to certify that the Ph.D. thesis of

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To Taylor, my love.

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ABSTRACT

I study how the properties of management earnings forecasts change after a firm merges with or acquires another company. I find management is more likely to issue a forecast in a merger or an acquisition firm-year than in a non-M&A firm-year. Compared to forecasts issued by the firm in non-M&A periods, the first forecast issued after completing an M&A deal is less likely to be bundled with an earnings announcement and the forecast range is wider, although more likely to be optimistic than non-M&A forecasts. I find the increase in forecast range width and optimism persist in forecasts issued up to the end of the fiscal year but are not present in the initial forecast issued in the subsequent year. Finally, I find variation in M&A experience and M&A type influence management earnings forecast properties. Because prior studies of management forecasts often delete observations containing mergers and acquisitions or simply include the firm's market-to-book, my study informs researchers about how the properties of management forecasts are impacted by the uncertainty from a merger or an acquisition.

PUBLIC ABSTRACT

I study how the properties of management earnings forecasts change after a firm merges with or acquires another company. I find management is more likely to issue a forecast in a merger or an acquisition firm-year than in a non-M&A firm-year. Compared to forecasts issued by the firm in non-M&A periods, the first forecast issued after completing an M&A deal is less likely to be bundled with an earnings announcement and the forecast range is wider, although more likely to be optimistic than non-M&A forecasts. I find the increase in forecast range width and optimism persist in forecasts issued up to the end of the fiscal year but are not present in the initial forecast issued in the subsequent year. Finally, I find variation in M&A experience and M&A type influence management earnings forecast properties. Because prior studies of management forecasts often delete observations containing mergers and acquisitions or simply include the firm's market-to-book, my study informs researchers about how the properties of management forecasts are impacted by the uncertainty from a merger or an acquisition.

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CHAPTER 1: INTRODUCTION

Management earnings forecasts disclose management's expectations for future performance based on management's forecasting ability and gathered information. When the firm is rapidly growing, expected future performance becomes more difficult to forecast because historical data is less relevant; instead, management must rely more on its own judgment to estimate future performance (Hutton 2005; Anantharaman and Zhang 2011). Growth stemming from a merger or acquisition (M&A), in particular, makes forecasting future performance challenging because the economic entity of the firm changes and combines the future revenues and expenses of two distinct entities into one. Consequently, management forecasts after a merger or acquisition require additional judgment and forecasting ability to predict upcoming synergies and complications from joining these accounts, likely influencing the marginal costs and marginal benefits of forecasting and changing management forecasting behavior. The expected changes in management's forecasting behavior, however, are unclear. As a result, prior studies of management forecasting behavior often delete forecasts around mergers and acquisitions. Given the pervasiveness of mergers and acquisitions for firms, however, it is important for researchers to understand the changes in management forecasting behavior around M&A transactions. Thus, in this paper, I examine the effect of a merger or an acquisition on the incidence and forecasting properties of management forecasts. Specifically, I study how the probability of forecast issuance and the characteristics of the management forecast change after a firm completes a merger or acquisition.

When a firm merges with or acquires another company, the economic entity that is represented in the consolidated financial statements changes, likely driving differential

disclosure behavior (Kasznik and Lev 1995). Collins and Kim (2015) report approximately 30 percent of Compustat firm-years contain mergers and acquisitions. Yet, despite the relative frequency of firms engaging in M&A transactions, little empirical research has directly examined whether and how mergers and acquisitions impact managers' forecasting behavior Instead, prior management forecasting studies often delete these observations (e.g., Kasznik and Lev 1995; Williams 1996; Clement, Frankel and Miller 2003; Feng and Koch 2010; Ng, Tuna and Verdi 2013) or include a measure of firm growth (i.e., market-to-book) as a control variable for growth (e.g., Bamber and Cheon 1998; Skinner and Sloan 2002; Gong, Li and Zhou 2013). These two methods for dealing with firm growth around management forecasting behavior fail to advance our understanding of how growth from mergers and acquisitions impacts management forecasting behavior.

The increased uncertainty of future earnings after a firm completes a merger or acquisition increases both the marginal benefits and marginal costs of forecasting for management. Theoretically, the merger or acquisition increases information asymmetry between management and external stakeholders, increasing the demand for information (Verrecchia 2001). Issuing a forecast responds to stakeholders' information demands. Additionally, the voluntary nature of forecasting builds management's long-term reputation for being forthcoming; forecasting when earnings are more difficult to predict likely incrementally increases management's reputation for being transparent and forthcoming (Merkley, Bamber and Christensen 2013). However, after a merger or acquisition, a forecast likely requires costly additional time and effort for management. Furthermore, the forecast reflects management's understanding of the newly-created entity and expected synergies from the combination. An inaccurate forecast reflects poorly on

management's ability to analyze and understand the effects of M&A related growth, potentially damaging both management's forecasting reputation and reputation for understanding its growth opportunities. Therefore, in an M&A setting, it remains unclear how management views the marginal costs and marginal benefits of earnings forecasts.

I use management earnings forecasts issued after a completed merger or acquisition to examine how the properties of these forecasts differ relative to forecasts issued by the firm in non-M&A periods. First, I test whether the probability of issuing a forecast increases or decreases in firm-years with M&A transactions compared to firm-years without M&A transactions. Examining a sample of 16,955 firm-years from 2001 to 2011, I find firms are more likely to issue a forecast in years with a merger or an acquisition than in non-M&A firm-years. Furthermore, I find a positive association between the relative size of the completed M&A deal(s) in the firm-year and the likelihood of forecast issuance. I also find firms that forecast in M&A years forecast more frequently than in non-M&A years. That is, management provides more updates to its earnings forecasts in M&A firm-years. Together, these results, on average, suggest management views the marginal benefits of forecasting as greater than the marginal costs in years in which the firm is growing through a merger or acquisition.

Issuing a forecast when it is more difficult to predict future earnings likely means management adjusts the forecast characteristics to reflect the changes in the forecasting environment. Using a sample of 763 mergers or acquisitions with acquiring firms that forecast earnings in both the year prior to and following the completion of a merger or an acquisition, I compare the characteristics of the first management forecast issued after the completed M&A to a prior forecast by the same firm in a non-M&A period. I find the

forecast issued after completing the M&A transaction is less likely to be bundled with a prior period's earnings than prior forecasts issued in non-M&A periods, suggesting management does not wait for the next earnings announcement date to release its updated earnings forecast after an M&A transaction. I also find the width of range forecasts are wider after M&A than non-M&A forecast ranges, likely reflecting the heightened uncertainty of future performance after M&A. Managers' optimism regarding the M&A transaction is also reflected in the post-M&A forecast; I find actual earnings are more likely to fall below the lower bound of the forecast after an M&A than for a forecast in a non-M&A period.

Over time, the effects of a completed M&A transaction become apparent, reducing the difficulty of forecasting performance for the new entity. I, therefore, also examine the persistence of the changes in the management forecast characteristics. Using the last forecast issued before the fiscal year-end by the acquirer in both the year of the completed M&A transaction and the year preceding the M&A transaction, I test the probability of forecasts being bundled, the forecast width and the optimism of the forecast. I find no difference in the likelihood of a forecast being bundled with the earnings announcement, suggesting the firm returned to its routine disclosure policy. The width of the range forecast continues to be wider in an M&A year than in the prior year, however, and management's forecast is still more optimistic than in a non-M&A period, suggesting M&A continues to influence management forecast characteristics from the completion of the transaction through the end of the fiscal-year.

I also examine the first forecast issued by the firm in year following the M&A transaction and compare it to the first forecast issue by that firm in the prior year (e.g. the

initial forecast in the M&A year before the M&A announcement). For these *t+1* forecasts, I find no differences in the probability of bundling the forecast, the width of the range or the optimism in the forecast.

Variation in management's experience with M&A transactions and the type of M&A transaction likely influence the properties of managements' forecasts. I expect and find firms who acquire more frequently forecast earnings after an M&A differently than firms who acquire less often. I find more frequent acquirers are more likely to issue an unbundled forecast after M&A, the forecast range width is narrower and the forecast is less likely to be optimistic, suggesting management's experience with prior M&A transactions reduces the uncertainty of future performance after completing an M&A deal. I also posit diversifying M&A transactions have different forecast properties than M&A transactions within the acquirer's industry, potentially because of variation in the usefulness of management's expertise and industry knowledge. I find diversifying M&A transactions are more likely to result in unbundled management forecasts than M&A transactions within the same industry. The width of forecast ranges are not statistically different for diversifying and non-diversifying M&A deals, although management is less likely to be overly-optimistic after a diversifying M&A transaction than for non-diversifying deals. I also examine how investors' response to an M&A announcement impacts the properties of the management forecast after the M&A is complete. I find no statistical difference in the likelihood of issuing an unbundled forecast for an M&A deal after a positive or negative market response to the M&A announcement, nor do I find a difference in the width of the forecast range. I do, however, find management is more optimistic in its forecast for an

M&A transaction following a positive market response to the M&A announcement than a negative market response.

My paper extends the growing literature that examines the interplay between management's forecasting behavior and their capital investment decisions. Prior research studies how the same internal decision-making processes for forecasting are positively-related to firms' capital investment decisions, specifically mergers and acquisitions (Goodman et al. 2014). In contrast to how forecasting impacts M&A decisions, I examine how the occurrence of an M&A deal impacts management forecasting behavior. My findings speak to how the increase in uncertainty of future performance induced by engaging in M&A impacts the subsequent properties of earnings forecasts.

My study also furthers our understanding of how firm-specific uncertainty impacts management forecasting. Prior studies often examine how cross-sectional variation in uncertainty affects management forecasts across firms (e.g., Allee et al. 2015; Amel-Zadeh and Meeks 2016). These studies find variation in uncertainty across firms impacts the propensity of forecast issuance and the timing of forecasting. In this study, I use time-series variation in uncertainty to study changes in forecasting behavior within a firm over time. My time-series approach highlights management's behavior when both the marginal costs and marginal benefits of forecasting increase for the firm.

Finally, my findings also contribute to the forecasting literature from a methodological standpoint. I characterize several widely-studied management forecast characteristics that differ following the completion of M&A. My findings allow future researchers to potentially increase the power of their tests by retaining these observations

and allowing for variation in forecast issuance, release with an earnings announcement, forecast width and forecast optimism when a firm completes a merger or acquisition.

CHAPTER 2: HYPOTHESIS DEVELOPMENT

2.1 Related Literature

The uncertainty of a firm's operations impacts management's forecasting process. Oftentimes, when managers issue a forecast, it signals that management is generally well informed about current and future firm performance (Allee et al. 2015). Being well informed about firm performance entails gathering high-quality internal (private) information about the firm's performance, collecting relevant information about the external environment, and utilizing systems that generate timely and high-quality information. Once this information is gathered, managers utilize their ability and judgment to process the information and estimate future earnings. Firm growth makes gathering high-quality information increasingly difficult because more sources of information are needed to become well informed. In addition, in highly uncertain settings, processing the available information and forming an earnings estimate requires greater managerial judgment and reliance on estimations and projections (Tversky and Kahneman 1974).

