Strategic Timing of Pro Forma Earnings Announcements

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ABSTRACT

Prior research suggests that managers are strategic in reporting pro forma earnings. However, empirical evidence is mixed on whether managers' strategic decisions reflect opportunistic or altruistic motives. We extend this research by examining the strategic timing of earnings announcements containing pro forma earnings information. Our results indicate that managers accelerate the timing of earnings announcements (relative to the expected announcement date) in quarters in which they disclose pro forma measures relative to quarters in which they do not. We also find that the acceleration of pro forma announcements increases with the level of (potentially opportunistic) manager exclusions of recurring items. Finally, we find that investors' response to news reported early decreases with the level of manager exclusions of recurring items. This result suggests that in the presence of strategic timing behavior, investors view these exclusions as opportunistic as opposed to conveying value-relevant "core" information. Additional results suggest that this decreased response is more pronounced following the regulation of pro forma reporting. Taken together, our results suggest that, while managers strategically accelerate the timing of pro forma earnings releases to influence investors' perceptions of firm performance, investors are not misled by this practice.

Keywords: *pro forma earnings; emphasis; strategic timing; corporate disclosure*

Data Availability: *The data are available from public sources identified in the text.*

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I. INTRODUCTION

We investigate whether managers strategically time earnings press releases when they contain an adjusted ("pro forma") earnings number. Bowen, Davis, and Matsumoto (2005) find that managers strategically place the pro forma and GAAP earnings figures within the press release to emphasize the more favorable number. We extend their research by exploring whether managers strategically accelerate or delay the earnings announcement itself (relative to the expected announcement date) when it contains pro forma earnings measures. In addition, we examine whether announcement timing is associated with the content of pro forma earnings news and, in particular, the magnitude of recurring items excluded by management in arriving at the pro forma figure. Consistent with prior evidence (e.g., Bhattacharya et al. 2004; Doyle and Soliman 2005; Christensen 2007), we contend that earnings exclusions on which managers and analysts disagree are more likely to reflect opportunistic motives than those on which they agree. Moreover, we expect that exclusions of recurring items are more likely to be misleading to investors than one-time items (see Elliott 2006). Given these arguments, we focus on manager exclusions of *recurring* items that are *incremental* to those made by analysts. Finally, we investigate whether the strategic timing of earnings announcements containing adjusted earnings measures affects the stock market reaction to earnings releases and thus, whether investors perceive the content of strategically-timed pro forma earnings news as value-relevant or opportunistic.

The managerial practice in recent years of reporting an alternative profitability measure (frequently called "pro forma" earnings) in the quarterly earnings press release along with the standard GAAP number has generated substantial debate. Managers often argue that adjusted earnings measures better portray sustainable core performance relative to GAAP earnings, which often contain transitory or "one-time" items. On the other hand, critics contend that managers opportunistically report pro forma earnings to divert investors' attention from poor operating performance (Lougee and Marquardt, 2004; Bhattacharya et al., 2003, 2007; Johnson and Schwartz, 2005). While recent empirical evidence suggests that managers are strategic in their pro forma reporting decisions, the results are mixed as to whether investors view managers' pro forma reporting decisions as value-relevant or opportunistic (e.g., Lougee and Marquardt 2004; Bowen et al. 2005). Therefore, we extend this line of research by examining another strategic tool

that managers may use to influence investor perceptions—the acceleration or delay of earnings announcements containing pro forma earnings information.

We focus on the timing of announcements since timing of news releases is a key element of firms' corporate disclosure strategies (Gennotte and Trueman 1996; Graham et al. 2005). Moreover, prior research suggests that the timing of earnings releases is an important means through which firms may influence investors' response to the released information. In this regard, several studies document that the market reaction to earnings announcements is conditioned on the timing of the news release, irrespective of the content and/or magnitude of the information in the press release (e.g., Kross and Schroeder 1994; Bagnoli et al. 2002; Bagnoli et al. 2006). Furthermore, in a recent survey of financial executives, Graham et al. (2005) find that managers strategically time their press releases in order to position the news in "the best possible light" and thereby, maximize (minimize) the response to favorable (unfavorable) news. Hence, while Bowen et al. (2005) suggest that managers emphasize pro forma earnings when it portrays a more favorable story than GAAP earnings, Graham et al.'s (2005) results suggest that managers could time the announcement itself in an effort to position pro forma earnings news in the best light possible. Therefore, we examine an important setting in which managers have considerable incentives to exercise discretion over both the timing and the content of earnings releases.

Based on a sample of 4,768 quarterly earnings press releases containing manager-adjusted (i.e., pro forma) earnings numbers from 1998 − 2003, our results suggest that managers accelerate the timing of announcements in quarters in which they disclose pro forma earnings measures relative to quarters in which they do not. We also find that the acceleration of announcement timing increases with the level of managers' (potentially opportunistic) exclusions of recurring items that are incremental to analysts' exclusions in arriving at the reported pro forma figure. These results suggest that managers strategically accelerate the release of favorable pro forma earnings news to influence investors' perceptions in a specified direction. Furthermore, these results suggest that managers accelerate pro forma announcements, which, in most of our sample, tends to 'spin' negative GAAP earnings news into positive pro forma earnings news. Finally, these results are robust to controls for various factors that may be correlated with both announcement timing and the content of pro forma disclosures.

Our market reaction analyses indicate that, although investors' do not respond differently to the analyst-adjusted component of accelerated pro forma earnings news, their response to accelerated pro forma news *decreases* with the level of incremental manager exclusions of recurring items. In other words, investors tend to discount unexpectedly early pro forma announcements that contain higher levels of incremental manager adjustments of recurring items. This result suggests that in the presence of strategic timing behavior, investors view managers' incremental exclusions of recurring items as opportunistic as opposed to conveying value-relevant core information. Moreover, consistent with Kim and Verrecchia (1991), this result suggests that investors discount accelerated pro forma earnings news when the quality of the information is lower than anticipated. Further analyses suggest that the diminished response to early pro forma earnings news is complete and does not revert in future periods. We also find that this decrease in investors' response is more pronounced following regulatory intervention into the use of pro forma disclosures (i.e., the Sarbanes-Oxley Act of 2002; SOX). Taken together, these results suggest that, on average, investors are not misled by managers' attempts to strategically emphasize pro forma good news by disclosing it earlier than expected. Moreover, regulatory actions seem to have increased investors' ability to recognize and adjust for at least one of managers' deliberate means of altering investor perceptions—the strategic timing of pro forma earnings announcements.

This study makes several contributions to the existing literature. First, we document the timing of announcements as an additional means of strategically highlighting favorable pro forma earnings news. More importantly, we find clear evidence that investors perceive these tactics as opportunistic and adjust for them accordingly. Second, we extend the wider literature on strategic considerations in firms' disclosure decisions. Prior research examines managers' strategic motives regarding the disclosure, presentation, and classification of both financial and non-financial information (e.g., Schrand and Walther 2000; Lansford 2006; McVay 2006; Reidl and Srinivasan 2007) and finds mixed evidence on whether strategic disclosures reflect opportunism. Since prior evidence suggests that pro forma reporting decisions are often strategic (e.g., Lougee and Marquardt 2004; Bowen et al. 2005; Doyle and Soliman 2005), we believe pro forma reporting provides an ideal setting for examining managers' strategic timing behavior. Third, in contrast to prior announcement timing studies, we provide strong evidence of a positive association between accelerated reporting and favorable (pro forma) earnings news. This result sheds further light on firms'

announcement timing choices, suggesting that these choices are conditioned not only on the magnitude of the earnings news but also on managers' selective disclosure decisions, namely, the disclosure of alternative performance metrics.

Our results have important implications for (1) regulators, who have expressed continued concern that managers can use their discretion in reporting pro forma earnings metrics to mislead investors, and (2) those interested in the impact of regulators' intervention in the use of pro forma disclosures. While, on average, investors appear to discount pro forma earnings information that is emphasized through early disclosure (especially when managers exclude high levels of recurring items), it is possible that some investors may be misled. For example, recent experimental and archival evidence indicates that less-sophisticated (but not more-sophisticated) investors may be misled by pro forma earnings information (Frederickson and Miller 2004; Elliott 2006; Bhattacharya et al. 2007; Allee et al. 2007).

The rest of the paper is organized as follows. Section II discusses the background and develops our research questions. Section III describes the data and the sample selection criteria. Section IV explains the research design and presents our results, and Section V presents extensions and robustness tests. Finally, Section VI provides concluding remarks.

II. BACKGROUND AND RESEARCH QUESTIONS

Pro Forma Earnings

In response to the debate over pro forma reporting, several studies have examined the market's response to alternative earnings metrics. Prior research suggests that investors frequently pay more attention to manager-adjusted pro forma earnings than to audited GAAP earnings figures (Bhattacharya et al. 2003; Lougee and Marquardt 2004). Moreover, recent evidence suggests that pro forma earnings information may be opportunistic and thus misleading to investors. For example, Doyle et al. (2003) find that expenses excluded from analysts' "street earnings" have implications for future cash flows.[1] They also find that

[1] While we focus on manager-adjusted earnings numbers, prior research investigates adjusted earnings numbers disclosed by managers as well as analysts. Gu and Chen (2004) introduce a useful convention by labeling manager-adjusted earnings figures voluntarily reported in earnings press releases as "pro forma" earnings and analyst-adjusted earnings numbers reported by forecast tracking services as "street" earnings. Following Gu and Chen (2004), we refer to management-reported numbers as "pro forma" or "adjusted" earnings and the numbers published by forecast data providers as "street" earnings.

investors fail to fully understand the implications of these exclusions for future firm performance, and that a trading strategy based on the excluded expenses generates significant future abnormal returns. Lougee and Marquardt (2004) find that, in some instances, pro forma earnings are negatively associated with future returns. They interpret this result as preliminary evidence that pro forma reporting decisions can lead to mispricing as a result of management-issued pro forma numbers. Similarly, Doyle and Soliman (2005) and Frankel, McVay, and Soliman (2007) find evidence suggesting that exclusions of recurring items from analysts' street earnings are motivated by managers' incentives to meet or beat earnings forecasts.[2]

Johnson and Schwartz (2005) find some evidence that "pro forma" firms are systematically priced higher than "non-pro-forma" firms, but do not find evidence consistent with investors being misled by pro forma earnings information. In addition, Bowen et al. (2005) find that managers' placement of pro forma versus GAAP earnings metrics in the earnings press release is opportunistically motivated, focusing on the metric that portrays more favorable firm performance. Nevertheless, their results suggest that investors perceive the emphasized pro forma metric as being more value-relevant than opportunistic. Finally, Elliott (2006) finds experimental evidence that investors are influenced by the emphasis management places on the pro forma metric as opposed to the mere presence of the pro forma metric. We extend this stream of research by examining another tool that managers may use to influence investors' perceptions of firm performance, namely, the strategic timing of the pro forma earnings announcement.

Earnings Announcement Timing

Prior research suggests that managers strategically time the release of favorable versus unfavorable news in order to influence investor perceptions. While the results are mixed, several studies find that managers frequently accelerate the release of good news and delay the release of bad news (e.g., Givoly and Palmon, 1982; Kross and Schroeder 1984; Chambers and Penman 1984; Bagnoli et al. 2002; Bowen et al. 1992; Begley and Fischer 1998; Kothari et al. 2006).[3] Furthermore, while investor perceptions are not

[2] Recent studies using analyst-adjusted street earnings also provide evidence consistent with managers' strategic motives in pro forma reporting (e.g., Doyle et al. 2003; Doyle and Soliman 2005). However, analyst-adjusted earnings numbers are a noisy proxy for manager-adjusted pro forma earnings because (1) managers often exclude more items than analysts and (2) a larger proportion of firms do not disclose adjusted earnings numbers while forecast tracking services such as I/B/E/S provide adjusted earnings numbers for most firms. Hence, these studies only provide limited evidence of managers' strategic motives.