Prior work examining the link between uncertainty and management forecasting focuses primarily on the association between management forecasting and cross-sectional variation in uncertainty. Allee, Christensen, Graden and Merkley (2015) study firms' initial guidance decision after an IPO and find firms with lower IPO uncertainty initiate guidance sooner. Gong, Li and Xie (2009) use operating accruals to capture firms' uncertainty in the operating environment and find a positive association between uncertainty and subsequent year management forecast errors. Amel-Zadeh and Meeks (2016) study management forecasts issued by bidding firms before a merger or acquisition is complete. They find firms attempting to acquire a target with more difficult synergies for investors to

understand are more likely to issue a merger forecast (i.e., a forecast that provides an assessment of potential synergies should the acquisition be completed) in an attempt to influence the M&A deal.

Firm growth via mergers and acquisitions generates a setting within the firm that is unique from prior studies' results of management forecasting around uncertainty. Unlike forecasting around an IPO in which the firms is constructing its disclosure policy, forecasting after an M&A deal is influenced by the pre-existing forecasting behavior of the acquirer before the M&A took place. Furthermore, while M&A influences the acquirer's operating accruals, the increase in uncertainty in my study is due to an identifiable, negotiated firm event implemented by management. Thus, the forecasting behavior around M&A illustrates how management deals with an increase in forecasting difficulty that the firm purposefully initiated. Moreover, because the M&A deal is complete in my study, as opposed to only announced, strategic incentives to influence shareholders' perceptions of the M&A transaction are reduced or eliminated.

Forecasting after an M&A is difficult because the event involves two entities with existing financial, operational and social structures and norms within the respective entities (such as work hour flexibility, dress code, and the hierarchy for making decisions) (Bruner 2004). Also, management must use its ability to process and predict the synergies between the firms' economic entities, including cost synergies from the elimination of facilities and expenses and revenue synergies from higher sales growth when operations are combined (Goodman et al. 2014). While most mergers and acquisitions are undertaken to generate synergy gains, the mere existence of potential synergies does not guarantee the realization of such synergies (Kitching 1967). On average, the greatest realized synergy gains are from

operational synergies, which arise from cutbacks in investments in working capital (Devos, Kadapakkam and Krishnamurthy 2009). These synergies are not fully realized immediately upon completion of the merger or acquisition, requiring managerial judgment to forecast eventual outcomes. Thus, even in the presence of high-quality information and highly-skilled managers, combining two entities through a merger or an acquisition generates uncertainty about future cash flows that is difficult to predict or control.

2.2 Probability of Forecast Issuance

Theory suggests when the incremental benefits of voluntary disclosure are greater than the incremental costs, firms are more likely to voluntarily disclose information (Verrecchia 2001). Issuance of a management forecast is one type of voluntary disclosure. The occurrence of a merger or acquisition introduces an empirical setting in which both the incremental benefits and incremental costs of disclosure increase because forecasting is arguably more difficult than when the economic entity remains the same (i.e. does not have M&A activity). Forecasting costs increase because gathering high-quality information takes more time. Information about the acquirer, the acquired target and the M&A deal itself all become necessary to forecast performance after M&A, whereas target and M&A deal information are not relevant in non-M&A years. Management must also rely less on historical data and more on its own judgment to forecast in M&A years because historical data of the acquirer's prior economic entity becomes less relevant, potentially increasing the amount of effort used to forecast upcoming earnings. The benefits from providing management forecasts increase because forecasting earnings also becomes more difficult for external stakeholders after M&A. Accordingly, shareholders' demand for information after M&A increases. The voluntary nature of issuing earnings forecasts

allows management to respond to shareholders' increased demand for firm-specific information after M&A and simultaneously build management's personal credibility and long-term reputation for being forthcoming under heightened uncertainty by issuing a forecast (Gibbins et al. 1990; Hutton and Stocken 2009; Merkley et al. 2013).

The likely increase in both the marginal benefits and marginal costs of issuing a management forecast after completing a merger or acquisition create an empirical question because the relative magnitude of the costs and benefits of issuing management forecasts after an M&A transaction is unclear. Accordingly, I state my first hypothesis in the null regarding the probability of forecasting in M&A firm-years compared to non-M&A firm-years:

HI: The likelihood of management issuing an earnings forecast is not associated with the occurrence of a merger or an acquisition.

2.3 Characteristics of Management Earnings Forecasts

Issuing a forecast when forecasting is more difficult likely means management alters the characteristics of its forecasts to respond to the different forecasting environment. One characteristic over which management has control is when they issue a forecast. Prior research finds approximately 80 percent of management forecasts issued since 2000 are bundled with earnings announcements (Rogers and Van Buskirk 2013; Bonsall et al. 2013; Billings, Jennings and Lev 2015). The remaining (unbundled) forecasts differ on a number of dimensions from bundled forecasts (Rogers and Van Buskirk 2013). Bonsall et al. (2013) posit these forecast differences stem from differential reasons for forecasting: bundled forecasts are more likely a result of predictable firm policy, whereas unbundled forecasts arise from the arrival of *new information*. More specifically, idiosyncratic shocks to firms,

as opposed to broader macroeconomic news, are associated with unbundled forecasts. Naturally, the completion of a merger or acquisition creates idiosyncratic news for the firm to release that responds to the increased demand for information from external stakeholders. Issuing an unbundled forecast releases this firm-specific news at the time management wants to release its expectation, rather than when the earnings announcement schedules it. After an M&A, I expect management is less likely to wait for the next earnings announcement to issue its forecast; instead, management is more likely to issue an unbundled forecast after the M&A than it is in non-M&A periods. Accordingly, I state my hypothesis in the alternative form:

H2A: Management forecasts issued after completing a merger or an acquisition are less likely to be bundled with earnings announcements than forecasts in non-M&A periods.

Given the increased difficulty of forecasting after creating a new economic entity, management is likely more uncertain about its future earnings projects than it is when the entity remains the same. One forecast characteristic which reflects changes in uncertainty is the width of the range forecast. The wider a range forecast becomes, the more potential earnings outcomes it contains. Consequently, Baginksi et al. (1993) argue a wider range acts as a proxy for greater uncertainty of management. Hribar, Huseman and Melessa (2016) show that when one controls for the likelihood of the forecast containing the actual earnings realization (i.e. the implied confidence level), an increase in range width reflects increased uncertainty. For example, if both Caribou Coffee Company and Starbucks Corporation issue earnings forecasts with a 70 percent likelihood of containing the actual earnings number, but Caribou's forecast has a width of 20 cents (e.g., EPS between $1.10

and $1.30) and Starbuck's forecast has a width of five cents (e.g., EPS between $1.10 and $1.15), Caribou's 20-cent forecast conveys greater uncertainty about future earnings, holding all else constant. Because forecasting after M&A is likely more difficult than forecasting in non-M&A periods because it is based on projected synergies and complications of a new entity, I expect management to be more uncertain in its forecast after M&A than in non-M&A period forecasts, which leads to my next hypothesis:

H2B: Management forecast ranges issued after completing a merger or an acquisition are wider than forecast ranges issued in non-M&A periods.

By definition, a forecast is management's projection of future performance. This projection of the future is likely directly-linked to its beliefs about its investments. Mergers or acquisitions are investments that acquirers make to take advantage of potential operational synergies that management believes will benefit the firm and its shareholders. Accordingly, forecasts issued after completing M&A are more likely to be optimistic because they reflect management's optimism for the new entity. Capps, Koonce and Petroni (2016) label such financial reporting situations as reflecting management's natural optimism. They state natural optimism will likely be found in an "accounting estimate that relates to a prior choice of the manager and/or a future outcome over which the manager has control" (p.84). That is, after a merger or acquisition, a management forecast likely contains management's optimistic expectations for synergies between the firm and the recently-acquired target. As the new entity operates, however, unpredictable complications or unrealized synergy gains render management's expectation optimistic. While it is possible a merger or acquisitions outperforms management's expectations for

performance, anecdotal evidence suggests this is less likely to happen. Accordingly, I hypothesize the following:

H2C: Management range forecasts issued after completing a merger or an acquisition are more optimistic than range forecasts issued in non-M&A periods.

2.4 Cross-Sectional Predictions of M&A Experience and Type

The previous section focuses on the average effect of mergers and acquisitions on management forecast characteristics. This section develops predictions about how characteristics of management forecasts may vary as a function of the acquiring firm's experience with M&A transactions and characteristics of the specific merger or acquisition deal.

The uncertainty of future earnings after a merger or an acquisition likely varies with management's experience in mergers and acquisitions. Laamanen and Keil (2008) explain the time required for absorbing and understanding an acquisition changes with each acquisition. The activities related to mentally processing an acquisition gradually become routine tasks as acquisitions increase. Thus, firms with a history of M&A deals tend to perform better than those with little M&A experience (Laamanen and Keil 2008). As management experiences more M&A transactions, I posit the observed relation between expected synergies and complications and the actual realizations of such synergies and outcomes help management learn and form its expectations for subsequent M&A deals. Thus, I expect forecast properties display more uncertainty and more optimism for firms with less M&A history and hypothesize:

H3A: Management forecast ranges issued after a completed merger and acquisition are wider for firms with less acquisition experience.

H3B: Management forecast ranges issued after a completed merger and acquisition are more optimistic for firms with less acquisition experience.

The operational synergies between the target and the acquirer also likely affects the difficulty of forecasting for management. Lane and Lubatkin (1998) posit firms from related industries rely on similar technologies and knowledge bases, which may reduce the difficulty of knowledge transfer once the M&A is complete. Haspeslagh and Jemison (1991) similarly argue that firms in related industries likely share similar operating procedures and cultures, which facilitates post-acquisition integration. I expect the operational similarities between the acquirer and the target also influence management's expectations regarding the performance of the new entity. Because management must rely less on its own experience when it acquires outside of its industry, I expect diversifying M&A transactions are associated with more forecasting uncertainty. I also expect diversifying M&A transactions lead to more optimistic forecasts because management does not anticipate the additional challenges of joining with a firm outside of its industry. Specifically, I hypothesize:

H4A: Management forecast ranges issued after a completed merger and acquisition are wider for diversifying M&A transactions.

H4B: Management forecast ranges issued after a completed merger and acquisition are more optimistic for diversifying M&A transactions.

Finally, I expect the market reaction to the M&A announcement to be related to management's forecasting behavior. Bens et al. (2012) explain the market reaction to an M&A announcement reflects shareholders' reaction to that specific managerial decision (i.e., that M&A transaction). They find firms are more likely to materially misstate financial statements after a poorly-received M&A decision and doing so delays the subsequent firing of the CEO. I expect, therefore, when an M&A is poorly received by shareholders, management also alters the characteristics of its forecasts in an attempt to influence shareholders' perception of the M&A. Specifically, for M&A announcements with a negative market reaction, I expect management is less likely to issue a bundled forecast in an attempt to be incrementally transparent and forthcoming. I also expect the forecast to be more optimistic to persuade shareholders to support the recently-completed M&A deal. I hypothesize:

H5A: Management forecasts issued after a completed merger or an acquisition are less likely to be bundled with earnings announcements when the market reacts negatively to the M&A announcement.

H5B: Management forecast ranges issued after a completed merger and acquisition are more optimistic when the market reacts negatively to the M&A announcement.

CHAPTER 3: SAMPLE SELECTION

I begin constructing my sample from SDC Platinum and collect mergers and acquisitions announced between 2001 and 2011. Following recent studies, I require the acquiring firm to be publicly-traded and headquartered in the United States (e.g., Kimbrough and Louis 2011; Wangerin 2015). I also restrict my analysis to completed M&A transactions to better capture the changes in forecasting due to the uncertainty of future cash flows from forming a new economic entity. All M&A deals must have the total deal values available in order to measure the magnitude of the change in the entity for the forecasting firm. I further require data on control variables described below from Compustat, CRSP, I/B/E/S and Thomson Reuters 13f file (please see Appendix A for the complete list of variables). Actual earnings are collected from I/B/E/S, and I use the CRSP Daily Stock – Securities file to adjust management forecasts to be on the same split-share basis as actual earnings.

I next construct two different samples to test management forecasting behavior around completed mergers and acquisitions. My first sample is at the firm-year level and is used to test whether management is more or less likely to issue a forecast in an M&A firm-year. Using the merger and acquisition observations collected from SDC, I create a panel dataset of firm-years for every firm that completed at least one merger or acquisition between 2001 and 2011. *M&A* is an indicator variable equal to one for a firm-year with an M&A transaction and equal to zero for a non-M&A firm-year. I then combine my sample of M&A deals with annual management earnings forecasts from the Company Issued Guidelines (CIG) Database issued by First Call. I focus on forecasts issued as a point (e.g, EPS with be $1.12) or a range (e.g., EPS will be between $1.05 and $1.15) in order to

assess the forecast against its actual earnings realization, and I follow prior studies and eliminate any earnings pre-announcements (e.g., Frankel et al. 1995; Rogers and Stocken 2005). I construct an indicator variable, *ISSUE*, equal to one for each firm-year with the issuance of an annual EPS forecast, and zero otherwise. This sample contains 18,429 firm-year observations.

Table 1, Panel A provides the frequency of firm-years with merger and acquisition activity and with management earnings forecasts over the years spanning from 2001 to 2011. To avoid survivorship bias, I do not require firms to be present throughout the entire sample period, creating an unbalanced, though fairly consistent, sample across years. Using a 2x2 analysis of M&A activity and management forecast issuance presented in Table 1, Panel B, I document considerable variation in growth and forecasting behavior. Of the 18,429 firm-years, 8,794 firm-year observations (or 48 percent) have neither a merger and acquisition nor a management forecast; 2,278 observations (or 12 percent) include both M&A activity and a management forecast in the same year. Twenty-one percent, or 3,869 observations, issue a forecast in years without M&A activity, and 3,488 observations (or 19 percent of firm-years) engage in a merger or acquisition but do not issue a management forecast.

I construct my second sample at the forecast level using a within-firm matched-forecast approach to study how the properties of a management forecast released by an acquirer after completing a merger or acquisition compare to a forecast by the same firm but within a non-M&A period. To do so, I use only acquiring firms that complete an M&A deal and later issue an earnings forecast for that same fiscal year. Additionally, the firm must issue a forecast in the prior year. To best capture the change in forecasting due to the

uncertainty of cash flows from operations for a new economic entity, I focus on the first earnings forecast issued after the M&A deal is complete and match the forecast with a forecast for the prior fiscal year with the most similar horizon (that is, closest to -365 days from the forecast in year t). Figure 1 provides a timeline of my matched sample selection process. When a firm engages in multiple M&A deals in a fiscal year, I measure forecast changes for annual earnings around the greatest increase in uncertainty by only using the M&A deal with the largest deal size. *POST* is an indicator variable equal to one for the first management forecast issued after completing the M&A deal. This within-firm sample of matched forecasts contains 1,526 forecasts issued around 763 mergers or acquisitions.

CHAPTER 4: RESEARCH DESIGN AND EMPIRICAL RESULTS

4.1 Issuance of Management Earnings Forecast

To test my hypotheses, I first study whether firms are more or less likely to issue forecasts in M&A firm-years compared to non-M&A firm-years. Using my first sample (panel data set) of all firms engaging in at least one M&A deal between 2001 and 2011, I test the association between the occurrence of an M&A transaction and the issuance of a management forecast. A positive (negative) association between the likelihood of issuing a forecast and an M&A firm-year indicates management views the marginal benefits (costs) of disclosure as greater than the marginal costs (benefits) when a merger or acquisition makes forecasting more difficult. To predict the likelihood of forecast issuance around M&A transactions, I create the following logit model:

$$\Pr(ISSUE) = \beta_0 + \beta_1 M\&A + \beta_2 ANALYST\ COVERAGE + \beta_3 ISSUE_{t-1} + \beta_4 INST\ OWNERSHIP + \beta_5 EARNINGS\ VOL + \beta_6 LITIGATION\ RISK + \beta_7 EQUITY\ ISSUE + \beta_8 EARN\ CHG + \beta_9 LOSS + \beta_{10} ROA + \beta_{11} SIZE + \beta_{12} VIX + \beta_{13} TOTAL\ VALUE + \beta_{14} M\&A\ DELAY + \beta_{15} \%STOCK + IndustryFE + \varepsilon \quad (1)$$

where observations are measured at the firm-year level. The coefficient on merger and acquisition firm-years (*M&A*) is used to test my first hypothesis that the probability of management forecast issuance increases (decreases) in M&A firm-years compared to non-M&A firm-years. *ISSUE* is equal to one if the firm releases an EPS forecast for the fiscal year and is zero otherwise. *M&A* is equal to one in firm-years with a merger or an acquisition and zero otherwise.

I use the natural log of analysts following the acquiring firm (*ANALYST COVERAGE*) in my first-stage model of the probability of forecast issuance. The number of analysts covering the firm has been shown to influence the decision of management to issue a forecast but is less likely to influence other management forecast characteristics, such as the accuracy of management forecasts (Lang and Lundholm 1996; Anantharaman and Zhang 2011; Feng, Li, and McVay 2009; Hribar and Yang 2015).[1] To control for prior forecasting history, I include an indicator variable ($ISSUE_{t-1}$) that equals one if the firm issued a management earnings forecast in the prior year, zero otherwise. I include the percentage of institutional investors in the firm (*INST OWNERSHIP*) because firms with more institutional investors are more likely to disclose earnings forecasts (Gong et al. 2013). I include controls for the inherent volatility in the operating environment of the firm (*EARNINGS VOL* and *EARN CHG*) to capture other aspects of information uncertainty surrounding a firm that influence guidance behavior (e.g., Waymire 1985; Graham, Harvey and Ragjopal 2005; Allee et al. 2015). I include coefficient estimates (*LITIGATION RISK)* from the litigation risk model of Kim and Skinner (2012) to proxy for changes in disclosure stemming from the threat of litigation (Cheng, Luo and Yue 2013). Allee et al. (2015) find firms are more likely to issue guidance when influential equity participants are present, and so I include a dummy variable equal to one for firms attempting to raise additional funds in year *t* through the issuance of equity capital (*EQUITY ISSUE*).

[1] To address the potential issue of endogeneity between the engaging in M&A and choosing to issue a forecast, I use the Heckman (1979) procedure and do not include the number of analysts in my second-stage models for the characteristics of management forecasts (Larcker and Rusticus 2007).

I control for the performance of the acquiring firm using its return on assets in year *t* (*ROA*) and an indicator variable equal to one if the firm experiences a loss in year *t* (*LOSS*), because firms often issue less guidance when performance is poor (e.g., Moeller et al. 2004; Dong et al. 2006; Miller 2002; Hutton et al. 2012). Kim, Pandit and Wasley (2015) find the level of macroeconomic uncertainty is negatively related to the probability of management guidance. Consequently, I include the annual average level of the CBOE Volatility Index (*VIX)* to control for the effects of macroeconomic uncertainty on management forecast issuance. Research argues smaller firms have relatively poorer information environments, which affects firms' voluntary disclosure policies, so I include the natural log of total assets (*SIZE)* as a proxy for firms' information environments (Lang and Lundholm 1996; Baginski and Hassell 1997; Bhojraj, Libby and Yang 2011; Gong et al. 2013).

I also control for characteristics of the merger or acquisition. I include the dollar value of all mergers and acquisitions completed within year *t (TOTAL VALUE*) because a greater magnitude of merger and acquisition activity generates more firm uncertainty. To control for uncertainty generated between the announcement of the M&A and its completion, I include an indicator variable equal to one for mergers or acquisitions announced in one fiscal year but completed in a subsequent fiscal year (*M&A DELAY).* Kimbrough and Louis (2011) find firms' disclosure behavior changes when bidding firms pay with stock; consequently, I include an indicator variable equal to one for a merger or an acquisition financed entirely with stock (*% STOCK*).

Table 2 presents descriptive statistics for all variables used to measure whether forecast issuance is more or less likely in firm-years with or without M&A transactions.

Variables are reported separately for firm-years with and firm-years without M&A activity. In firm-years *without* M&A activity (*M&A=0*), management issues a forecast (*ISSUE=1)* only 30.6 percent of the time. In firm-years *with* M&A activity, management forecasts are issued in 39.5 percent of firm-years.

The results of estimating the logit model given in equation (1) are presented in Table 3. Column 1 presents the forecast issuance results using equation 1 outlined above, and Column 2 includes industry fixed effects. The positive coefficient on *M&A* indicates that management is more likely to issue earnings forecasts in years with a merger or an acquisition compared to non-M&A firm-years. In column 1, the coefficient on *M&A* is 0.2892, suggesting in M&A firm-years, the log odds of forecast issuance increases by 1.33. This result suggests, on average, management behaves as if the marginal benefits of forecasting are greater than the marginal costs after a merger or acquisition.