[3] There is also evidence that managers often seek to preempt the release of bad news through various means such as management forecasts, preannouncements, or conference calls (Skinner 1994, 1997; Kasznik and Lev 1995; Graham et al. 2005; Tucker and Zarowin 2006).

directly observable, prior evidence suggests that investors react more strongly to early versus on-time/late earnings announcements (relative to the expected announcement date), regardless of the nature of the news (e.g., Bagnoli et al. 2002). In other words, investors respond more positively (negatively) to good (bad) news when it is reported unexpectedly early.[4] Taken together, these results suggest that, holding all else equal, managers have incentives to accelerate (delay) the disclosure of good (bad) news in order to maximize increases (minimize decreases) in stock price.

Prior studies offer several reasons why managers strategically time their news releases. As previously mentioned, all of these reasons point to managers' incentives to influence the stock market's reaction to the released information.[5] First, managers might release good news early to preempt the leakage of information from other sources, thereby ensuring a larger price impact (Bowen et al. 1992). Similarly, some managers might delay the release of bad news to allow investors to anticipate its release and in turn, causing stock price to adjust slowly to the anticipated news (Bagnoli et al. 2005). Second, managers are likely to strategically time their news releases to attract or avoid media attention. Specifically, managers might release good news early in an effort to draw more media attention and thus, highlight the news to investors, resulting in a stronger price reaction (Barber and Odean 2005; Bowen et al. 1992; Brown and Kim 1993). Likewise, some managers delay bad news in the hope of receiving less media coverage around the news release (Bagnoli et al. 2005; Doyle and Magilke 2007). For example, as argued by Bowen et al. (1992), managers may delay bad news until other industry-wide bad news is released. Since bad news is already expected, the media may give less coverage to the actual news release. Third, managers often time their press releases to minimize litigation risk and to "manage" the response to negative news. In a recent survey, Graham et al. (2005) find that managers release bad news faster to mitigate litigation risk (see also Skinner 1994, 1997; Kasznik and Lev 1995) and, more interestingly, to enable the firm to position the bad news in the best possible light. Further, Graham et al. find that while managers release good news faster

[4] The stronger reaction to both early good news and early bad news occurs because disclosing news earlier than expected halts investors' private information search or preempts the leakage of information from alternative sources (Kim and Verrecchia 1991; Bowen et al. 1992; Graham et al. 2005). This results in higher information asymmetry around early news releases, leading to a stronger price reaction (regardless of the nature of the news). We also note that higher information asymmetry around early announcements could lead to higher transaction costs and lower liquidity, which may not be desirable to managers.

[5] Note that these benefits of strategic timing as discussed in prior research must outweigh any potential reputation and litigation costs that are associated with this behavior. See Bowen et al. (1992) and Begley and Fischer (1998) for further discussions of managers' private benefits and costs of announcement timing.

(especially if the firm is unprofitable), they also try to "package bad news with other [favorable] disclosures." However, the coordination of good news with bad news could result in a timing delay.[6] Finally, prior studies document that managers time their earnings releases in response to other factors such as investor demand for timely information, growth opportunities, firm size, and audit quality (e.g., Givoly and Palmon 1982; Sengupta 2004; Tucker and Zarowin 2006).

Based on this discussion, it is possible to argue both in favor of accelerated or delayed disclosure when earnings announcements contain pro forma earnings measures. If pro forma earnings numbers convey favorable (unfavorable) "core" earnings news, then managers may accelerate (delay) the earnings release to emphasize the good news (mitigate the bad news) to investors. However, critics argue that managers opportunistically report pro forma numbers in an effort to 'spin' bad GAAP news in the best light possible. In such cases, managers may accelerate the earnings release so as to emphasize favorable pro forma metrics, which deliberately mask poor GAAP performance. On the other hand, managers may delay the earnings release to draw less attention to their use of opportunistic pro forma adjustments. Furthermore, the coordination and analysis of pro forma exclusions (both altruistically and opportunistically motivated exclusions) can cause a delay in the release of pro forma news. Given these conflicting predictions about whether managers strategically accelerate or delay the timing of pro forma earnings announcements, our first research question does not predict a particular direction:

RQ1: Do firms strategically accelerate or delay earnings announcements that contain pro forma earnings information relative to those that do not?

Our first research question addresses whether firms, on average, accelerate or delay their earnings announcement when it contains an adjusted pro forma earnings figure versus when it does not. If we find evidence of strategic timing of pro forma earnings announcements, our next question is whether managers' behavior is opportunistic or altruistic in nature. Since managers' incremental exclusions of recurring items (beyond those made by analysts) are most likely associated with opportunistic behavior (Bhattacharya et al. 2004; Doyle and Soliman 2005; Christensen 2007; Elliott 2006), our second question investigates the association between announcement timing and the magnitude of managers' incremental exclusions of

[6] In Graham et al. (2005), 35.5% of interviewed managers indicate that they are likely to "package bad news with other disclosures." Kothari et al. (2006) also argue that managers strategically accelerate the release of good news when the positive news outweighs any bad news that may be buried in or packaged with the disclosure.

recurring items. Hence, if the timing of earnings announcements containing pro forma earnings metrics is motivated by managers' opportunistic motives to influence investor perceptions, then we expect to see an association between announcement timing and managers' incremental recurring item exclusions.

RQ2: When earnings announcements contain pro forma earnings numbers, is the timing of press releases associated with the magnitude of incremental manager exclusions of recurring items?

Although some managers' incremental exclusions of recurring items may reflect opportunistic motives, it is also likely that many managers exclude these items to better portray core earnings performance. To shed more light on this issue, we investigate the stock market response to these exclusions, *conditional* on the timing of the earnings announcement containing pro forma earnings measures. If investors perceive strategically timed pro forma announcements as opportunistic, then we should find a diminished (or no) incremental response to manager exclusions of recurring items – especially when analysts disagree with these exclusions.[7] Alternatively, if investors perceive strategically timed pro forma announcements as more value-relevant *or* if they are unable to unravel managers' opportunism, then we could find a positive incremental response to managers' exclusions. In addition, theory suggests that market participants seek out private information to decipher the quality of public information (Kim and Verrecchia 1991). Therefore, investors' response to strategically timed announcements could also reflect their perceptions of the quality of the reported pro forma figure (and the exclusions therein) relative to its expected level.[8] Consistent with these arguments, our third research question relates to investor perceptions of information content and quality:

RQ3: Does the timing of the earnings announcement affect investors' perceptions of the information content of managers' incremental exclusions of recurring items?

[7] Opportunistic managers may still choose to accelerate the release of pro forma earnings news even if investors cannot be misled. Consistent with Kothari et al.'s (2006) argument, if investors expect managers to strategically time the earnings release, then it could be rational for managers to fulfill this belief. That is, if the market response is conditioned on the expectation of strategic timing, then managers could be at a disadvantage if they do not time their releases accordingly. A similar argument is found in the earnings management literature (e.g., Stein 1989; Healy and Wahlen 1999), wherein investors anticipate, and even tolerate, a certain amount of earnings management. In such settings, managers may still manage earnings even though investors cannot be misled.

[8] Kim and Verrecchia (1991) show that when the quality of anticipated announcements is greater (less) than its anticipated level, both the stock price and volume reactions become stronger (weaker). They also show that when the announcement is unanticipated (as with unexpectedly early or late announcements), the price reaction is stronger at the announcement date relative to anticipated (or on-time) announcements.

III. DATA AND SAMPLE SELECTION

We collect a comprehensive sample of quarterly pro forma earnings press releases by searching the *PR Newswire* and *Business Wire* on LexisNexis for the years 1998 – 2003. A typical pro forma press release contains the GAAP earnings per share (EPS) figure, a pro forma earnings number (an adjusted earnings measure voluntarily disclosed by managers) for the current quarter, and various other details deemed to be relevant by management. We include earnings announcements in which the company discloses a pro forma number that differs from the "bottom line" GAAP diluted EPS number disclosed in the same press release. Our original search uses the keywords "pro forma," "pro-forma," and "proforma" and retrieves 50,011 press releases. However, companies often use other nomenclatures to describe their adjusted earnings figures. Based on Wallace's (2002) categorization of adjusted earnings nomenclatures commonly used by companies, we further search LexisNexis using an expanded search string.[9] This expanded search yields an additional 33,373 hits, bringing the grand total to 83,384 potential press releases. After carefully reading each press release, we find 17,511 announcements containing actual quarterly pro forma earnings.

To conduct our empirical analyses, we require firm observations to have an actual quarterly earnings announcement date in Compustat for quarter q of year t and year t–1 for the period 1998 − 2003. As detailed below, we use firms' actual announcement date for quarter q of the previous year to determine the expected announcement date for the current quarter. We eliminate firm-quarters for which the actual announcement date is less than 7 calendar days or more than 45 calendar days (90 calendar days) after the fiscal quarter-end date for interim (annual) announcements. We also eliminate firm-quarters for which the Compustat earnings announcement date is more than one calendar day earlier or later than the date of the pro forma earnings press release. These restrictions ensure that our sample is free of data entry errors and potential conflicts arising from pre-earnings announcements. In addition, they ensure that each company has had sufficient time to meet the Securities and Exchange Commission (SEC) filing deadlines.

[9] Our expanded search string is as follows: "earnings excluding," "net income excluding," "adjusted net income," "adjusted loss," "cash earnings," "earnings before," "free cash flow," "normalized EPS," "normalized earnings," "recurring earnings," "distributable cash flow," "GAAP one-time adjusted," "GAAP adjusted," "cash loss," AND NOT "pro forma," "pro-forma," or "proforma." We do not include EBIT or EBITDA since these are commonly reported as standard items in the income statement. Moreover, these figures were often reported on a per share basis long before the pro forma reporting trend began in the late 1990s.

These criteria result in a sample of 4,768 quarterly pro forma press releases by 1,662 unique firms over the period 1998 – 2003. To mitigate the potential effects of selection bias on our results, we do not impose further data restrictions on the sample when assessing our first research question (RQ1). For our remaining research questions (RQ2 and RQ3), we then require firm-quarters to have data available in Compustat, CRSP, the I/B/E/S unadjusted actual and detail history files, and the Thomson Financial CDA/Spectrum 13f Institutional Holdings database. Consistent with previous studies (e.g., Collins et al. 2003; Nagel 2005), firms with available CRSP stock data, but without any reported institutional holdings data, are assumed to have zero institutional ownership. These additional restrictions result in a final sample of 4,330 pro forma announcement quarters for 1,534 firms over the period 1998 – 2003.

IV. EMPIRICAL RESULTS

RQ1: Do Firms Accelerate or Delay Pro Forma Earnings Announcements?