In general, the results of the control variables included in equation (1) are in line with findings of prior research. *ANALYST COVERAGE* is positive and statistically significant, suggesting firms with higher analyst coverage are more likely to issue earnings forecasts.[2] The $ISSUE_{t-1}$ coefficient is positive and statistically significant (coeff=3.5825, s.e.=0.05), which supports the notion that firms follow an earnings forecast issuance policy. The *INST OWNERSHIP* coefficient is positive and significant (coeff=0.5453; st.error=0.10), which suggests firms with greater ownership by institutional investors are

[2] Following Feng et al. (2009) and Hribar and Yang (2015), I use this variable as an instrument in subsequent earnings forecast models to control for potential issues arising from endogeneity. Because my subsequent tests only use a sample of firms that forecast earnings, I construct the inverse Mills ratio from my prediction model in Column I to attempt to control for sample selection bias in subsequent models (Heckman 1979). The inverse Mills ratio is the ratio of the standard normal probability density function over the standard normal cumulative density function.

more likely to issue management forecasts, holding all else constant. Firms with greater inherent earnings uncertainty, as measured by *EARNINGS VOL* and *EARN CHG*, are less likely to issue management forecasts, although the relation is not statistically significant in my regression. *LITIGATION RISK* is positive and statistically significant, consistent with empirical findings that firms are more likely to issue management forecasts when the potential risk of litigation is high. Consistent with prior research, I find a positive association between *EQUITY ISSUE* and the probability of issuing a forecast, although it is not significant at conventional levels. The coefficient on *ROA* is positive, consistent with prior research that finds firms with better performance are more likely to forecast (Moeller et al. 2004; Dong et al. 2006; Hui and Matsunaga 2014). Firms are less likely to issue an earnings forecast in a loss year (*LOSS* coefficient = -0.5861) and when the macroeconomic environment is more uncertain (*VIX* coefficient = -0.0145). I also find a negative association between *SIZE* and the probability of issuance, which is inconsistent with prior research that finds larger firms are more likely to voluntarily disclose. However, this association becomes insignificant once I control for industry fixed effects. Finally, in Column 1, I find a negative statistically significant relation between the delay of M&A completion (*M&A DELAY)* and the probability of issuing a forecast (coeff=-0.1772, s.e.=0.10).

To further strengthen my finding that firms, on average, view the marginal benefits of forecasting as greater than the marginal costs when mergers and acquisitions make forecasting more difficult, I examine two additional variable specifications related to forecast issuance and mergers and acquisitions. First, I examine the relative size of the M&A transaction(s) to the market value of the acquirer, and second, I examine the

frequency of forecast issuance. If the marginal benefits of forecasting are greater than the marginal costs when M&A activity makes forecasting more difficult, I expect to find a positive association between issuing a forecast and the relative size of M&A activity in the firm-year. Additionally, I expect to find firms issue forecasts more frequently in M&A firm-years than in non-M&A firm-years.

I test these additional variable specifications using *M&A SIZE,* which is equal to the total deal value of all M&A transactions in year *t* scaled by the acquirer's market value of equity at the beginning of year *t*, and using *MF FREQ,* which is the number of forecasts issued by a firm in year *t.* The results of these tests are reported in Table 2, Columns 3 through 6. Consistent with my initial result that firms are more likely to forecast in M&A years than in non-M&A years, I find a positive association between the relative size of all M&A deals and the probability of issuance (Col 3: *M&A SIZE* = 0.4303, s.e=0.10) and the frequency of forecast issuance (Col 4: *MF FREQ* = 0.1667, s.e.=0.03*).* Together, these results suggest forecast issuance increases with merger and acquisition activity.

4.2 Characteristics of Management Earnings Forecasts

4.2.1 Bundled Forecasts

My second set of hypotheses predict management alters the characteristics of its earnings forecasts when forecasting difficulty changes. Using my second sample of within-firm observations, in which the first forecast issued after completing the M&A is matched to the firm's forecast issued in the prior year with the most similar horizon, I first examine whether forecasts are less likely to be bundled with an earnings announcement in the M&A firm-year. Using *BUNDLED* as the dependent variable, I estimate the following logit model:

$$PR(BUNDLED) = \beta_0 + \beta_1 POST + \beta_2 INST\ OWNERSHIP + \beta_3 SIZE + \beta_4 EARNINGS\ VOL + \beta_5 LITIGATION\ RISK + \beta_6 EARN\ CHG + \beta_7 EQISSUE + \beta_8 ROA + \beta_9 LOSS + \beta_{10} DISPERSION + \beta_{11} HORIZON + \beta_{12} NEWS + \beta_{13} CONFIDENCE + \beta_{14} RELATIVE\ VALUE + \beta_{15} TOTAL\ VALUE + \beta_{16} \%STOCK + \beta_{17} DELAY + \beta_{18} IMR + YearFE + \varepsilon \quad (2A)$$

BUNDLED is a dichotomous variable that equals one when the management forecast is issued on the same day as a prior period's earnings are announced, and zero otherwise. A negative coefficient on *POST* indicates the forecast issued after the M&A deal is complete is less likely to be issued with a prior period's earnings than a forecast issued in a non-M&A period.

I include many of the same control variables used in Model 1, in addition to other aspects of the management forecast and M&A deal characteristics. I consider the difficulty of the forecasting environment leading up to the completion of the merger or acquisition by including *DISPERSION*, measured as the forecast dispersion of analysts' forecasts the day prior to management forecast issuance (Zhang 2006; Hutton and Stocken 2009). Baginski and Hassell (1997) show that management has more time to gather relevant earnings information when it waits to release a forecast. Consequently, I include *HORIZON*, measured as the difference in days between the issuance of the management forecast and the fiscal year-end, to capture any differences in information gathered by management between the forecast issued in the non-M&A year and the forecast in the M&A year. *NEWS* is equal to the difference between the management earnings forecast and the consensus analyst forecast prior to management's issuance, because Kim, Pandit and Wasley (2015) find managers are more likely to issue forecasts that agree with the

consensus analyst forecast when uncertainty is higher.[3] I follow Hribar, Huseman and Melessa (2016) to construct *CONFIDENCE,* a continuous variable between zero and one that captures the objective likelihood at the time of issuance that earnings will fall within the range of a forecast, or the *ex ante* implied confidence level of a forecast. Hribar et al. posit that management issues bundled forecasts with a higher confidence level than non-bundled forecasts, given the additional potential scrutiny of analysts and investors on an earnings announcement day.

To control for variation in the degree of uncertainty inherent in the M&A transaction, I include four deal-specific variables. *RELATIVE VALUE* is the value of the recently-completed merger or acquisition, scaled by the market value of the acquiring firm at the beginning of the M&A year. I use this variable to capture the relative increase in uncertainty for the acquirer due to combining with the target's operations. *TOTAL VALUE* is the summation of all completed M&A deals in year *t* by the firm to control for other cumulative changes in the economic entity. I include *%STOCK*, which is the percentage of the deal financed with the acquiring firm's stock. Amel-Zadeh and Meeks (2016) and Kimbrough and Louis (2011) document differences in management forecasts when the merger announcement is financed solely with stock. Finally, I also include *DELAY* to capture the difference in days between the completion of the M&A deal and the issuance of the management forecast, as a longer delay creates more time for additional firm events and information to influence the earnings forecast characteristics.

[3] I use the midpoint of the forecast if management issues a range forecast. Based on findings by Ciconte et al. (2014), I also use the upper bound of the range forecast. My results are robust to either specification.

Table 4 reports descriptive statistics for both the year prior to the M&A transaction (non-M&A forecasts) and the year of the completed M&A deal (M&A forecasts) for all variables used in the regressions of forecast characteristics. Forecast variables report the first forecast issued after the completion of the M&A transaction or the firm's forecast issued in the prior year with the most similar horizon. Forecasts issued in non-M&A periods (M&A periods) are released with a prior period's earnings (*BUNDLED)* approximately 78.7 (74.1) percent of the time. The difference between the upper and lower bound of management's forecast (*WIDTH*) is, on average, 6.7 (8.1) cents and actual earnings fall below the lower bound of the range forecast (*OPTIMISTIC)* in 22.0 (28.2) percent of observations for non-M&A and M&A observations, respectively.

Table 5, Column 1 reports the results of Equation 2A, in which the coefficient on *POST* is -0.303. This negative association between the likelihood of issuing a bundled forecast and the completion of an M&A deal suggests management is less likely to wait for the scheduled earnings announcement date to release its updated forecast after M&A. This finding provides a specific setting for general predictions presented in Bonsall et al. (2013), in which they posit unbundled forecasts convey information about idiosyncratic firm events. Indeed, I find management's expectations about earnings after a completed merger or acquisition are more likely to be released via an unbundled forecast, precisely when an idiosyncratic firm event changes the forecasting environment.

4.2.2 Width of Range Forecasts

My next hypothesis predicts management's forecast reflects the increase in uncertainty of future earnings after completing a merger or acquisition. I study the increase

in uncertainty by examining the width of management range forecasts in the following OLS regression model:

$$WIDTH = \beta_0 + \beta_1 POST + \beta_2 INST\ OWNERSHIP + \beta_3 SIZE + \beta_4 EARNINGS\ VOL + \beta_5 LITIGATION\ RISK + \beta_6 EARN\ CHG + \beta_7 EQISSUE + \beta_8 ROA + \beta_9 LOSS + \beta_{10} DISPERSION + \beta_{11} HORIZON + \beta_{12} NEWS + \beta_{13} CONFIDENCE + \beta_{14} RELATIVE\ VALUE + \beta_{15} TOTAL\ VALUE + \beta_{16} \%STOCK + \beta_{17} DELAY + \beta_{18} IMR + YearFE + \varepsilon \quad (2B)$$

WIDTH is a continuous variable measured as the difference between the upper and lower bounds of management range forecasts. A positive association between *POST* and *WIDTH* indicates management issues wider range forecasts after completing an M&A deal than when it issues range forecasts in non-M&A periods, holding all else constant.

Consistent with my prediction, Table 5, Column 2 shows range forecasts issued after a merger or an acquisition are wider than range forecasts in non-M&A periods. Holding constant the objective likelihood that earnings fall within the forecast *(CONFIDENCE),* a wider forecast conveys greater uncertainty because management forecasts a greater number of earnings possibilities as potential earnings realizations. This wider range likely captures one forecast characteristic through which management adjusts to the heightened uncertainty of the forecasting environment.