Using a matched "within-sample" design, we first assess whether the timing of firms' earnings announcements is significantly different in the quarters in which they report pro forma earnings relative to quarters in which they do not. This design uses each firm as its own control and thus minimizes the potential effects of cross-sectional variation in announcement timing. For each firm, we collect the earnings announcement dates for all non-pro-forma quarters (i.e., those quarters in which our LexisNexis search string does not identify a pro forma earnings number in the press release) in year t and the corresponding fiscal quarter in year t–1. We again eliminate non-pro-forma quarters in which the actual earnings announcement date is less than 7 calendar days or more than 45 calendar days (90 calendar days) after the fiscal quarter-end date for interim (annual) announcements. This results in a comparative sample of 26,178 non-pro-forma and 4,768 pro forma reporting quarters over the period 1998 – 2003.[10]

[10] The fact that our pro forma quarters comprise only 15% (4,768 ÷ 30,946) of all quarters with available data during the sample period is not surprising. Bhattacharya et al. (2007, Figure 4), indicate that 84% of their sample firms report a pro forma earnings number three times or less during the 1998-2003 period. Although our sample is slightly smaller, we find a similar but slightly lower percentage in our sample, 73%. This result suggests that firms generally report alternative profitability figures selectively. We also acknowledge that our search string is imperfect and may fail to identify pro forma earnings press releases for some firm-quarters. Nevertheless, to the extent that our search string fails to identify actual pro forma announcements, including these quarters in the non-pro-forma group works against our finding significant differences.

We define earnings announcement timing using the following extrapolative model that is widely used in the literature (e.g., Givoly and Palmon 1982; Chambers and Penman 1984; Kross and Schroeder 1984; Begley and Fischer 1998; Bagnoli et al. 2002):

$$DELAY_{iqt} = EAD\_LAG_{iqt} - EAD\_LAG_{iqt-1}, \quad (1)$$

where *EAD_LAG* is the number of trading days (excluding weekends and holidays) between the fiscal end date of quarter *q* and the actual earnings announcement date for firm *i* in fiscal year *t*. This model implicitly assumes that a firm's expected announcement timing for the current quarter is the same as the reporting lag in trading days for the corresponding quarter of year *t*–1. Hence, a negative (positive) *DELAY* indicates that a firm's actual earnings announcement is earlier (later) than expected. We find similar results using four alternative time-series models of announcement delay (see Section VI for further details). While these alternative models may have less measurement error, we report results based on the simple model to facilitate comparison with previous studies. [11]

Table 1 compares earnings announcement timing for pro forma versus non-pro-forma quarters. Panel A presents results for the full sample, 30,946 quarterly observations (comprised of 4,768 pro forma quarters and 26,178 non-pro-forma quarters). The mean *DELAY* is –0.2087 for pro forma quarters, which is significantly different from zero at the 1% level (*t*-statistic = –3.01; Wilcoxon sign rank *z*-statistic = –2.36). This result contrasts with prior studies that document a mean delay that is about four times smaller and not significantly different from zero (e.g., Begley and Fischer 1998). Hence, this result suggests that managers tend to report earlier than expected when they disclose pro forma earnings numbers. In contrast, the mean *DELAY* for non-pro-forma quarters is 0.1495, which, based on a *t*-test, is significantly higher than the mean for pro forma quarters (i.e., 0.1495 is significantly higher than −0.2087, *t*-statistic = −4.71). This result suggests that managers tend to announce earnings earlier in pro forma quarters relative to non-

[11]Prior studies also report that their results are not sensitive to alternative models of delay (see, for e.g., Givoly and Palmon 1982; Chambers and Penman 1984; Begley and Fischer 1998). Bagnoli et al. (2002) find that management's own expected announcement dates as collected by First Call are more accurate than expected dates derived from extrapolative models. However, these management-provided dates are no longer available from First Call due to a change in their data archival procedures. Similar data is available from Thomson StreetEvents (which powers widely-available earnings calendars such as *The Wall Street Journal*'s). However, the StreetEvents data is very sparse during our test period and matches with only 0.93% (287 ÷ 30,946) of our sample. This poor match indicates that most of our firms did not provide expected dates to StreetEvents during our sample period. Further, when managers do not provide an expected date, StreetEvents will create an estimate using the actual announcement date for the same quarter of the previous year. Hence, while our extrapolative model may have greater measurement error, we contend that this methodology is close to the standard practice of forecast data providers.

pro-forma quarters.[12] We find similar evidence using a Wilcoxon rank sum test (z-statistic = −1.98), indicating that this result is not attributable to extreme observations. Consistent with Kross and Schroeder (1984), we also observe that the 25th percentiles, medians, and 75th percentiles are equal across the two groups, indicating similar symmetric distributions in earnings announcement timing.

[Insert Table 1 here]

We conjecture that firms are less likely to deviate from their disclosure timing strategies when they report pro forma or non-pro-forma measures in consecutive quarters (i.e., in the current quarter and in the same quarter of the previous year). We therefore replicate our analyses separately for those quarters that follow a pro forma quarter versus those that follow a non-pro-forma quarter. We conduct this analysis for the fiscal years 1999 – 2003 since our sample selection procedures does not identify whether a firm reports a pro forma or non-pro-forma figure in the years prior to 1998.[13] The results in Panel B indicate that pro forma announcements are relatively on-time when firms report pro forma measures in two consecutive quarters. For these cases, the mean *DELAY* is 0.0847, which is not statistically different from zero (t-statistic = 0.93; Wilcoxon sign rank z-statistic = 0.19). However, we again find that current-quarter pro forma announcements are significantly earlier than non-pro-forma announcements (0.0847 versus 0.8390; t-statistic = −6.14). This result is even more evident when we examine cases in which the current quarter follows a non-pro-forma quarter. Specifically, Panel C indicates that firms report much earlier in pro forma quarters that follow non-pro-forma quarters.

RQ2: What is the Association between Announcement Timing and Manager Recurring Exclusions?

Using the restricted sample of 4,330 pro forma reporting quarters, we next investigate the relation between announcement timing and various characteristics of pro forma earnings news, especially managers' incremental exclusions of recurring items. We conduct univariate and multivariate analyses to examine this relation, while controlling for other determinants of firms' announcement timing choices. In the following subsections, we first define our primary and control variables. We then present and discuss our empirical results.

[12] We find similar results when we examine RQ1 in a multivariate setting. These results are reported in the robustness tests section (see Section V).
[13] This procedure reduces the matched sample comparisons to 4,436 pro forma and 21,000 non-pro-forma quarters.

Variable Definitions

Forecast Error

We calculate three measures of unexpected earnings news or forecast error based on three earnings metrics: (1) Compustat's diluted EPS from operations, $EPS_{GAAP\text{-}OP}$;[14] (2) actual EPS from the I/B/E/S unadjusted actual file, $EPS_{I/B/E/S}$, and (3) the hand-collected adjusted diluted EPS numbers voluntarily disclosed by managers in their quarterly earnings press releases, $EPS_{PROFORMA}$. Forecast errors based on GAAP operating EPS, I/B/E/S actual EPS, and pro forma earnings ($FE_{GAAP\text{-}OP}$, $FE_{I/B/E/S}$, $FE_{PROFORMA}$) are calculated by subtracting the mean analyst forecast from each of the three actual earnings metrics and scaling this difference by the closing price five days before the earnings announcement date (e.g., Christie 1987).[15]

Characteristics of Pro Forma Earnings Numbers

In addition to the pro forma forecast error, we measure several attributes of firms' adjusted earnings information, such as the magnitude of recurring and non-recurring exclusions, the strategic emphasis of pro forma earnings within the press release, and the use of pro forma reporting to achieve strategic earnings benchmarks.

Recurring and Non-recurring Exclusions

Following Black and Christensen (2007) and Christensen (2007), we calculate the total amount of exclusions including below-the-line items[16] per share (*TOTAL_EXCL*) as the difference between $EPS_{PROFORMA}$ and GAAP diluted EPS after extraordinary items ($EPS_{GAAP\text{-}EXI}$, Compustat quarterly data item 7). We then decompose *TOTAL_EXCL* into the following components: (1) below-the-line items per share (*BELOWLINE_EXC*), calculated as GAAP diluted EPS before extraordinary items ($EPS_{GAAP\text{-}BXI}$,

[14] The latest Compustat files contain a quarterly diluted operating EPS number (data item 181). However, the history of this metric is missing for most of our sample firms. Hence, consistent with Bhattacharya et al. (2003), we reconstruct the GAAP diluted operating EPS as follows: We begin with Compustat's basic earnings per share from operations (quarterly data item 177) and multiply this by the number of basic shares outstanding (Compustat quarterly data item 15) to get total operating earnings. We then divide operating earnings by the number of diluted shares outstanding (Compustat annual data item 171) to obtain quarterly diluted earnings per share from operations.

[15] We use the unadjusted I/B/E/S actual and detail files to avoid biases arising from using split-adjusted I/B/E/S data (e.g., Payne and Thomas 2003). The mean forecast is calculated for each firm using all unadjusted forecasts made within 90 days prior to the earnings announcement date. This 90-day restriction ensures that forecasts are not stale.

[16] "Below the line items" include extraordinary items, income or loss from discontinued operations, and the cumulative effect of changes in accounting principles. Note that while SFAS 154 has now changed the rules for changes in accounting principles, our sample period pre-dates this standard. Thus, changes in accounting principles are consistently reported as below-the-line items during our sample period.

Compustat quarterly data item 9) minus $EPS_{GAAP\text{-}EXI}$; (2) special items per share (*SPECIAL_EXC*), calculated as $EPS_{GAAP\text{-}OP}$ minus $EPS_{GAAP\text{-}BXI}$; (3) analysts' exclusions of recurring items from street earnings (*ANAL_EXCL*), calculated as $EPS_{I/B/E/S}$ minus $EPS_{GAAP\text{-}OP}$; and (4) managers' incremental exclusions of recurring items (*MGR_EXCL*), calculated as $EPS_{PROFORMA}$ minus $EPS_{I/B/E/S}$.[17] We classify below-the-line items (*BELOWLINE_EXC*) and special items (*SPECIAL_EXC*) as being one-time or non-recurring in nature. Therefore, any additional exclusions by analysts and/or managers (*ANAL_EXCL* and *MGR_EXCL*) are generally recurring items such as depreciation, amortization, and stock-based compensation.

Strategic Emphasis of the Pro Forma Earnings Number

In the spirit of Bowen et al. (2005), we define strategic emphasis, *PROFIRST*, as an indicator variable that equals one if the pro forma number is mentioned first in the press release, and zero otherwise. This variable captures managers' attempts to highlight the pro forma number when it portrays a better picture of the firm's performance than the standard GAAP number.[18]

The Use of Pro Forma Disclosures to Meet Strategic Earnings Benchmarks

Consistent with prior studies (e.g., Burgstahler and Dichev 1997; Skinner and Sloan 2002) and following Bhattacharya et al. (2003), we measure whether the pro forma earnings number allows firms to achieve two earnings-related targets—avoiding a loss (*PROFIT*) and meeting or beating analysts' expectations (*CONSENSUS*)—that they otherwise would have missed based on GAAP operating earnings. Specifically, we code *PROFIT* as one if the pro forma adjustments turn a GAAP operating loss into a pro forma profit (i.e., $EPS_{GAAP\text{-}OP}$ is negative and $EPS_{PROFORMA}$ is positive), and zero otherwise. We code *CONSENSUS* as one if the pro forma number meets or beats the current mean analyst forecast but the GAAP operating earnings number falls short, and zero otherwise.

[17] Christensen (2007a) provides a detailed discussion of these exclusion components, their magnitudes, and their impact on forecast errors.

[18] In robustness tests, we also employ a second measure following Bowen et al. (2005). This second measure, *RELEMP*, is the emphasis level (i.e., placement) of the pro forma number relative to the GAAP number in the press release. We measure the level of pro forma and GAAP emphasis based on a four-point scale, where "1" indicates that the number is reported in the financial statements only; "2" that the number is reported in paragraph three or later; "3" that the number is reported in the first or second paragraph; and "4" that the number is reported in the headline. *RELEMP* is then calculated as the pro forma emphasis level minus the GAAP emphasis level.