4.2.3 Optimism of Management Forecasts

My third hypothesis regarding the characteristics of management's earnings forecast posits management's beliefs about its investments are reflected in its forecast. Accordingly, I expect management is more likely to be optimistic about the synergies of a

merger or acquisition than other investments, resulting in a more optimistic post-M&A forecast. My logit model is specified as follows:

$$PR(OPTIMISTIC) = \beta_0 + \beta_1 POST + \beta_2 INST\ OWNERSHIP + \beta_3 SIZE + \beta_4 EARNINGS\ VOL + \beta_5 LITIGATION\ RISK + \beta_6 EARN\ CHG + \beta_7 EQISSUE + \beta_8 ROA + \beta_9 LOSS + \beta_{10} DISPERSION + \beta_{11} HORIZON + \beta_{12} NEWS + \beta_{13} CONFIDENCE + \beta_{14} RELATIVE\ VALUE + \beta_{15} TOTAL\ VALUE + \beta_{16} \%STOCK + \beta_{17} DELAY + \beta_{18} IMR + YearFE + \varepsilon \quad (2C)$$

OPTIMISTIC is an indicator variable equal to one if the ex post actual earnings realization falls below the lower bound of the management earnings forecast. *POST* is an indicator variable equal to one for the first management forecast issued after the M&A deal is complete and zero for the firm's matched forecast in the prior fiscal year.

Column 3 in Table 5 reports the results of estimating Equation 2C. Consistent with my expectation, I find management earnings forecasts are more likely to be optimistic, as actual earnings fall below the management forecast range after completing a merger or an acquisition more often than for forecasts issued without recent M&A activity. *POST* has a coefficient of 0.441 (st. error=0.14), which indicates the first forecast issued after a completed M&A deal is 1.56 times more likely to be optimistic than management's forecast issued in the prior firm-year.

4.3 Persistence of Forecasting Changes

As the time between the completion of the merger and acquisition and subsequent forecasts increases, the difficulty of forecasting future performance likely decreases. Realizations of synergies and complications in merging the operations of the acquirer and

target gradually develop, allowing management to gather additional relevant information to forecast future performance. Thus, it is unclear how long, on average, the changes in the management forecasting characteristics persist after the M&A is completed.

To test the persistence of the changes in management forecasting behavior after a completed merger or acquisition, I use the same three forecasting characteristics (i.e. *BUNDLED, WIDTH, OPTIMISM*) within the same equations discussed above (Equations 2A-2C) but measured by the last forecast issued before the fiscal year-end for the acquirer in both the year of the M&A completion and the year prior to the M&A transaction. Table 6 reports the results of these regressions. In Column 1, I find no difference in the likelihood of issuing the last fiscal forecast as a bundled forecast, which suggests management returns to its scheduled forecast disclosure policy by the end of the year. In Column 2, however, I find the forecast width is still wider for the last forecast issued in the M&A year than the firm's last forecast issued in the prior non-M&A year (*WIDTH* coeff = 0.006, s.e. = 0.001). Additionally, Column 3 reports the M&A year forecast is still more optimistic than the non-M&A year forecast (*OPTIMISTIC* coeff = 0.303, s.e. = 0.16).

Given the persistence of the change in width and forecast optimism through the end of the M&A year, I further examine the first forecast issued in the subsequent year within 360 days of the fiscal year-end. When I re-run Equations 2A-2C using this sample of subsequent year forecasts (i.e. POST=1 for the first forecast in year *t+1* of the M&A year, and *POST=0* for the first forecast in year *t* of the M&A but *before* the M&A announcement), I find no statistically significant differences in any of the three management forecast characteristics. Together, these results suggest the uncertainty and

optimism reflected in management forecasts after M&A activity is mitigated after fiscal year-end results are reported.

4.4 Cross-Sectional Tests of M&A Experience and Type

4.4.1 Serial Acquirers

I hypothesize forecasts after M&A become less uncertain and less optimistic as experience with M&A transactions increases. I test my hypothesis by creating a variable, *SERIAL*, which is equal to the number of prior firm-years as of year *t* in which the firm has engaged in M&A in my panel dataset of all M&A firms between 2001 and 2011 (Sample 1).

Table 7 presents the results of my original equations of management forecast characteristics (Equation 2A-2C) presented in Table 5 but also considers the interaction of firms' M&A frequency (*SERIAL)* with the increase in uncertainty after M&A (*POST*). In Columns 1 and 2, I find more frequent acquirers are more likely to issue an unbundled forecast after M&A than firms who acquire less frequently (*POST*SERIAL* coeff=-0.132, s.e=0.06) and issue range forecasts with narrower widths (*POST*SERIAL* coeff=-0.003, s.e.=0.001). Column 3 also reports firms that acquire more frequently are less likely to be optimistic with the forecast issued after M&A than firms who acquire less frequently (*POST*SERIAL* coeff=-0.112, s.e.=0.06). Together, these results suggest management learns from prior M&A outcomes and issues more precise and less optimistic forecasts as it gains more experience with M&A deals.

4.4.2 Diversifying M&A Transactions

To test whether diversifying mergers and acquisitions differentially affect the properties of management forecasts, I construct an indicator variable, *DIVERSIFY*, that

equals one if the 2-digit SIC code of the acquirer is different from the 2-digit SIC code of the target. Columns 4-6 of Table 6 present the results of the original forecast property models (i.e. Equations 2A-2C) but include the interactive effects of diversifying M&A deals. In column 4, I find forecasts issued after diversifying M&A are less likely to be bundled than forecasts after non-diversifying M&A deals (*POST*DIVERSIFY* coeff=-0.521, s.e.=0.26), which suggests management is less likely to wait for the upcoming earnings announcement to issue its expectation of future earnings when acquiring outside its industry. Contrary to my expectation, in Column 5, I find no statistical difference exists for forecast ranges of diversifying M&A transactions than non-diversifying M&A transactions. Furthermore, forecasts issued after diversifying M&A are *less* likely to be optimistic (Column 6, *POST*DIVERSIFY* coeff=-0.440, s.e.=0.26) than non-diversifying M&A forecasts, potentially because management anticipates more complications when acquiring outside of its industry than acquisitions within its own industry.

4.4.3 Market Response to M&A Announcement

Management forecasts are a mechanism through which management can align its expectations for future performance with shareholders. Therefore, I hypothesize management forecasts display more transparency and optimism when the M&A transaction is negatively received by the market compared to M&A transactions with a positive market response. To test my hypothesis, I measure the 3-day window cumulative abnormal return around the M&A announcement (CAR[-1,+1]). If the cumulative abnormal return is positive (i.e. greater than zero), I label an indicator variable, *CAR>0,* equal to one and zero otherwise. I include *CAR>0* in the original equations of management forecast properties (Equations 2A-2C) and interact it with *POST.* Table 6, Columns 7 through 9 report the

results. Contrary to my expectations, I do not find management is more transparent by issuing an unbundled forecast when the market reaction is negative. I also find no statistical difference between the width of forecast ranges for positive and negative M&A announcements. I also find management is more likely to be optimistic in its forecast when the market reacts positively to the M&A deal.

4.5 Additional Analyses

In untabulated tests, I also examine whether management forecasting is different when the target firm is public or private and whether the relative size of the target is associated with different forecasting properties. In general, across all three models of forecasting characteristics, neither the public status nor the size of the target significantly impact the forecasting characteristics, although bundling a forecast with earnings for M&A of private targets does exhibit the expected negative coefficient (coeff=-0.156, s.e.=0.308). When examining the relative size of the target to the acquirer, I expect larger targets are associated with greater uncertainty. When I include an interaction term in my main regressions between *POST* and *RELATIVESIZE,* the coefficients are the expected direction but not significant at conventional levels (*BUNDLED* coeff=-0.266, s.e.=0.546; *WIDTH* coeff=0.0145, s.e.=0.014; *OPTIMISM* coeff=0.851, s.e.=0.558).

CHAPTER 5: CONCLUSION

Prior management forecasting studies acknowledge mergers and acquisitions increase firm uncertainty and likely change the properties of management forecasts. These studies often delete firm-quarter or firm-year observations containing a merger or an acquisition, which can result in sample attrition of up to 30 percent. I provide evidence consistent with the notion that mergers and acquisitions impact the properties of annual management forecasts after the deal is completed. More specifically, a merger or acquisition increases the likelihood of forecast issuance, decreases the likelihood of bundling the forecast with an earnings announcement, increases the width of the forecast range and increases the likelihood of an optimistic forecast. These properties do not persist, however, into the following year.

My study contributes to our understanding of how a specific large capital investment (M&A) impacts management forecasting behavior. My findings also have implications for future researchers interested in examining management forecasting behavior. Researchers should consider whether it is appropriate to delete M&A observations, as retaining M&A firm-years will increase the power of tests and may better capture the researchers construct of interest (e.g. how does uncertainty affect forecast properties). If M&A firms-years are retained, researchers can either employ an interaction term that allows characteristics to vary across M&A and non-M&A periods or partition their sample into M&A and non-M&A observations to investigate whether inferences differ during periods with mergers and acquisitions.

APPENDIX A: TABLES

Table A1: Frequency of Mergers and Acquisitions and Management Forecasts

Panel A: Observations by Firm-Year

Year	Number of Firms	Number of Merger & Acquisition Firms	Number of Firms Issuing Management Forecasts	Number of M&A Firms Also Forecasting
2001	1573	536	511	189
2002	1611	582	492	197
2003	1607	616	487	212
2004	1698	692	614	271
2005	1761	627	616	265
2006	1742	646	628	269
2007	1739	610	593	238
2008	1715	545	493	203
2009	1722	420	371	114
2010	1662	444	458	161
2011	1599	429	503	159
Total	**18429**	**6147**	**5766**	**2278**

Panel B: Aggregate Observations

	Firm-Years without M&A	Firm-Years with M&A	Total
Firm-Years without Management Forecasts	8794	3488	12282
Firm-Years with Management Forecasts	3869	2278	6147
Total	12663	5766	18429

Note: These tables present the firm-year frequency of mergers and acquisitions and management earnings forecasts across a panel data of all firms engaging in at least one M&A transaction between 2001 and 2011. Data on mergers and acquisitions is from SDC Platinum, and management forecast data is from First Call. Panel A presents firm-year observations by year; Panel B presents firm-year observations in the aggregate.