Determinants of Earnings Announcement Timing

We include several controls for other determinants of firms' announcement timing choices as documented in prior literature. These include poor firm performance as proxied by a history of prior losses (*LOSS*), where *LOSS* equals one if a firm has reported losses for four consecutive quarters, and zero otherwise; the level of growth opportunities, measured as the ratio of book to market value of equity at the end of the quarter (*BOOKMKT*); firm size, total assets (in millions of dollars) at the end of the quarter (*TOTASSET*); and audit quality, proxied by an indicator variable, *BIG4AUDIT*, which identifies those firm-quarters that are audited by a Big 4 audit firm.[19] Consistent with the arguments of prior studies (e.g., Bowen et al. 1992; Bagnoli et al. 2005; Doyle and Magilke 2007), we control for the degree of media coverage that the firm receives. We define media coverage (*MEDIA_COV*) as the number of articles, during the 12 months prior to the end of the quarter, in which the firm is mentioned in the headline or lead paragraph of the following major press sources: *The New York Times*, *USA Today*, *Financial Times*, *The Washington Post*, and *The Wall Street Journal*.

Miller (2002) finds that firms strategically adjust their disclosure patterns during periods of sustained earnings increases or earnings momentum. To control for this behavior, we include an indicator variable, *STRING4UP*, to identify observations with a string of consecutive earnings increases. For each firm-quarter, *STRING4UP* equals one if earnings increased in the previous four quarters, and zero otherwise. We measure the change in quarterly earnings as $EPS_{GAAP\text{-}BXI}$ in the current quarter of year t minus $EPS_{GAAP\text{-}BXI}$ in the same quarter of year t–1, scaled by the time-series standard deviation of earnings changes over the previous eight quarters (e.g., Chan et al. 1996).[20]

Consistent with prior studies (e.g., Sengupta 2004), we control for the effect of institutional demand for timely information. The level of institutional demand is proxied by the percentage of shares owned by institutional investors (*%INSTHOLD*) as reported in the CDA/Spectrum 13f institutional holdings database for the calendar quarter closest to the current fiscal quarter. We also control for the effect of litigation risk on the acceleration or delay of earnings news releases (Skinner 1994, 1997;

[19] Our sample period (1998−2003) spans the 1998 merger of Price Waterhouse and Coopers & Lybrand, and the 2002 collapse of Arthur Andersen. These events reduced the Big 6 auditing firms from the beginning of our sample period to the current Big 4. For convenience, we refer to all firms from the original Big 6 as the Big 4.

[20] We find similar results when we use the raw values of earnings changes for the corresponding quarter of year t–1.

Kasznik and Lev 1995). Following Francis et al. (1994), we define litigation risk (*LITIGATE*) as an indicator variable that equals one for firms operating in the biotechnology (SIC 2833-2836; 8731-8734), computers (3570-3577; 7370-7374), electronics (3600-3674), and retailing (5200-5961) industries, and zero otherwise. Finally, we control for the occurrence of one-time or "unusual" events that may be correlated with both announcement timing and the decision to report pro forma earnings measures. We use special items (*SPECIAL_CHRG*) and restructuring charges (*RESTRUCT_CHRG*) to proxy for the occurrence of unusual events. *SPECIAL_CHRG* is coded one if the firm reports non-zero special items (Compustat quarterly data item 32) for the respective quarter, and zero otherwise. Similarly, *RESTRUCT_CHRG* is coded one if the firm reports non-zero restructuring-related charges (Compustat quarterly data items 257, 258, 259, or 260) for the quarter, and zero otherwise.

Descriptive Evidence

Panel A of Table 2 presents summary statistics of variables associated with the characteristics of the earnings announcement. While Table 1 is based on all pro forma quarterly observations for which we can calculate *DELAY*, Table 2 focuses on the 4,330 observations with available data for all our variables. The median, 25th percentile, and 75th percentile of *DELAY* for this sub-sample are identical to those reported for the pro forma quarters in Panel A of Table 1. However, the mean is slightly lower, −0.2236 in Panel A of Table 2 versus −0.2087 in Panel A of Table 1. For ease of interpretation, we present the unscaled forecast errors in Panel A. Consistent with Bhattacharya et al. (2003), we find that firms, on average, convert a negative GAAP and I/B/E/S earnings surprise into a positive pro forma earnings surprise. For instance, the mean (median) of $FE_{PROFORMA}$ is 0.0118 (0.0024), whereas the mean (median) of $FE_{GAAP\text{-}OP}$ is −0.1463 (−0.0449). Moreover, the differences in the magnitudes of the three forecast errors indicate that GAAP earnings measures are more conservative relative to pro forma measures.

[Insert Table 2 here]

Panel A also presents summary statistics for measures of the characteristics of adjusted earnings figures. The mean *TOTAL_EXCL* is 0.2861, indicating that the average difference between bottom-line GAAP earnings and the pro forma earnings figure announced by management is approximately 29 cents per share. We also present descriptive statistics of the various components of *TOTAL_EXCL* to illustrate the magnitude of both recurring and non-recurring exclusions. By definition, both below-the-line items

(*BELOWLINE_EXC*) and special items (*SPECIAL_EXC*) are generally one-time in nature. Their means are 0.0159 and 0.1122 per share, respectively. Managers frequently argue that they exclude primarily one-time items from earnings. However, these adjustments account for less than half (45%) of total exclusions, indicating that analysts and managers both exclude some recurring items from earnings as well. As depicted in Panel A, items excluded by both analysts and managers (*ANAL_EXCL*) amount to approximately 12 cents per share, on average; whereas incremental manager exclusions (*MGR_EXCL*), i.e., exclusions of recurring items beyond those excluded by analysts, amount to 4 cents per share, on average. These statistics indicate that the magnitude of recurring items excluded by managers is one-third higher than the magnitude of recurring items excluded by analysts.

Panel B provides descriptive statistics on management's strategic use of pro forma disclosures. The mean *PROFIRST* is 0.6406, suggesting that managers strategically place the pro forma number before the GAAP number in the press release approximately 64% of the time during our sample period. Furthermore, the mean *PROFIT*, 0.1023, indicates that approximately 10% of our sample reports a pro forma earnings profit when the GAAP operating earnings number is a loss. In addition, the mean *CONSENSUS*, 0.3219, suggests that 32% of our sample report a pro forma figure that meets or exceeds analyst expectations, while the corresponding GAAP operating earnings number falls short.

Panel C of Table 2 reports descriptive statistics for various factors associated with earnings announcement timing. We include these factors as a comprehensive set of control variables in our multivariate analyses, when testing the association between earnings announcement timing and potentially opportunistic pro forma reporting.

Univariate Comparisons

Several studies examine the effects of measurement error on inferences in the "GAAP versus Street earnings" literature (e.g., Bradshaw and Sloan 2002; Bradshaw 2003; Berger 2005; Abarbanell and Lehavy 2007; Cohen et al. 2007a). To avoid what is termed the "classic errors-in-variables" problem associated with using an earnings metric that is not adjusted for the same items as the earnings expectation, we employ the forecast error based on both the I/B/E/S earnings expectation and the I/B/E/S actual EPS figure, $FE_{I/B/E/S}$, in all our analyses. Even critics of pro forma reporting would agree that the exclusion of one-time (or some recurring) items results in an earnings measure that better portrays

sustainable core earnings relative to the standard GAAP measure. However, if recurring items are excluded, we expect that the exclusions on which analysts and managers agree (*ANAL_EXCL*) are less likely to be misleading to investors than managers' incremental exclusions (on which analysts disagree). Therefore, we argue that managers' incremental exclusions of recurring items (*MGR_EXCL*) are the set of exclusions that most likely reflects managers' opportunistic motives. Hence, in our analyses, we focus on *MGR_EXCL* after controlling for $FE_{I/B/E/S}$, which incorporates all other exclusions (Black and Christensen 2007).

Panel A of Table 3 presents univariate comparisons of our variables across categories of early (*DELAY* < 0), on-time (*DELAY* = 0), and late announcements (*DELAY* > 0). For ease of interpretation, we again present the unscaled I/B/E/S forecast error ($FE_{I/B/E/S}$).[21] Both parametric and nonparametric tests of differences between early and late announcements (see columns 5 and 6) indicate a positive and significant difference in $FE_{I/B/E/S}$ between these two groups. This result is consistent with the good news early hypothesis as argued in previous studies. Panel A also indicates that, relative to late announcers, early announcers are more likely to have a consecutive string of earnings increases (*STRING4UP*). Conversely, we find that late announcers tend to emphasize the pro forma number more often by placing it first in the press release (*PROFIRST*). In addition, late announcers have lower growth opportunities (*BOOKMKT*) and tend to undergo restructurings more frequently (*RESTRUCT_CHRG*). However, we find no significant difference in the level of incremental manager exclusions of recurring items between early and late announcers.

[Insert Table 3 here]

Given the broad classifications of early and late announcements in Panel A of Table 3, Panel B presents univariate comparisons of pro forma firm-quarters sorted by quintiles of *DELAY*. Quintile 1 represents the earliest reporting category; quintile 5 represents the latest reporting category. We note that the significant differences in Panel A are also significant in Panel B. We also find that late announcers are marginally more likely to use pro forma adjustments to convert a GAAP loss into a pro forma profit (*PROFIT*), and are more often audited by Big 4 auditors (*BIG4AUDIT*). In panel B, our most interesting result is that the level of manager exclusions of recurring items is significantly higher for quintile 1

[21] The univariate tests for differences using scaled forecast errors produce similar results.

relative to quintile 5. This result suggests that the acceleration of favorable pro forma news coincides with greater magnitudes of manager exclusions, consistent with the notion that managers strategically time the release of potentially opportunistic pro forma news (see RQ2).