Table A2: Descriptive Statistics of All M&A Firms

	M&A=0 Firm-Year Obs					M&A=1 Firm-Year Obs			
	N	MEAN	MED	STD		N	MEAN	MED	STD
$ISSUE_t$	12,663	0.306	0.000	0.461	*$ISSUE_t$*	5,766	0.395	0.000	0.489
MF FREQ	12,663	1.085	0.000	1.967	*MF FREQ*	5,766	1.517	0.000	2.316
ANALYST COVERAGE	12,663	9.216	7.000	7.871	*ANALYST COVERAGE*	5,766	11.82	9.00	9.096
$ISSUE_{t-1}$	12,663	0.312	0.000	0.463	*$ISSUE_{t-1}$*	5,766	0.388	0.000	0.487
INST OWNERSHIP	12,663	0.598	0.629	0.321	*INST OWNERSHIP*	5,766	0.653	0.700	0.279
EARNINGS VOL	12,663	0.057	0.029	0.085	*EARNINGS VOL*	5,766	0.045	0.025	0.067
LITIGATION RISK	12,663	-3.457	-3.500	0.934	*LITIGATION RISK*	5,766	-3.289	-3.381	0.956
EQUITY ISSUE	12,663	0.776	1.000	0.417	*EQUITY ISSUE*	5,766	0.815	1.000	0.389
EARN CHG	12,663	0.188	0.232	15.82	*EARN CHG*	5,766	0.892	0.400	16.46
LOSS	12,663	0.306	0.000	0.461	*LOSS*	5,766	0.216	0.000	0.412
ROA	12,663	0.015	0.049	0.232	*ROA*	5,766	0.050	0.064	0.153
SIZE	12,663	6.890	6.854	1.936	*SIZE*	5,766	7.395	7.298	1.967
VIX	12,663	22.66	22.73	6.78	*VIX*	5,766	21.59	22.21	6.72
TOTAL VALUE	12,663	0	0	0	*TOTAL VALUE*	5,766	624.4	78.5	3040.3
M&A DELAY	12,663	0	0	0	*M&A DELAY*	5,766	0.253	0.000	0.435
% STOCK	12,663	0	0	0	*% STOCK*	5,766	0.130	0.000	0.336

Note: This table presents the mean, median and standard deviation of the variables used in the analyses of management earnings forecasts around completed merger and acquisition activity. The sample includes 18,429 firm-year observations of U.S. publicly-traded firms which engage in merger or acquisition activity at least once between 2001 and 2011. M&A=0 (M&A=1) reports firm-year observations without (with) a merger or acquisition. *ISSUE* is an indicator variable equal to one for firm-years with a management earnings forecast, zero otherwise. *MF FREQ* is the number of management earnings forecasts issued in year t .All continuous variables are winsorized at the 1 and 99 percent levels. Detailed variable definitions are available in the Appendix.

Table A3: Probability of Forecast Issuance in an M&A Firm-Year

Dep Variable	***PR(ISSUE $_t$)***		***PR(ISSUE $_t$)***		***PR(ISSUE $_t$)***		***MF FREQ***		***MF FREQ***		***MF FREQ***	
Variable	***(1)***		***(2)***		***(3)***		***(4)***		***(5)***		***(6)***	
M&A	0.2892	***	0.2745	***			0.1667	***	0.1461	***		
	(0.06)		*(0.06)*				*(0.03)*		*(0.03)*			
M&A SIZE					0.4303	***					0.2138	***
					(0.10)						*(0.04)*	
ANALYST COVERAGE	0.0147	***	0.0172	***	0.0172	***	0.0107	***	0.0019		0.0019	
	(0.00)		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*	
ISSUE $_{t-1}$	3.5825	***	2.9758	***	2.9756	***	2.9196	***	2.3840	***	2.3841	***
	(0.05)		*(0.05)*		*(0.05)*		*(0.03)*		*(0.03)*		*(0.03)*	
INST OWNERSHIP	0.5453	***	0.2974	***	0.2941	***	0.2801	***	0.1580	***	0.1569	***
	(0.10)		*(0.08)*		*(0.09)*		*(0.04)*		*(0.04)*		*(0.04)*	
EARNINGS VOL	-0.4287		-0.5527		-0.5466		0.2665		0.1527		0.1520	
	(0.46)		*(0.48)*		*(0.48)*		*(0.20)*		*(0.20)*		*(0.20)*	
LITIGATION RISK	0.2493	***	0.2163	***	0.2211	***	0.0254		0.0079		0.0096	
	(0.06)		*(0.06)*		*(0.06)*		*(0.03)*		*(0.03)*		*(0.03)*	
EQUITY ISSUE	0.0328		0.1020		0.0985		-0.0723	**	-0.0434		-0.0441	
	(0.06)		*(0.07)*		*(0.07)*		*(0.03)*		*(0.03)*		*(0.03)*	
EARN CHG	-0.0009		-0.0019		-0.0019		0.0020	***	0.0009		0.0009	
	(0.00)		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*	
LOSS	-0.5861	***	-0.6278	***	-0.6278	***	-0.3289	***	-0.3450	***	-0.3456	***
	(0.07)		*(0.08)*		*(0.08)*		*(0.03)*		*(0.03)*		*(0.03)*	
ROA	1.6721	***	1.5006	***	1.4956	***	0.0852		0.1282	*	0.1278	*
	(0.25)		*(0.26)*		*(0.26)*		*(0.07)*		*(0.07)*		*(0.07)*	
SIZE	-0.1538	***	-0.0320		-0.0328		0.0298	**	0.1320	***	0.1318	***
	(0.03)		*(0.04)*		*(0.04)*		*(0.01)*		*(0.02)*		*(0.02)*	
VIX	-0.0145	***	-0.0214	***	-0.0213	***	0.0009		-0.0008		-0.0008	
	(0.00)		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*	
TOTAL VALUE	0.0000		0.0000		0.0000		0.0000		0.0000		0.0000	*
	(0.00)		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*	
M&A DELAY	-0.1772	*	-0.0690		-0.0737		-0.0075		0.0302		0.0369	
	(0.10)		*(0.10)*		*(0.10)*		*(0.05)*		*(0.05)*		*(0.05)*	
% STOCK	0.0294		0.1991	**	0.1946	*	-0.2033	***	-0.0769	*	-0.0770	*
	(0.10)		*(0.10)*		*(0.10)*		*(0.05)*		*(0.05)*		*(0.05)*	
INTERCEPT	-0.4228						-0.0515					
	(0.43)						*(0.21)*					
Industry FE	N		Y		Y		N		Y		Y	
Number of Obs	16,955		16,660		16,660		16,950		16,655		16,655	
Adj R2	59.51%		48.09%		48.09%		48.92%		56.47%		56.46%	

Table A3 – continued

Note: This table presents the coefficients and standard errors from logit and OLS regressions of management earnings forecast issuance on the occurrence of merger or acquisition activity. *ISSUE* is an indicator variable equal to one if the firm issued at least one forecast in year t, zero otherwise. *MF FREQ* is the number of management earnings forecasts issued in year t. *M&A* is an indicator variable equal to one if the firm announced a merger or acquisition in year t, zero otherwise. *M&A SIZE* is the cumulative relative size of all targets acquired by the acquirer in year t. See Appendix for further variable definitions. Industry fixed effects are included where specified. ***, **, and * indicate 0.01, 0.05 and 0.10 significance levels, respectively.

Table A4: Descriptive Statistics of Within-Firm Matched-Forecast Sample

	Firm-Year Prior to M&A				Firm-Year of M&A		
	MEAN	MED	STD		MEAN	MED	STD
BUNDLED	0.787	1.000	0.409	*BUNDLED*	0.741	1.000	0.438
WIDTH	0.067	0.050	0.077	*WIDTH*	0.081	0.050	0.084
OPTIMISTIC	0.220	0.000	0.415	*OPTIMISTIC*	0.282	0.000	0.450
ANALYST COVERAGE	14.34	12.00	8.30	*ANALYST COVERAGE*	15.07	13.00	8.29
CAR>0	0.530	1.000	0.500	*CAR>0*	0.530	1.000	0.500
CONFIDENCE	0.413	0.343	0.356	*CONFIDENCE*	0.415	0.341	0.349
DELAY	-8.66	25.00	128.7	*DELAY*	47.54	38.50	38.17
DISPERISON	0.102	0.045	0.164	*DISPERISON*	0.123	0.058	0.177
DIVERSIFY	0.433	0.000	0.496	*DIVERSIFY*	0.433	0.000	0.496
EARN CHG	2.652	0.673	11.50	*EARN CHG*	1.876	0.676	12.34
EARNINGS VOL	0.033	0.024	0.029	*EARNINGS VOL*	0.027	0.022	0.022
EQUITY ISSUE	0.736	1.000	0.441	*EQUITY ISSUE*	0.754	1.000	0.431
HORIZON	137.2	148.5	80.5	*HORIZON*	163.0	158.0	84.5
INST OWNERSHIP	0.746	0.773	0.200	*INST OWNERSHIP*	0.775	0.799	0.193
LEVERAGE	0.183	0.159	0.163	*LEVERAGE*	0.200	0.176	0.166
LITIGATION RISK	-3.082	-3.154	0.843	*LITIGATION RISK*	-3.082	-3.194	0.843
LOSS	0.075	0.000	0.263	*LOSS*	0.089	0.000	0.286
NEWS	-0.001	0.000	0.013	*NEWS*	-0.003	0.000	0.018
RELATIVE VALUE	68.4	16.0	268.0	*RELATIVE VALUE*	72.2	15.0	323.1
ROA	0.107	0.099	0.064	*ROA*	0.101	0.093	0.061
SERIAL	2.470	2.000	2.142	*SERIAL*	3.443	3.000	2.131
SIZE	7.862	7.646	1.791	*SIZE*	8.049	7.885	1.724
% STOCK	0.101	0.000	0.301	*% STOCK*	0.067	0.000	0.250
TOTAL VALUE	271.8	0.0	964.1	*TOTAL VALUE*	471.2	85.0	1207.3

Note: This table presents the mean, median and standard deviation of the variables used to analyze the characteristics of management earnings forecasts after completed merger and acquisition activity. The sample includes 1,526 management forecasts of within-firm paired observations around 713 completed M&A deals in which the acquiring firm issued a management forecast subsequent to the M&A completion and issued a management forecast in the prior year. *BUNDLED* is an indicator variable equal to one when the forecast is issued with a prior period's earnings, zero otherwise. *WIDTH* is the difference between the upper and lower bounds of the management forecast. *OPTIMISTIC* equals one when actual earnings fall below the management forecast, zero otherwise. All continuous variables are winsorized at the 1 and 99 percent levels. Detailed variable definitions are available in the Appendix.