Multivariate Analyses

The univariate analyses indicate that, in addition to the street earnings news ($FE_{I/B/E/S}$) and managers' incremental exclusions (*MGR_EXCL*), announcement timing is associated with strategic pro forma reporting decisions (*PROFIRST* and *PROFIT*) as well as other determinants of disclosure timing (especially *BOOKMKT*, *BIG4AUDIT*, *STRING4UP*, and *RESTRUCT_CHRG*). Therefore, to further investigate RQ2, we use the following multivariate model to estimate the association between announcement timing and manager exclusions, while controlling for street earnings news, strategic reporting decisions, and other determinants of announcement timing:

$$\begin{aligned} DELAY = {} & \alpha_0 + \alpha_1 FE_{I/B/E/S} + \alpha_2 MGR\_EXCL + \alpha_3 PROFIRST + \alpha_4 PROFIT + \alpha_5 CONSENSUS \\ & \alpha_6 LOSS + \alpha_7 BOOKMKT + \alpha_8 TOTASSET + \alpha_9 BIG4AUDIT + \alpha_{10} MEDIA\_COV \\ & \alpha_{11} STRING4UP + \alpha_{12} \%INSTHOLD + \alpha_{13} LITIGATE + \alpha_{14} SPECIAL\_CHRG \\ & \alpha_{15} RESTRUCT\_CHRG + \varepsilon \end{aligned} \quad (2)$$

As discussed above, we avoid the "errors-in-variables" problem by employing $FE_{I/B/E/S}$ (which is not biased by measurement error) as our measure of earnings news. After controlling for the unbiased earnings surprise, we use *MGR_EXCL* (scaled by closing price five days before the earnings announcement date) to estimate the association between announcement timing and managers' potential opportunism. That is, we examine the association between managers' strategic timing behavior and the magnitude of potentially misleading recurring item exclusions. Since *MGR_EXCL* equals $EPS_{PROFORMA}$ minus $EPS_{I/B/E/S}$, it is positive when $EPS_{PROFORMA}$ is greater than $EPS_{I/B/E/S}$. Accordingly, a significantly negative coefficient on *MGR_EXCL* (α_2) would indicate that pro forma announcement delay decreases with the magnitude of managers' incremental exclusions. In other words, firms with higher levels of recurring item exclusions tend to announce their pro forma earnings earlier than expected. Consistent with prior studies (e.g., Cheng et al. 1992; Bowen et al. 2005), we estimate our regressions using rank-transformed variables for the following reasons. First, rank regressions do not presume a particular functional form and allow us to relax the assumption of a linear relation between announcement timing

and pro forma earnings information. Second, as shown in Table 2, the distributions of several of our variables are highly skewed (especially *MGR_EXCL* and *MEDIA_COV*). Hence, the use of rank regressions mitigates potential biases arising from outlier observations. We rank all nondichotomous variables and use percentile ranks, i.e., [(*rank* − 1)/(*N* − 1)], so that all transformed variables range between zero and one.[22]

Table 4 presents the regression results for equation (2). The *t*-statistics (in parentheses) for this and all subsequent regressions are calculated using standard errors clustered by firm and fiscal-quarter to correct for general within-firm and time-series correlation patterns (see Petersen 2007).[23] In column 1, we exclude the control variables to focus on RQ2 in its simplest form: Is managers' strategic timing of earnings announcements associated with potentially opportunistic exclusions of recurring items after controlling for the street earnings surprise? The estimated coefficient on $FE_{I/B/E/S}$ is significantly negative (−0.1037, *t*-statistic = −5.49), suggesting that the better the earnings news, the earlier the earnings report. This result contrasts with prior research that finds little evidence of an association between good earnings news and reporting unexpectedly early. Interestingly, we find a significantly negative association between announcement timing and the size of manager exclusions. Since we use percentile ranks, the negative coefficient on *MGR_EXCL* (−0.0385, *t*-statistic = 2.22) indicates that a 100 percent increase in the size of manager exclusions results in a 3.9 percent incremental shift in the acceleration of announcement timing. Although this incremental effect seems small, the effect for the total pro forma earnings surprise indicates a significant shift in announcement timing given an increase in manager exclusions. Specifically, the coefficients on $FE_{I/B/E/S}$ and *MGR_EXCL* sum to a 14 percent shift in announcement acceleration ($\alpha_1 + \alpha_2 = -0.1422$) given a 100 percent increase in the pro forma earnings surprise. To gauge the economic significance of this result, note that a 14 percent decrease from the 25th percentile of *DELAY* is exactly 2 days early in our sample. The mean (unscaled) *MGR_EXCL* for 2 days early announcers is over

[22] Our main inferences are similar using unranked data. We also find similar results using logit regressions, where *DELAY* is converted to a dichotomous variable that equals one for early announcements (*DELAY* < 0), and zero otherwise. We choose to report the rank regression results since the dichotomous representation of *DELAY* has less information content.

[23] We also correct for cross-sectional correlation using fixed fiscal-quarter and industry effects. The industry effects are based on either three-digit SIC or the Fama and French (1997) industry classifications. The significance and direction of our estimated coefficients are similar to our reported results when we use these additional corrections.

4 cents per share versus 1 cent per share for 2-days late announcers.[24] This suggests that managers exclude an extra penny per share of recurring items for each additional day that earnings is released early.

[Insert Table 4 here]

Column 2 of Table 4 includes controls for (1) managers' strategic pro forma reporting decisions and (2) other determinants of earnings announcement timing. The inferences from the results in column 1 are unchanged. Although slightly weaker, we still find significantly negative coefficients on both $FE_{I/B/E/S}$ and *MGR_EXCL*. The results also indicate a significantly positive association between *PROFIRST* and announcement timing. This suggests that delayed announcements have a higher frequency of pro forma emphasis in the press release, and that managers tend to trade off between these two types of strategic emphasis. In other words, if managers delay the timing of pro forma earnings news, they tend to emphasize the pro forma figure in the press release (and vice versa). Among our other controls, we find that firms announce earnings systematically later if they have lower growth opportunities and engage in restructurings (as evidenced by significantly positive coefficients on *BOOKMKT* and *RESTRUCT_CHRG*). Finally, the significantly negative coefficient on *STRING4UP* indicates that firms with consecutive earnings increases are more likely to accelerate the timing of their earnings releases.[25, 26]

[24] The mean (unscaled) $FE_{I/B/E/S}$ is negative 1 cent per share and negative 3 cents per share, respectively, for 2-days early and 2-days late announcers. The differences in $FE_{I/B/E/S}$ and *MGR_EXCL* between these two groups are significant at the 10% level and higher.

[25] Untabulated results expanding equation (2) indicate that the coefficients on $FE_{I/B/E/S}$ and *MGR_EXCL* remain significantly negative after controlling for specific types of pro forma earnings adjustments. Moreover, we find an interesting result with respect to managers' exclusions of one-time gains. Prior research argues that managers who exclude transitory gains on the sale of assets are more altruistic in their adjustment decisions (e.g., Bhattacharya et al. 2003). We find a significantly negative coefficient on an indicator variable, which identifies those quarters in which managers exclude one-time gains on the sale of assets. This result suggests that for some firms, the acceleration of (altruistically motivated) pro forma news is a means of emphasizing core earnings.

[26] We investigate the robustness of our results in Table 4 by replicating these regressions on a sub-sample that includes a "within-sample" matched non-pro-forma quarter for each pro forma quarter in our sample. Specifically, we follow Bhattacharya et al. (2007, see footnote 35) and identify for each quarterly pro forma observation, a non-pro-forma quarter match for the same firm. We collect matched-sample quarterly data for all variables in equation (2). Since the matched non-pro-forma quarters do not contain pro forma adjustments in the earnings press releases, we code *MGR_EXCL*, *PROFIRST*, *PROFIT*, and *CONSENSUS* as zero for these firm-quarters. Our main inferences regarding $FE_{I/B/E/S}$ and *MGR_EXCL* remain unchanged when we replicate our regressions. Further, several additional control variables become significant, i.e, *PROFIT*, *BIG4AUDIT*, and *LITIGATE*, indicating that firms accelerate their earnings releases if they do not convert a GAAP loss to a pro forma profit, have low audit quality, and have high litigation risk. *PROFIRST* remains positive, but is no longer significant. Note that the inclusion of these matched non-pro-forma quarters diminishes the power of our tests because (1) our search string is imperfect and the "pro forma" variables for true pro forma quarters not identified by our search string would be systematically coded as zero, and (2) in non-pro-forma quarters, zero values of *MGR_EXCL*, *PROFIRST*, *PROFIT*, and *CONSENSUS* do not have the same interpretation as zero values in those quarters in which a firm voluntarily reports a pro forma earnings number but does *not* exclude incremental recurring items, place it before the GAAP number, or beat an earnings benchmark that would have been missed based on the GAAP number. Thus, we contend that these results confirm the robustness of our main inferences.

RQ3: Does Announcement Timing Affect Investors' Reaction to Manager Exclusions?

Contemporaneous Stock Returns

The results in Tables 3 and 4 suggest that managers who accelerate their pro forma announcements tend to exclude a higher level of recurring items from the reported pro forma figure. However, it is not clear whether these items are excluded in order to portray a more favorable performance measure (regardless of the information content) or to emphasize a more value-relevant "core" measure. To shed more light on this issue, we examine the contemporaneous market reaction to manager exclusions, *conditional* on the timing of the pro forma earnings announcement and after controlling for the I/B/E/S forecast error. We estimate this relation using the following returns model:

$$CAR = \beta_0 + \beta_1 FE_{I/B/E/S} + \beta_2 MGR\_EXCL + \beta_3 (EARLY \times FE_{I/B/E/S}) + \beta_4 (EARLY \times MGR\_EXCL) + \varepsilon, \quad (3)$$

where *CAR* is the cumulative size-adjusted abnormal return over the three-day window centered on the announcement date for quarter *q*, and *EARLY* is an indicator variable that equals one for unexpectedly early announcements (*DELAY* < 0), and zero for on-time or late announcements (*DELAY* ≥ 0). Size-adjusted returns are calculated as the firm-specific daily return minus the average daily return on the firm's size-decile benchmark portfolio. Both $FE_{I/B/E/S}$ and *MGR_EXCL* are scaled by closing stock price five days before the announcement date. Similar to our previous analyses, we use rank regressions and transform the continuous values of $FE_{I/B/E/S}$, *CAR,* and *MGR_EXCL* into percentile ranks.[27]

The coefficient on $FE_{I/B/E/S}$ (β_1) captures investors' response to the earnings surprise for on-time and late announcements, while the $EARLY \times FE_{I/B/E/S}$ interaction term estimates investors' incremental response to unexpectedly early street earnings news and thus, provides comparative evidence of the response to early good news. We employ an *F*-test to examine the null hypothesis that the total effect of $FE_{I/B/E/S}$ for early announcements is equal to zero (i.e., $\beta_1 + \beta_3 = 0$). Since *MGR_EXCL* is the difference between

[27] In addition to the reasons listed in the previous subsection for using rank regressions in our *DELAY* analyses, Freeman and Tse (1992) and Cheng et al. (1992) argue that there is non-linearity in the unexpected earnings (UE) – abnormal returns (AR) relation. Specifically, they contend that earnings surprises that are larger in magnitude frequently include larger transitory items. However, since investors respond more strongly to permanent versus transitory earnings, larger absolute surprises (either positive or negative) result in relatively smaller market reactions. While Freeman and Tse (1992) recommend an arctangent transformation of the data to correct for non-linearity, Cheng et al. (1992) find that a relative rank transformation of the data provides an excellent solution for the non-linearity in the UE-AR relation.

$EPS_{PROFORMA}$ and $EPS_{I/B/E/S}$, then β_2 indicates investors' response to incremental manager exclusions for on-time or late announcements. The interaction *EARLY* × *MGR_EXCL* captures investors' incremental response to manager exclusions for early announcements. We also conduct *F*-tests to examine the following null hypotheses: (1) that the total response to *MGR_EXCL* for early announcements is equal to zero ($\beta_2 + \beta_4 = 0$), and (2) that the incremental response to $FE_{I/B/E/S}$ is equal to the incremental response to *MGR_EXCL* for early announcements ($\beta_3 + \beta_4 = 0$).

Column 1 of Table 5 presents regression results for equation (3). The coefficients on $FE_{I/B/E/S}$ (β_1) and *MGR_EXCL* (β_2) are significantly positive. Taken together, these coefficients suggest that investors respond positively to the pro forma earnings surprise for on-time and late announcers. More importantly, β_2 indicates that investors respond positively to managers' recurring items exclusions when they are on-time or late (i.e., on average, they do not perceive these excluded items as being transitory). This result is consistent with Bhattacharya et al. (2007), who find a positive association between investors' abnormal net-buying activities and the level of incremental manager exclusions, as well as with Bowen et al. (2005) and Marques (2006), who document a positive market response to reconciling pro forma adjustments.[28] Furthermore, β_2 indicates that for on-time or late announcers, a 100 percent increase in the unexpected level of manager exclusions results in a 5.6 percent increase in abnormal stock returns. Based our sample distribution, a 5.6 percent increase from the median *CAR* is about 0.85 percent (or 85 basis points); therefore, this result appears to be economically significant.