Table A5: Characteristics of Management Earnings Forecasts after M&A

Dep Variable	***BUNDLED***		***WIDTH***		***OPTIMISTIC***	
	(1)		***(2)***		***(3)***	
	Coefficient		**Coefficient**		**Coefficient**	
Variable	***(s.e.)***		***(s.e.)***		***(s.e.)***	
POST	-0.303	**	0.008	**	0.441	***
	(0.14)		*(0.00)*		*(0.14)*	
INST OWNERSHIP	0.187		0.053	***	0.291	
	(0.45)		*(0.01)*		*(0.45)*	
SIZE	-0.189	*	0.009	***	-0.280	***
	(0.10)		*(0.00)*		*(0.10)*	
EARNINGS VOL	-1.600		0.127		-8.985	***
	(3.17)		*(0.08)*		*(3.14)*	
LITIGATION RISK	0.012		0.001		0.360	*
	(0.19)		*(0.00)*		*(0.18)*	
EARN CHG	-0.004		-0.001	***	-0.022	***
	(0.01)		*(0.00)*		*(0.01)*	
EQUITY ISSUE	-0.350	**	-0.006	*	-0.333	**
	(0.15)		*(0.00)*		*(0.16)*	
ROA	-0.26		0.04		-4.65	***
	(1.24)		*(0.03)*		*(1.32)*	
LOSS	-0.299		-0.007		-0.017	
	(0.26)		*(0.01)*		*(0.25)*	
DISPERSION	-0.369		0.196	***	0.707	*
	(0.39)		*(0.01)*		*(0.40)*	
HORIZON	-0.004	***	0.000		0.004	***
	(0.00)		*(0.00)*		*(0.00)*	
NEWS	-1.70		0.30	***	7.57	
	(3.99)		*(0.11)*		*(4.79)*	
CONFIDENCE	0.231		0.137	***	-0.809	***
	(0.20)		*(0.01)*		*(0.21)*	
RELATIVE VALUE	-0.373		0.002		0.343	
	(0.28)		*(0.01)*		*(0.28)*	
TOTAL VALUE	0.0001		0.0000	***	0.0000	
	(0.00)		*(0.00)*		*(0.00)*	
%STOCK	0.204		0.000		-0.418	*
	(0.24)		*(0.01)*		*(0.25)*	
DELAY	0.0015	**	0.0000		-0.0009	
	(0.00)		*(0.00)*		*(0.00)*	
IMR	-0.913		-0.108	***	-3.183	***
	(0.79)		*(0.02)*		*(0.83)*	
Number of Obs	1,526		1,526		1,526	
Adjusted R^2	8.48%		44.89%		16.65%	

Table A5 – continued

Note: This table presents the results of either logit regressions or OLS regressions of management forecast characteristics on the completion of a merger or acquisition. Column 1 reports a logit model in which *BUNDLED* is an indicator variable equal to one when the management forecast is issued with a prior period's earnings, zero otherwise. Column 2 reports an OLS model in which *WIDTH* is the difference between the upper and lower bounds of the management forecast. Column 3 reports a logit model in which *OPTIMISTIC* is an indicator variable equal to one if the actual earnings realization falls below the lower bound of the management earnings forecast, zero otherwise. POST is an indicator variable equal to one for the first management earnings forecast issued after completion of a merger or acquisition, zero otherwise. See Appendix for further variable definitions. All continuous variables are winsorized at the 1% and 99% levels, and year fixed effects are included. ***, **, and * indicate 0.01, 0.05 and 0.10 significance levels, respectively.

Table A6: Persistence of Changes in Management Forecasting Characteristics

	Last Forecast in M&A Year						First Forecast in M&A t+1 Year					
Dep Variable	***BUNDLED***		***WIDTH***		***OPTIMISTIC***		***BUNDLED***		***WIDTH***		***OPTIMISTIC***	
Variable	***(1)***		***(2)***		***(3)***		***(4)***		***(5)***		***(6)***	
POST	0.083		0.006	**	0.303	*	0.049		0.007		0.045	
	(0.14)		*(0.00)*		*(0.16)*		*(0.20)*		*(0.01)*		*(0.18)*	
INST OWNERSHIP	0.999	**	0.042	***	0.720		1.406	**	0.078	***	0.070	
	(0.49)		*(0.01)*		*(0.51)*		*(0.64)*		*(0.02)*		*(0.60)*	
SIZE	-0.180	*	0.006	**	-0.206	*	0.202		0.010	**	0.303	**
	(0.11)		*(0.00)*		*(0.11)*		*(0.14)*		*(0.00)*		*(0.14)*	
EARNINGS VOL	-0.716		0.066		-4.224		1.138		0.296	**	3.919	
	(3.68)		*(0.07)*		*(3.41)*		*(4.53)*		*(0.14)*		*(4.32)*	
LITIGATION RISK	-0.173		0.003		0.426	**	-0.385		0.006		-0.409	
	(0.20)		*(0.00)*		*(0.21)*		*(0.25)*		*(0.01)*		*(0.25)*	
EARN CHG	-0.008		-0.001	***	-0.030	***	-0.004		-0.001	***	0.000	
	(0.01)		*(0.00)*		*(0.01)*		*(0.01)*		*(0.00)*		*(0.01)*	
EQUITY ISSUE	-0.057		-0.006	*	-0.079		-0.537	**	-0.016	**	0.006	
	(0.16)		*(0.00)*		*(0.18)*		*(0.25)*		*(0.01)*		*(0.20)*	
ROA	-0.514		-0.010		-6.142	***	4.145	**	0.014		-0.206	
	(1.36)		*(0.03)*		*(1.53)*		*(1.81)*		*(0.05)*		*(1.61)*	
LOSS	-0.521	*	0.001		-0.203		0.225		-0.006		-0.521	
	(0.28)		*(0.01)*		*(0.27)*		*(0.42)*		*(0.01)*		*(0.36)*	
DISPERSION	-0.790	**	0.105	***	0.683	*	0.024		0.233	***	-0.293	
	(0.35)		*(0.01)*		*(0.39)*		*(0.44)*		*(0.01)*		*(0.39)*	
HORIZON	0.033	***	0.000	***	0.008	***	0.034	***	0.000		-0.006	***
	(0.00)		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*	
NEWS	1.084		0.061		17.377	**	-8.303		0.120		-85.938	***
	(8.14)		*(0.17)*		*(8.10)*		*(9.76)*		*(0.28)*		*(11.43)*	
CONFIDENCE	0.140		0.127	***	-0.516	*	0.896	**	0.283	***	0.701	**
	(0.25)		*(0.01)*		*(0.27)*		*(0.37)*		*(0.01)*		*(0.31)*	
RELATIVE VALUE	-0.43		-0.01		0.07		-0.69	*	0.02	*	0.10	
	(0.30)		*(0.01)*		*(0.32)*		*(0.38)*		*(0.01)*		*(0.39)*	
TOTAL VALUE	0.000		0.000	***	0.000		0.000		0.000	**	0.000	
	(0.00)		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*	
%STOCK	0.128		0.003		0.011		0.365		0.002		-0.124	
	(0.26)		*(0.01)*		*(0.27)*		*(0.35)*		*(0.01)*		*(0.32)*	
DELAY	0.001		0.000		-0.001		0.001		0.000		0.000	
	(0.00)		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*	
IMR	-2.17	**	-0.08	***	-3.89	***	-1.93		-0.10	***	-2.68	**
	(0.85)		*(0.02)*		*(0.96)*		*(1.18)*		*(0.03)*		*(1.10)*	
Number of Obs	1,502		1,502		1,502		1,147		1,147		1,147	
Adj R2	28.20%		39.80%		17.65%		37.58%		49.81%		16.38%	

Table A6 – continued

Note: This table presents the coefficients and standard errors of either logit regressions or OLS regressions of management forecast characteristics. Columns 1-3 use the last management forecast issued in the M&A year or prior year. Columns 4-6 use the first management forecast issued in the subsequent year. Column 1 reports a logit model in which *BUNDLED* is an indicator variable equal to one when the management forecast is issued with a prior period's earnings, zero otherwise. Column 2 reports an OLS model in which *WIDTH* is the difference between the upper and lower bounds of the management forecast. Column 3 reports a logit model in which *OPTIMISTIC* is an indicator variable equal to one if the actual earnings realization falls below the lower bound of the management earnings forecast, zero otherwise. *POST* is an indicator variable equal to one for the last management earnings forecast issued after completion of a merger or acquisition, zero otherwise. See Appendix for further variable definitions. All continuous variables are winsorized at the 1% and 99% levels, and year fixed effects are included. ***, **, and * indicate 0.01, 0.05 and 0.10 significance levels, respectively.