[Insert Table 5 here]

In column 1, the estimated coefficient on *EARLY* × $FE_{I/B/E/S}$ is positive, but not significant at conventional levels. Thus, there is little evidence that investors respond more positively to good street earnings news when it is announced earlier than expected. This result is not surprising since our sample has a much lower percentage of announcements with good street earnings news relative to samples used in prior studies. For example, only 45% of our pro forma announcements contain positive street earnings news; whereas Bagnoli et al. (2002, Table 3) report that 65% of their announcements contain positive

[28] Bowen et al.'s (2005) definition of reconciling pro forma adjustments includes both analysts' and managers' recurring and special items exclusions. Marques' (2006) definition includes managers' recurring and special items exclusions.

news (based on First Call forecast errors). More importantly, the coefficient on *EARLY* × *MGR_EXCL* (β_4) suggests a significantly negative incremental response to managers' recurring item exclusions for early announcers. Specifically, β_4 indicates that accelerated announcements experience a 5.1 percent *lower* market response for every 100 percent increase in the level of manager exclusions. In addition, our *F*-tests indicate that the total response to manager exclusions for early announcers is not significantly different from zero ($\beta_2 + \beta_4 = 0.0049$; *F*-test: *p*-value = 0.8233). These results remain robust after controlling for other cross-sectional determinants of investors' response to earnings news such as firm size, book-to-market, and earnings momentum (see Section V for further details).[29]

Taken together, these results suggest that although managers strategically accelerate the release of positive pro forma news, investors attach less (or zero) weight to the recurring items that managers exclude to arrive at the pro forma figure. More importantly, these results suggest that, on average, investors perceive accelerated pro forma announcements to be opportunistic as opposed to conveying value-relevant information. These findings are also consistent with the argument that investors discount the information content of announcements with unexpectedly low perceived quality (Kim and Verrecchia 1991). Finally, our results suggests that investors are not necessarily misled by managers who attempt to strategically emphasize their pro forma news (which is inflated via incremental exclusions of recurring items) by disclosing it earlier than expected.

Future Stock Returns

While our market reaction results in column 1 of Table 5 suggest that investors adjust for managers' opportunistic behavior, it is still an open question whether this price adjustment is appropriate or complete. To address this issue, we examine the association between these same variables and future stock returns. For each firm observation, we calculate future cumulative size-adjusted returns, beginning two days after the earnings announcement date for quarter *q* and extending over the next one, two, three,

[29] Consistent with Doyle et al. (2003), we also control for the predictive value of analyst exclusions of recurring items. The results do not change when we include this additional control. We also find similar results after excluding or controlling for those observations with other corporate announcements (i.e., dividends and management forecasts of earnings) within ±5 days of the pro forma earnings announcement date. In addition, we re-estimate our returns models based on a sub-sample using only the earliest and latest quintiles. Our results are unchanged and again indicate that investors' response to early pro forma news diminishes with the level of manager exclusions.

or four quarters (i.e., quarter q+1 through to quarter q+4).[30] We then re-estimate equation (3) using abnormal returns over each future return interval as the dependent variable (i.e., CAR_{q+j}, where j = 1,…,4).

Columns 2 to 4 of Table 5 present regression results for each return interval. We do not find an association between future abnormal returns and manager exclusions for early announcers. That is, the coefficient on *EARLY* × *MGR_EXCL* is insignificant across the first three return intervals and is only marginally significant for the interval ending in quarter q+4. This result suggests that investors promptly adjust for the potentially misleading nature of accelerated pro forma news. Again, these findings are robust to controls for other determinants of the response to earnings news such as firm size, book-to-market, and earnings momentum. We also find some evidence of a negative future return to early street news. Specifically, the incremental future return to early street earnings news ($EARLY \times FE_{I/B/E/S}$) is negative for all return intervals; however, the total future return is only marginally significant for quarter q+1 ($\beta_1 + \beta_3 = -0.0361$; F-test: p-value = 0.09). Hence, this negative return reversal is short-term in nature. For on-time and late announcements, we find a positive association between future abnormal returns and both street earnings news (β_1) and managers' recurring item exclusions (β_2). Consistent with prior studies (e.g., Abarbanell and Bernard 1992; Doyle et al. 2006), this result suggests that investors underreact to both street earnings news and manager exclusions in on-time and late pro forma announcements. Moreover, this suggests that, on average, the information content of on-time and late pro forma releases have greater predictive value than anticipated by investors.

V. EXTENSIONS AND ROBUSTNESS TESTS

The Regulation of Pro Forma Reporting

Given concerns of the potential misuse of pro forma reporting, the December 2001 SEC cautionary advice and Section 401(b) of SOX (later implemented as Regulation G, approved January 2003) were issued with the goal of increasing the consistency and transparency of pro forma disclosures.[31]

[30] We eliminate firm observations with missing daily returns during the entire four-quarter future return window. This procedure allows us to better compare results across all future return windows. Our results do not change when we include these observations.

[31] Regulation G requires firms that disclose pro forma earnings figures to include in the press release the most directly comparable GAAP measure and to reconcile the pro forma figure to the GAAP measure (SEC 2003).

While recent studies document a decrease in the frequency and strategic use of pro forma reporting following regulatory intervention (Heflin and Hsu 2005; Kolev et al. 2007), there is mixed evidence on whether the market response to pro forma information has changed (Marques 2006; Yi 2007). Accordingly, we examine whether the regulation of pro forma reporting has had an impact on both the strategic timing of pro forma announcements as well as investors' response. We focus on the periods before and after the passage of SOX because SOX represents a more definitive regime shift in the regulation of pro forma reporting relative to the SEC cautionary advice. To conduct our analyses, we first divide our sample into two sub-samples—firm-quarters before the second calendar quarter of 2002 (1998 Q1 to 2002 Q1, pre-SOX) and those firm-quarters after the second calendar quarter of 2002 (2002 Q3 to 2003 Q4, post-SOX).[32] We then replicate our tests separately for the pre- and post-SOX sub-samples.

First, in untabulated results, we find that after SOX managers continue to announce earnings earlier in pro forma quarters relative to non-pro-forma quarters. Specifically, in the post-SOX period, the mean *DELAY* for pro forma quarters continues to be significantly lower than that for non-pro-forma quarters (*t*-statistic = −4.52; Wilcoxon rank sum *z*-statistic = −4.23). Further, multivariate regressions of equation (2) indicate no significant change in the association between announcement timing and incremental manager exclusions after SOX. Conversely, consistent with prior studies (e.g., Bowen et al. 2005), univariate tests indicate a significant post-SOX decrease in pro forma emphasis (*PROFIRST*) and the use of pro forma adjustments to convert a GAAP loss into a pro forma profit (*PROFIT*). We also note a significant decline in the frequency of pro forma reporting for our sample firms. That is, 48% of the firms that reported pro forma figures at least 3 times during the pre-SOX period (209 of 434 firms), stopped providing pro forma figures in the post-SOX period. These results suggest that although regulatory intervention has decreased the frequency and, to some extent, the strategic use of pro forma earnings, it has had no effect on the strategic timing of announcements containing pro forma earnings measures. However, this is not surprising since SOX (and later Reg G) does not address the deliberate timing of pro forma releases; rather, it explicitly addresses the placement of the pro forma figure in the press release and its reconciliation to the audited GAAP number.

[32] SOX was passed into law on July 30, 2002. However, the potential contents of the final bill (which combined the Oxley and Sarbanes bills) were publicly available as of the second quarter of 2002.

Table 6 investigates whether investors' response to manager exclusions, conditional on announcement timing, has changed following SOX. Columns 1 and 2 present regression results for equation (3) in the pre- and post-SOX periods, respectively. For on-time and late announcers, we find a marginal increase in investors' response to incremental manager exclusions (β_2) after SOX. Interestingly, we find a significant shift in the weight placed on managers' incremental exclusions for accelerated pro forma announcements. Specifically, the coefficient on $EARLY \times MGR\_EXCL$ (β_4) is significantly *lower* in the post-SOX period relative to the pre-SOX period (–0.1373 versus –0.0283; *F*-test: *p*-value = 0.00). In other words, investors appear to "punish" early pro forma announcements, which contain potentially opportunistic exclusions, to a much greater extent after SOX. This result is consistent with Marques (2006) who also finds a significantly negative response to manager adjustments following the approval of Reg G. In untabulated results, we again find no significant association between future abnormal returns and early pro forma news in the pre- versus post-SOX periods. Overall, these findings suggest that, although regulatory intervention has had no effect on the acceleration of "good" pro forma news, the intervention has increased investors' ability to see through or adjust for managers' opportunistic behavior. Moreover, these results suggest that our previous result of a negative response to early pro forma news is attributable largely to the regulation of pro forma reporting.

[Insert Table 6 here]

Matched sample, multivariate analyses

As discussed previously (see footnote 27), we find similar results for RQ2 using a matched control sample of non-pro-forma quarters for the same firm. In our matching procedure, we identify the closest non-pro-forma quarter for the same firm in a different year (by alternating back one year and then forward one year until we identify a non-pro-forma quarter). Using this same matched sample, we also replicate our analyses for RQ1 in a multivariate setting. Specifically, we re-estimate equation (2), with an additional indicator variable, *PROFORMA*, that is coded one for pro forma quarters and zero for non-pro-forma quarters. Our results (not tabulated) indicate a significantly negative coefficient on *PROFORMA* (–0.0373, *t*-statistic = –2.98) after controlling for the street earnings surprise, manager exclusions, strategic motives for pro forma reporting, and other determinants of announcement timing. Hence, this

result provides robust evidence that managers accelerate their earnings announcements when they report pro forma earnings versus when they do not.

Alternative Measures of Reporting Lag (*DELAY*)

Our definition of *DELAY* uses the actual reporting lag (in trading days) for the same quarter of the previous year as a proxy for the current quarter's expected reporting lag. This approach potentially introduces measurement error in our analyses. To investigate whether our results are sensitive to this approach, we re-define *DELAY* using four alternative time-series proxies for the expected reporting lag based on prior research. Following Cohen et al (2007b, Appendix A), the first measure uses the integer value of the median reporting lag for each firm over all six sample years (1998–2003) as a proxy for the expected reporting lag. As argued by Cohen et al. (2007b), this approach attempts to estimate a firm's "normal" reporting strategy based on a window of past and future actual reporting lags. Our second measure defines the expected reporting lag as the integer median lag for the past four years, scaled by the time-series standard deviation of the lag over the past four years. The third and fourth measures define the expected reporting lag as the integer mean and median announcement lag, respectively, for the prior four years. Results using all four alternative measures (not tabulated) are consistent with our main inferences.