Table A7: Cross-Sectional Tests of Management Earnings Forecast Characteristics

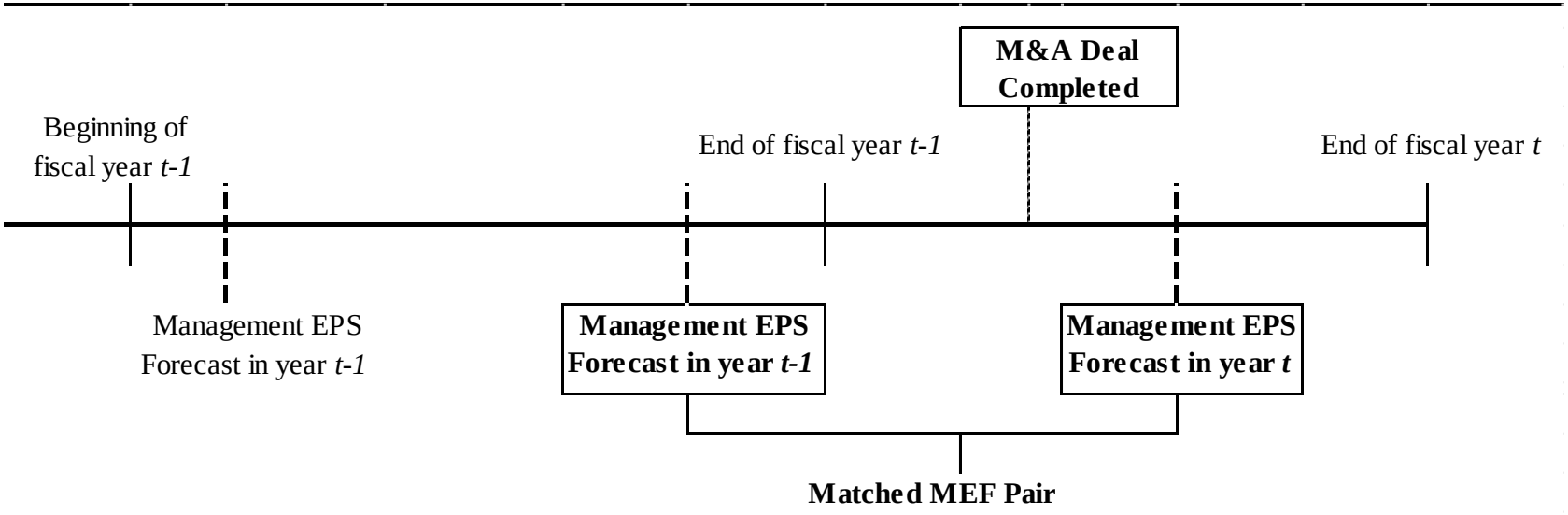
	Serial Acquirers						*Diversifying M&A*						*CAR(-1,+1) around M&A Announcement*					
Dep Variable	***BUNDLED***		***WIDTH***		***OPTIMISTIC***		***BUNDLED***		***WIDTH***		***OPTIMISTIC***		***BUNDLED***		***WIDTH***		***OPTIMISTIC***	
Variable	***(1)***		***(2)***		***(3)***		***(4)***		***(5)***		***(6)***		***(7)***		***(8)***		***(9)***	
POST	0.068		0.018	***	0.742	***	-0.070		0.005		-0.240		-0.649	***	0.009		0.129	
	(0.23)		*(0.01)*		*(0.23)*		*(0.18)*		*(0.00)*		*(0.19)*		*(0.22)*		*(0.01)*		*(0.23)*	
*POST*SERIAL*	-0.129	**	-0.003	**	-0.112	*												
	(0.06)		*(0.00)*		*(0.06)*													
SERIAL	0.097	*	-0.004	***	0.100	**												
	(0.05)		*(0.00)*		*(0.05)*													
*POST*DIVERSIFY*							-0.521	**	0.006		-0.440	*						
							(0.26)		*(0.01)*		*(0.26)*							
DIVERSIFY							0.268		0.002		0.098							
							(0.19)		*(0.00)*		*(0.19)*							
*POST*CAR>0*													0.435		-0.007		0.603	**
													(0.28)		*(0.01)*		*(0.29)*	
CAR>0													-0.287		0.013	***	-0.188	
													(0.21)		*(0.01)*		*(0.21)*	
INST OWNERSHIP	0.261		0.050	***	0.357		0.190		0.051	***	-0.249		0.139		0.070	***	0.046	
	(0.45)		*(0.01)*		*(0.46)*		*(0.46)*		*(0.01)*		*(0.45)*		*(0.53)*		*(0.01)*		*(0.54)*	
SIZE	-0.195	*	0.012	***	-0.297	***	-0.189	*	0.009	***	0.280	***	-0.068		0.008	***	-0.363	***
	(0.10)		*(0.00)*		*(0.10)*		*(0.10)*		*(0.00)*		*(0.10)*		*(0.11)*		*(0.00)*		*(0.12)*	
EARNINGS VOL	-1.383		0.157	**	-8.993	***	-1.383		0.129	*	9.118	***	-3.480		0.138		-13.757	***
	(3.18)		*(0.08)*		*(3.16)*		*(3.18)*		*(0.08)*		*(3.16)*		*(3.46)*		*(0.09)*		*(3.82)*	
LITIGATION RISK	0.014		-0.001		0.374	**	0.011		0.001		-0.356	*	-0.112		0.003		0.457	**
	(0.19)		*(0.00)*		*(0.19)*		*(0.19)*		*(0.00)*		*(0.18)*		*(0.21)*		*(0.01)*		*(0.21)*	
EARN CHG	-0.004		-0.001	***	-0.023	***	-0.003		-0.001	***	0.022	***	-0.008		-0.001	***	-0.017	**
	(0.01)		*(0.00)*		*(0.01)*		*(0.01)*		*(0.00)*		*(0.01)*		*(0.01)*		*(0.00)*		*(0.01)*	
EQUITY ISSUE	-0.351	**	-0.005		-0.334	**	-0.359	**	-0.006		0.314	**	-0.420	**	-0.008	*	-0.239	
	(0.16)		*(0.00)*		*(0.16)*		*(0.16)*		*(0.00)*		*(0.16)*		*(0.17)*		*(0.00)*		*(0.17)*	
ROA	-0.21		0.03		-4.60	***	-0.28		0.03		4.73	***	1.10		0.04		-6.28	***
	(1.23)		*(0.03)*		*(1.33)*		*(1.24)*		*(0.03)*		*(1.33)*		*(1.37)*		*(0.04)*		*(1.53)*	
LOSS	-0.335		-0.006		-0.052		-0.298		-0.006		0.006		-0.167		-0.008		0.337	
	(0.26)		*(0.01)*		*(0.25)*		*(0.26)*		*(0.01)*		*(0.25)*		*(0.31)*		*(0.01)*		*(0.30)*	
DISPERSION	-0.357		0.192	***	0.735	*	-0.377		0.196	***	-0.701	*	-0.541		0.196	***	0.453	
	(0.39)		*(0.01)*		*(0.40)*		*(0.39)*		*(0.01)*		*(0.40)*		*(0.43)*		*(0.01)*		*(0.44)*	
HORIZON	-0.004	***	0.000	***	0.004	***	-0.004	***	0.000		-0.004	***	-0.004	***	0.000	***	0.004	***
	(0.00)		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*	
NEWS	-1.50		0.28	***	7.98	*	-1.97		0.31	***	-7.86		-3.38		0.17		8.08	
	(4.00)		*(0.11)*		*(4.82)*		*(3.99)*		*(0.11)*		*(4.78)*		*(4.63)*		*(0.12)*		*(5.94)*	
CONFIDENCE	0.245		0.136	***	-0.791	***	0.235		0.137	***	0.819	***	0.039		0.139	***	-0.923	***
	(0.20)		*(0.00)*		*(0.21)*		*(0.20)*		*(0.01)*		*(0.21)*		*(0.23)*		*(0.01)*		*(0.24)*	
RELATIVE VALUE	-0.383		0.001		0.335		-0.373		0.002		-0.363		-0.421		-0.002		0.307	
	(0.29)		*(0.01)*		*(0.28)*		*(0.29)*		*(0.01)*		*(0.28)*		*(0.34)*		*(0.01)*		*(0.35)*	
TOTAL VALUE	0.0001		0.0000	***	0.0000		0.0001		0.0000	***	0.0000		0.0001		0.0000	***	0.0000	
	(0.00)		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*	
%STOCK	0.204		0.000		-0.418	*	0.203		0.001		0.404		0.185		0.000		-0.543	*
	(0.24)		*(0.01)*		*(0.25)*		*(0.24)*		*(0.01)*		*(0.25)*		*(0.25)*		*(0.01)*		*(0.28)*	
DELAY	0.0015	**	0.0000		-0.0009		0.0014	**	0.0000		0.0008		0.0021	***	0.0000		0.0001	
	(0.00)		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*		*(0.00)*	
IMR	-1.1700		-0.0942	***	-3.4815	***	-0.9031		-0.1040	***	3.1148	***	-1.4072		-0.1258	***	-1.7147	*
	(0.80)		*(0.02)*		*(0.85)*		*(0.79)*		*(0.02)*		*(0.84)*		*(0.90)*		*(0.02)*		*(0.96)*	
Number of Obs	1,526		1,526		1,526		1,526		1,526		1,526		1,168		1,168		1,168	
Adj R2	8.32%		46.15%		16.98%		8.26%		45.01%		16.96%		8.31%		46.85%		17.97%	

Table A7 – continued

Note: This table presents the coefficients and standard errors of either logit regressions or OLS regressions of management forecast characteristics on the completion of a merger or acquisition. Column 1 reports a logit model in which *BUNDLED* is an indicator variable equal to one when the management forecast is issued with a prior perod's earnings, zero otherwise. Column 2 reports a OLS model in which *WIDTH* is the difference between the upper and lower bounds of the management forecast. Column 3 reports a logit model in which *OPTIMISTIC* is an indicator variable equal to one if the actual earnings realization falls below the lower bound of the management earnings forecast, zero otherwise. *POST* is an indicator variable equal to one for the first management earnings forecast issued after completion of a merger or acquisition, zero otherwise. *SERIAL* is the number of firm-years during the sample during which the firm engaged in M&A. *DIVERSIFY* is an indicator variable equal to one when the 2-digit SIC code of the acquirer is different from the 2-digit SIC code of the target, zero otherwise. *CAR>0* is an indicator variable equal to one when the market-adjusted CAR(-1,+1) around the M&A announcement date is positive, zero otherwise. See Appendix for further variable definitions. All continuous variables are winsorized at the 1% and 99% levels, and year fixed effects are included. ***, **, and * indicate 0.01, 0.05 and 0.10 significance levels, respectively.

APPENDIX B: FIGURE

Figure 1: Timeline of Matched Forecast Sample



This figure shows the management forecast selection procedure for tests of management forecast characteristics. The forecast in year *t* is the first forecast after the M&A deal is completed. The matched forecast in year *t-1* is the forecast issued in the prior fiscal year with the most similar horizon as the forecast in *t*.

APPENDIX C: VARIABLE DEFINITIONS

Variable Defintions	
Key Variables:	
$ISSUE_t$	Equals one if management issues an EPS forecast in year *t*
MF FREQ	The number of annual management earnings forecasts issued in year *t*
M&A	Equals one if firm engages in merger & acquisition activity in year *t*
M&A SIZE	The total value of all M&A deals in year *t*, scaled by the acquirer's MVE at the beginning of the M&A year
BUNDLED	Equals one if the management forecast is issued on the same day as a prior period's earnings announcement
WIDTH	The difference between the upper and lower bounds of the management forecast
OPTIMISTIC	Equals one if actual earnings fall below the lower bound of the management forecast
POST	Equals one for the first management earnings forecast issued after a completed M&A deal
Control Variables:	
ANALYST COVERAGE	The natural log of the number of analysts covering the firm in year *t*
CAR>0	Equals one when the market-adjusted CAR(-1,+1) around the M&A Announcement Date is positive, zero otherwise.
CONFIDENCE	Follows Hribar et al. (2016) and equals the objective likelihood actual earnings will fall within the range
DELAY	The difference in days between the issuance of the management forecast and the effective (pseudo) date of the merger or acquisition
DISPERISON	The standard deviation of analyst forecasts issued prior to the management forecast in year *t*
DIVERSIFY	Equals one if the 2-digit SIC code of the acquirer is different from the 2-digit SIC code of the target, zero otherwise
EARN CHG	The difference in earnings from year *t-1* to year *t*, scaled by year-end price
EARNINGS VOL	The standard deviation of earnings over the prior five years from year *t*, scaled by assets
EQUITY ISSUE	Equals one if the firm issues shares in year *t*
HORIZON	The number of days between the management EPS forecast and the fiscal year-end
IMR	The inverse Mill's ratio estimated from the first-stage of the Heckman (1979) model
$ISSUE_{t-1}$	Equals one if the firm issued an EPS forecast in the prior year, zero otherwise
INST OWNERSHIP	The percentage of firm *i's* investors who are classified as institutional investors
LEVERAGE	The ratio of long-term debt over total assets
LITIGATION RISK	The probability of litigation using the Kim and Skinner (2012) litigation model
LOSS	Equals one if the firms reports negative net income in year *t*
M&A DELAY	Equals one if the M&A deal is announced in year *t* and completed in year *t+1*
NEWS	The difference between management's forecast and the pre-existing analyst consensus forecast
RELATIVE VALUE	The value of the completed M&A deal, scaled by MVE at the beginning of the M&A year
ROA	The ratio of earnings before interest and taxes over assets in year *t*
SERIAL	The number of firm-years during the sample period in which the acquirer engaged in M&A.
SIZE	The natural log of the firm's assets in year *t*
% STOCK	Equals one if the M&A deal is financed entirely with stock
TOTAL VALUE	The summation of the value of all completed M&A deals in year *t*
VIX	The average monthly value of the CBOE Volatility Index (VIX) in year *t*

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