Differential Effects of Cross-sectional Determinants on Stock Market Reaction

Prior studies document that investors' response to earnings news varies with firm size, book-to-market, earnings momentum, media coverage, the level of institutional ownership, the occurrence of losses and audit quality (see e.g., Barber and Odean 2005; Barth et al. 1999; Collins and Kothari 1989; El-Gazzar 1998; Hayn 1995; Teoh and Wong 1993). Bowen et al. (2005) also find that the response to pro forma news increases with pro forma emphasis in the press release. Moreover, our results indicate that these cross-sectional determinants are also correlated with announcement timing (especially pro forma emphasis, firm size, book-to-market, and earnings momentum). Hence, failure to control for these factors could induce self-selection biases in our market reaction tests (Healy and Palepu 2001). To address this concern, we re-estimate our contemporaneous and future returns regressions, while controlling for the incremental effects of *PROFIRST*, *TOTASSET*, *BOOKMKT*, *MEDIA_COV*, *STRING4UP, %INSTHOLD*, *BIG4AUDIT*, and *GAAP_LOSS* on the response to street earnings news ($FE_{I/B/E/S}$) and incremental manager exclusions (*MGR_EXCL*). *GAAP_LOSS* equals one if $EPS_{GAAP\text{-}BXI}$ is negative, and zero otherwise; all other variables

are defined in Section IV. Untabulated results are similar to our previous findings. Thus, our market reaction results are not sensitive to the exclusion of other cross-sectional determinants.

Alternatively, we control for potential self-selection in firms' announcement timing choices using the Heckman (1979) two-step estimation procedure. First, we estimate a probit model similar to equation (2), except here we use the binary *EARLY* indicator as the dependent variable. Second, we re-estimate our contemporaneous and future returns regressions while including the inverse of the Mills ratio (lambda). Untabulated results show no presence of self-selection (i.e., lambda is insignificant). Our findings and their interpretations are again similar to those reported previously.

VI. CONCLUSION

Recent research suggests that managers are "strategic" in their pro forma reporting decisions, but provides mixed evidence as to whether these strategic reporting decisions reflect managers' opportunistic or altruistic motives. This study examines another tool that managers use to influence investors' response to pro forma news—the strategic timing of pro forma earnings announcements. Specifically, we investigate whether managers strategically accelerate or delay the announcement of pro forma earnings news, relative to the expected earnings announcement date. In addition, we explore whether firms' pro forma announcement timing is associated with the magnitude of recurring items that managers exclude to arrive at the pro forma figure. Finally, we investigate whether announcement timing affects the market reaction to managers' recurring items exclusions, and thus whether investors perceive the content of strategically timed pro forma announcements as value-relevant or opportunistic.

Our results suggest that managers do accelerate the timing of their earnings announcements in quarters in which they disclose pro forma earnings information relative to quarters in which they do not. In addition, we find that the acceleration of pro forma announcements increases with the size of recurring item exclusions. This result contrasts with prior studies which find weak evidence of an association between early announcements and good earnings news. Moreover, this evidence is consistent with the notion that managers strategically accelerate positive pro forma news, which contains potentially opportunistic exclusions. Finally, our results suggest that, although managers strategically accelerate the release of positive pro forma news, investors discount managers' recurring item exclusions. This suggests

that, in the presence of strategic timing behavior, investors view managers' exclusions of recurring items as opportunistic rather than conveying value-relevant core information, and hence, that investors are not misled by managers' attempts to emphasize pro forma news by disclosing it earlier than expected. Additional analysis shows that this negative response is largely due to the regulation of pro forma reporting in the post-SOX period. Thus, regulatory requirements may have increased investors' ability to recognize and adjust for at least one of managers' deliberate means of altering investor perceptions, namely, the strategic timing of pro forma earnings announcements.

These results have important implications for regulators who have expressed continued concern that managers use their discretion in reporting pro forma earnings information to mislead investors. In addition, these results have implications for those interested in the impact of regulatory intervention into the use of pro forma disclosures. While investors, on average, appear to discount pro forma earnings information that is emphasized through early disclosure (especially when managers exclude high levels of recurring items), it is possible that some investors may be misled. For example, recent experimental and archival evidence indicates that less-sophisticated (but not more-sophisticated) investors may be misled by pro forma earnings information (Frederickson and Miller 2004; Elliott 2006; Bhattacharya et al. 2007; Allee et al. 2007).

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TABLE 1

**Statistical Comparisons of Earnings Announcement Timing (*DELAY)*
across Pro Forma and Non-Pro-Forma Quarters**

DELAY	All Quarters	Pro Forma Quarters	Non-Pro-Forma Quarters	Difference in Means	*t* -statistic	Wilcoxon *z* -statistic
Panel A: Full Sample						
Mean	0.0943	-0.2087	0.1495	-0.3582	(-4.71)***	(-1.98)**
Median	0.0000	0.0000	0.0000			
Std Dev	4.9959	4.7878	5.0310			
25th Percentile	-2.0000	-2.0000	-2.0000			
75th Percentile	2.0000	2.0000	2.0000			
No. of Announcements	30,946	4,768	26,178			
Panel B: Prior year quarter is a pro forma quarter						
Mean	0.6140	0.0847	0.8535	-0.7688	(-6.14)***	(-3.68)***
Median	0.0000	0.0000	0.0000			
Std Dev	4.2714	3.2920	4.6279			
25th Percentile	-1.0000	-1.0000	-1.0000			
75th Percentile	2.0000	1.0000	3.0000			
No. of Announcements	4,205	1,310	2,895			
Panel C: Prior year quarter is a non-pro-forma quarter						
Mean	0.1073	-0.3135	0.1799	-0.4934	(-4.77)***	(-2.71)**
Median	0.0000	0.0000	0.0000			
Std Dev	5.2392	5.3591	5.2149			
25th Percentile	-2.0000	-2.0000	-2.0000			
75th Percentile	2.0000	2.0000	2.0000			
No. of Announcements	21,231	3,126	18,105			

* significant at 10%; ** significant at 5%; *** significant at 1%

TABLE 2
Summary Statistics of Firms that Voluntarily Disclose Pro Forma Earnings Numbers in Quarterly Earnings Press Releases (1998-2003) [1]

Panel A: Characteristics of the Earnings Announcement				
	25th Percentile	Mean	Median	75th Percentile
DELAY	-2.0000	-0.2236	0.0000	2.0000
$FE_{GAAP\text{-}OP}$	0.1524	-0.1463	-0.0449	0.0078
$FE_{I/B/E/S}$	0.0556	-0.0258	-0.0050	0.0225
$FE_{PROFORMA}$	-0.0440	0.0118	0.0024	0.0448
TOTAL_EXCL	0.0200	0.2861	0.0800	0.2600
BELOWLINE_EXC	0.0000	0.0159	0.0000	0.0000
SPECIAL_EXC	-0.0019	0.1122	0.0072	0.0757
ANAL_EXCL	-0.0001	0.1205	0.0173	0.0900
MGR_EXCL	0.0000	0.0376	0.0000	0.0000
Panel B: Strategic Emphasis and Use of Pro Forma Reporting				
	25th Percentile	Mean	Median	75th Percentile
PROFIRST	0.0000	0.6406	1.0000	1.0000
PROFIT	0.0000	0.1023	0.0000	0.0000
CONSENSUS	0.0000	0.3219	0.0000	1.0000
Panel C: Determinants of Earnings Announcement Timing				
	25th Percentile	Mean	Median	75th Percentile
LOSS	0.0000	0.2164	0.0000	0.0000
BOOKMKT	0.3447	0.8096	0.5723	1.0277
TOTASSET	235.5000	6699.4400	797.6430	2712.8000
BIG4AUDIT	1.0000	0.8679	1.0000	1.0000
MEDIA_COV	0.0000	27.6469	2.0000	12.0000
STRING4UP	0.0000	0.1894	0.0000	0.0000
%INSTHOLD	0.2640	0.4824	0.5114	0.7087
LITIGATE	0.0000	0.4963	0.0000	1.0000
RESTRUCT_CHRG	0.0000	0.1684	0.0000	0.0000
SPECIAL_CHRG	0.0000	0.0868	0.0000	0.0000

[1] Based on 4,330 pro forma earnings announcements for 1,534 unique firms.

DELAY = number of trading days between the fiscal quarter end date and the earnings annnouncement date (EAD_LAG) minus the EAD_LAG

$FE_{GAAP\text{-}OP}$ = forecast error calculated as Compustat diluted operating EPS minus the I/B/E/S mean forecast.

$FE_{I/B/E/S}$ = forecast error calculated as I/B/E/S actual EPS minus the I/B/E/S mean forecast.

$FE_{PROFORMA}$ = forecast error calculated as managers' adjusted-GAAP EPS minus the I/B/E/S mean forecast.

TOTAL_EXCL = total exclusions per share calculated as managers' adjusted-GAAP EPS minus Compustat diluted operating EPS ($EPS_{GAAP\text{-}OP}$).

BELOWLINE_EXC = below-the-line items per share calculated as Compustat diluted EPS after extraordinary items ($EPS_{GAAP\text{-}EXI}$) minus Compustat diluted EPS before extraordinary items ($EPS_{GAAP\text{-}BXI}$).

SPECIAL_EXC = special items exclusions per share calculated as $EPS_{GAAP\text{-}OP}$ minus $EPS_{GAAP\text{-}BXI}$.

ANAL_EXCL = analysts' exclusions of recurring items per share calculated as the I/B/E/S unadjusted actual EPS minus $EPS_{GAAP\text{-}OP}$.

MGR_EXCL = managers' incremental exclusions of recurring items per share calculated as managers' adjusted-GAAP EPS minus the I/B/E/S unadjusted actual EPS.

PROFIRST = "1" if the pro forma number is reported first in the press release; "0" otherwise.

PROFIT = "1" if the pro forma adjustments turned a GAAP loss into a pro forma profit; "0" otherwise.

CONSENSUS = "1" if the pro forma number meets or beats the current mean analyst forecast; "0" otherwise.

LOSS = "1" if a firm has reported losses for four consecutive quarters: "0" otherwise.

BOOKMKT = the ratio of book to market value of equity at the beginning of the quarter.

TOTASSET = total assets in $ millions at the end of the previous quarter.

BIG4AUDIT = "1" if firm is audited by a Big 4 audit firm; "0" otherwise.

MEDIA_COV = the number of press articles, during the 12 months prior to the end of quarter *t* , in which the firm is mentioned in the headline or lead paragraph from the following major press sources: *The New York Times* , *USA Today* , *Financial Times* , *The Washington Post* , and *The Wall Street Journal* .

STRING4UP = "1" if earnings increased in the previous four quarters, and 0 otherwise. Changes in quarterly earnings are calculated as EPS_{GAAP_BXI} in the current quarter of year *t* minus EPS_{GAAP_BXI} the same quarter of year *t* –1, scaled by the time-series standard deviation of earnings changes over the previous eight quarters.

%INSTHOLD = the percentage of shares owned by institutional investors reported in the Thomson's Financial CDA/Spectrum 13f institutional holdings database for the closest calendar quarter.

LITIGATE = "1" for firms operating in the biotechnology (SIC 2833-2836; 8731-8734), computers (3570-3577; 7370-7374), electronics (3600-3674), and retailing (5200-5961) industries; 0 otherwise.

SPECIAL_CHRG = "1" if firm reports non-zero special item charges (Compustat quarterly data item 32); "0" otherwise.

RESTRUCT_CHRG = "1" if firm reports non-zero restructuring-related charges (Compustat quarterly data items 257, 258, 259, or 260); "0" otherwise.

TABLE 3

Univariate Comparisons Across *DELAY* Categories[1]

Panel A: Summary statistics for early, on-time, and late earnings announcements

	Early (*DELAY* < 0)	On-time (*DELAY* = 0)	Late (*DELAY* > 0)	Early minus Late	*t* -statistics	Wilcoxon *z* -statistics
	(1)	(2)	(3)	(4)	(5)	(6)
$FE_{I/B/E/S}$	-0.0164	-0.0232	-0.0383	0.0219	(3.00)***	(6.03)***
MGR_EXCL	0.0413	0.0319	0.0360	0.0053	(0.65)	(0.74)
PROFIRST	0.6214	0.6189	0.6746	-0.0531	(-3.30)***	(-3.28)***
PROFIT	0.0941	0.1071	0.1097	-0.0156	(-1.52)	(-1.53)
CONSENSUS	0.3219	0.3300	0.3180	0.0039	(-0.25)	(-0.25)
LOSS	0.2106	0.2391	0.2120	-0.0014	(-0.10)	(-0.10)
BOOKMKT	0.5631	0.6298	0.6430	-0.0798	(-3.53)***	(-4.60)***
TOTASSET	6825.1290	6247.4290	6775.0410	50.0880	(0.05)	(0.46)
BIG4AUDIT	0.8601	0.8605	0.8809	-0.0208	(-1.84)*	(-1.83)*
MEDIA_COV	26.7676	27.3288	28.8604	-2.0928	(-0.53)	(-1.54)
STRING4UP	0.2184	0.1843	0.1571	0.0613	(4.68)***	(4.615)***
%INSTHOLD	0.4864	0.4931	0.4722	0.0142	(1.47)	(1.71)*
LITIGATE	0.4909	0.5205	0.4906	0.0003	(0.01)	(0.01)
SPECIAL_CHRG	0.0879	0.0872	0.0854	0.0025	(0.26)	(0.26)
RESTRUCT_CHRG	0.1368	0.1993	0.1908	-0.0540	(-4.30)***	(-4.34)***
No. of Announcements	1,923	803	1604			
No. of Firms	1,038	540	923			

Panel B: Summary statistics based on quintiles of *DELAY*

	Quintile 1 (Earliest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (Latest)	Quintile 1 minus Quintile 5	*t* -statistics	Wilcoxon *z* -statistics
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$FE_{I/B/E/S}$	-0.0170	-0.0154	-0.0232	-0.0344	-0.0443	0.0273	(3.29)***	(5.48)***
MGR_EXCL	0.0450	0.0352	0.0319	0.0357	0.0365	0.0085	(0.76)	(2.13)**
PROFIRST	0.6374	0.5950	0.6189	0.6684	0.6840	-0.0465	(-2.01)**	(-1.99)**
PROFIT	0.0994	0.0854	0.1071	0.0992	0.1258	-0.0264	(-1.67)*	(-1.73)*
CONSENSUS	0.3275	0.3127	0.3300	0.3130	0.3255	0.0020	(0.09)	(0.09)
LOSS	0.2289	0.1804	0.2391	0.1932	0.2406	-0.0117	(-0.56)	(-0.56)
BOOKMKT	0.5787	0.5375	0.6298	0.6198	0.6782	-0.0996	(-3.08)***	(-4.67)***
TOTASSET	5553.9550	8920.9920	6247.4290	6886.6750	6605.1330	-1051.1780	(-0.72)	(-0.75)
BIG4AUDIT	0.8613	0.8581	0.8605	0.8636	0.9072	-0.0459	(-3.01)***	(-2.85)***
MEDIA_COV	24.5731	30.3857	27.3288	28.7190	29.0755	-4.5024	(-0.76)	(-0.71)
STRING4UP	0.2097	0.2328	0.1843	0.1622	0.1493	0.0604	(3.28)***	(3.14)***
%INSTHOLD	0.4597	0.5302	0.4931	0.4818	0.4575	0.0022	(0.15)	(0.43)
LITIGATE	0.4896	0.4931	0.5205	0.4866	0.4969	-0.0073	(-0.30)	(-0.30)
SPECIAL_CHRG	0.0810	0.0992	0.0872	0.0857	0.0849	-0.0039	(-0.29)	(-0.29)
RESTRUCT_CHRG	0.1103	0.1804	0.1993	0.1839	0.2013	-0.0910	(-4.97)***	(-5.31)***
No. of Announcements	1,197	726	803	968	636			
No. of Firms	780	513	540	665	463			

[1]All variables are defined in Table 2

* significant at 10%; ** significant at 5%; *** significant at 1%

TABLE 4

Relative Rank Regressions of Factors Associated with the Timing of Pro Forma Earnings Announcements

Variable[1]	Parameter	Regression Model[2]	
		(1)	(2)
Intercept	α_0	0.5711 (25.55)***	0.4985 (21.35)***
$FE_{I/B/E/S}$	α_1	-0.1037 (-5.49)***	-0.0810 (-5.01)***
MGR_EXCL	α_2	-0.0385 (-2.22)**	-0.0348 (-1.80)*
PROFIRST	α_3		0.0218 (2.04)**
PROFIT	α_4		0.0242 (1.38)
CONSENSUS	α_5		-0.0021 (-0.20)
LOSS	α_6		-0.0173 (-1.12)
BOOKMKT	α_7		0.0580 (3.75)***
TOTASSET	α_8		0.0484 (1.57)
BIG4AUDIT	α_9		0.0160 (0.97)
MEDIA_COV	α_{10}		-0.0324 (-1.33)
STRING4UP	α_{11}		-0.0256 (-2.78)***
%INSTHOLD	α_{12}		-0.0079 (-0.44)
LITIGATE	α_{13}		-0.0049 (-0.44)
SPECIAL_CHRG	α_{14}		0.0018 (0.14)
RESTRUCT_CHRG	α_{15}		0.0450 (2.93)***
Adjusted R-squared		1.10%	2.07%
No. of announcements		4,330	4,330

[1]All variables are defined in Table 2

[2]Robust *t*-statistics clustered by firm and fiscal-quarter are in parentheses.

* significant at 10%; ** significant at 5%; *** significant at 1%

TABLE 5

Relative Rank Regressions of the Effect of Early Reporting on Market Reactions to Pro Forma Earnings News

		Regression Model[1]				
		Contemporaneous Abnormal Returns	Cumulative abnormal returns from 2 days after quarter q earnings announcement date to the end of quarter $q+j$, where j = (1,…,4)			
Variable	Parameter	Quarter q	Quarter q+1	Quarter q+2	Quarter q+3	Quarter q+4
		(1)	(2)	(3)	(4)	(5)
Intercept	β_0	0.4129 (33.15)***	0.4794 (14.10)***	0.4628 (13.43)***	0.4398 (10.82)***	0.4225 (9.61)***
$FE_{I/B/E/S}$	β_1	0.1238 (5.76)***	0.0013 (0.06)	0.0110 (0.56)	0.0250 (1.02)	0.0398 (1.26)
MGR_EXCL	β_2	0.0558 (2.52)**	0.0476 (1.39)	0.0751 (1.77)*	0.1107 (2.43)**	0.1216 (2.61)***
$EARLY \times FE_{I/B/E/S}$	β_3	0.0365 (1.56)	-0.0372 (-1.59)	-0.0457 (-2.01)**	-0.0515 (-2.45)**	-0.0509 (-2.27)**
$EARLY \times MGR\_EXCL$	β_4	-0.0509 (-2.72)***	0.0222 (0.96)	0.0220 (1.05)	0.0201 (1.04)	0.0397 (1.77)*
Adjusted-R^2		1.93%	0.20%	0.47%	0.94%	1.22%
No. of announcements		4,330	4,169	4,169	4,169	4,169
				F-tests		
		H_o: $\beta_1 + \beta_3 = 0$ 59.41***	H_o: $\beta_1 + \beta_3 = 0$ 2.83*	H_o: $\beta_1 + \beta_3 = 0$ 2.65	H_o: $\beta_1 + \beta_3 = 0$ 1.52	H_o: $\beta_1 + \beta_3 = 0$ 0.27
		H_o: $\beta_2 + \beta_4 = 0$ 0.05	H_o: $\beta_2 + \beta_4 = 0$ 9.95***	H_o: $\beta_2 + \beta_4 = 0$ 18.78***	H_o: $\beta_2 + \beta_4 = 0$ 31.38***	H_o: $\beta_2 + \beta_4 = 0$ 46.74***
		H_o: $\beta_3 + \beta_4 = 0$ 6.37**	H_o: $\beta_3 + \beta_4 = 0$ 1.60	H_o: $\beta_3 + \beta_4 = 0$ 2.06	H_o: $\beta_3 + \beta_4 = 0$ 2.22	H_o: $\beta_3 + \beta_4 = 0$ 3.51*

[1]Robust *t*-statistics clustered by firm and fiscal-quarter are in parentheses.

* significant at 10%; ** significant at 5%; *** significant at 1%

$FE_{I/B/E/S}$ = forecast error calculated as I/B/E/S actual EPS minus the I/B/E/S mean forecast, , scaled by closing stock price 5 days before the earnings announcement date.

MGR_EXCL = managers' incremental exclusions of recurring items per share calculated as managers' adjusted-GAAP EPS minus the I/B/E/S unadjusted actual EPS, , scaled by closing stock price 5 days before the earnings announcement date.

EARLY = "1" if the number of trading days between the fiscal quarter end date and the earnings annnouncement date (*EAD_LAG*) minus the *EAD_LAG* for quarter q of year t-1 is negative (i.e., $DELAY < 0$); "0" otherwise. Negative values indicate that earnings are announced earlier than expected.

TABLE 6

Relative Rank Regressions of Market Reactions to Pro Forma Earnings News in the Pre- and Post-SOX Periods

Variable	Parameter	Regression Model[1] Pre-SOX [1998 Q1 - 2002 Q1]	Regression Model[1] Post-SOX [2002 Q3 - 2003 Q4]	Differences in Coefficients *F*-tests in parentheses
		(1)	(2)	(3)
Intercept	β_0	0.4065 (24.60)***	0.4408 (18.81)***	0.0343 (789.73)***
$FE_{I/B/E/S}$	β_1	0.1580 (7.55)***	0.0337 (0.66)	-0.1243 (19.23)***
MGR_EXCL	β_2	0.0528 (1.79)*	0.0540 (1.90)*	0.0012 (5.33)**
$EARLY \times FE_{I/B/E/S}$	β_3	-0.0088 (-0.34)	0.1608 (4.05)***	0.1696 (8.12)***
EARLY × *MGR_EXCL*	β_4	-0.0283 (-1.55)	-0.1373 (-2.91)***	-0.1090 (8.97)***
Adjusted R-squared		2.15%	2.10%	
No. of announcements		3,045	1,037	
		F-tests		
		H_o: $\beta_1 + \beta_3 = 0$ 31.80***	H_o: $\beta_1 + \beta_3 = 0$ 26.44***	
		H_o: $\beta_2 + \beta_4 = 0$ 0.83	H_o: $\beta_2 + \beta_4 = 0$ 4.48**	
		H_o: $\beta_3 + \beta_4 = 0$ 0.11	H_o: $\beta_3 + \beta_4 = 0$ 12.37***	

[1]Robust *t*-statistics clustered by firm and fiscal-quarter are in parentheses.

* significant at 10%; ** significant at 5%; *** significant at 1%

$FE_{I/B/E/S}$ = forecast error calculated as I/B/E/S actual EPS minus the I/B/E/S mean forecast, scaled by closing stock price 5 days before the earnings announcement date.

MGR_EXCL = managers' incremental exclusions of recurring items per share calculated as managers' adjusted-GAAP EPS minus the I/B/E/S unadjusted actual EPS, scaled by closing stock price 5 days before the earnings announcement date.

EARLY = "1" if the number of trading days between the fiscal quarter end date and the earnings annnouncement date (*EAD_LAG*) minus the *EAD_LAG* for quarter q of year t-1 is negative (i.e., *DELAY* < 0); "0" otherwise. Negative values indicate that earnings are announced earlier than expected.