The Strategic Timing of Management Earnings Forecasts Around Scheduled Releases of Macroeconomic News

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Abstract

We find that managers strategically time their bad news forecasts around scheduled releases of macroeconomic news. Specifically, we find a significant increase in the frequency of bad news forecasts on days with scheduled releases of the *Federal Funds Rate* by the FOMC and the *Employment Situation Summary* by the Bureau of Labor Statistics releases. This finding is unique to bad news forecasts; there is no evidence for a similar increase in the frequency of good news forecasts. We also find that the strategic timing of bad news forecasts is greater for firms with higher ex-ante shareholders' litigation risk and with a greater magnitude of forecast surprise, but smaller when managers have self-interested incentives to make their bad news disclosures more, rather than less, transparent. However, despite this disclosure strategy, our stock-price-based tests provide no evidence for investor inattention to firm-specific disclosures on days with macroeconomic news releases. Specifically, we find no difference in either the immediate or delayed stock price reaction between forecasts issued concurrently with macroeconomic news releases and those issued at other times. These results are robust to controlling for the effect of a potential self-selection bias, and to using other proxies for days with a potentially more limited attention to firm-specific announcements. One interpretation of our findings is that the strategic timing behavior we document is motivated by reasons other than to alter the stock price response. In particular, the commingling of stock price effects related to the contemporaneous release of bad news forecasts and macroeconomic news can help mitigate the expected litigation cost related to the firm's adverse announcement. A second, alternative interpretation is that managers overestimate the level of market inefficiency with respect to the processing of their firms' information disclosures. Either way, our findings cast some doubt on the notion that investor inattention plays a significant role in the processing of firm disclosures, at least in the context of management earnings forecasts.

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1. Introduction

The extant literature on corporate disclosure policies suggest the issuance of management earnings forecasts serves as an important source of information for capital market participants. Given the value-relevance of management forecasts and the discretion in deciding whether and when to makes these disclosures, it is surprising how little we know about the determinants of the disclosure timing choice and how it might affect stock price patterns within the reporting period. Our objective is to investigate the timing of management earnings forecasts as a strategic choice variable. Specifically, we investigate the timing of management forecasts – particularly those containing bad news – around scheduled releases of macroeconomic news, such as the *Employment Situation Summary* by the Bureau of Labor Statistics and the *Federal Funds Rate* by the Federal Open Market Committee (FOMC).

Findings in the prior literature suggest management forecasts containing bad news are more frequent than those containing good news, and the likelihood of an earnings warning increases with the magnitude of the surprise (Kasznik and Lev [1995]). These findings prompted researchers to hypothesize that managers issue earnings warnings as a means of reducing the expected litigation cost associated with the imminent release of adverse earnings news (Skinner [1994]; Field et al. [2005]). Expected litigation cost is likely higher when (i) investors believe managers withheld adverse earnings information, and (ii) there is a large and abrupt stock price decline. Thus, the issuance of forecasts containing bad news provides managers with some (albeit not full) protection against claims that they withheld adverse material information from investors. At the same time, managers have an incentive to mitigate the expected litigation cost

associated with the negative price reaction to the announcement. Thus, we hypothesize that managers strategically time the issuance of bad news forecasts such that it coincides with the scheduled release of major macroeconomic news.[1] There are two potential motivations to this hypothesis. The first stems from the growing literature on investor inattention. Although asset pricing models are based on the assumption that markets immediately incorporate new information and therefore provide the best possible estimate of asset values, some argue that such level of information efficiency requires "attentive" market participants. Several recent studies investigate whether investor attention plays a role in determining stock prices in the context of mandatory earnings announcements, but provide mixed evidence (DellaVigna and Pollet [2009]; Doyle and Magilke [2009]; Michaeli et al. [2013]; deHaan et al. [2014]). To the extent managers believe that issuing bad news forecasts on limited attention days leads to a more gradual incorporation of the adverse information into their firm's stock price, they might have an incentive to time bad news forecasts such that they occur when investor attention to firm-specific announcements is more limited. Given the mixed evidence in the prior literature on investor inattention in the context of earnings announcements, it is important to note that whether or not investor attention plays a role in determining asset prices, managers may still believe such information inefficiency does exist, and will strategically time their forecasts accordingly.

The second motivation stems from the notion that macroeconomic news releases often are associated with increased stock price volatility (Nofsinger and Prucyk [2003]). Thus, an announcement by the FOMC of changes to interest rate or an announcement by the Bureau of Labor Statistics of updated employment numbers can move stock prices upward or downward,

[1] The extent to which Rule 10b-5 requires managers to disclose prospective information has been the subject of numerous court cases and clarifying statements from the SEC (see Trueman [1997] for a discussion). Generally, it has been established that management is not legally required to disclose internally generated forecasts, unless that information is needed to update or correct a prior announcement that may be relied upon by market participants. Nonetheless, many managers believe warning investors in advance of disappointing earnings can deter litigation.

making it difficult for investors to discern the incremental effect of firm-specific disclosures. [2] When a bad news forecast is issued concurrently with positive macroeconomic news, the firm's stock return on that day may be less negative, potentially reducing expected litigation costs (to the extent that raw – rather than abnormal – return is the trigger for securities litigation). Similarly, when a bad news forecast is issued concurrently with adverse macroeconomic news, the negative market-wide reaction can help provide a plausible defense for the firm, arguing that the firm's negative stock return is attributable to overall market movements. This motivation – unlike the one based on investor attention - does not rely on the notion of market inefficiency in processing firms' disclosures. On the contrary, investors are presumed to be attentive to all firm-specific and market-wide announcements, but the commingling of stock price effects related to the contemporaneous release of management bad news forecasts and macroeconomic news can help mitigate the potential litigation cost.

We consider both motivations as non-mutually exclusive, and take an agnostic view of market efficiency with respect to the processing of corporate disclosures. Yet, in subsequent tests we investigate the stock price reaction to bad news forecasts, and how this reaction varies depending on whether or not the forecast was issued concurrently with the scheduled release of major macroeconomic news. This analysis may help distinguish between the two motivations for the hypothesized strategic timing of management earnings forecasts.

Our first set of tests focuses on the strategic timing of bad news forecasts. We begin by examining the relation between the frequency of management forecasts and dates of scheduled macroeconomic news such as the *Employment Situation Summary* and the *Federal Funds Rate*.

[2] For example, Bernanke and Kuttner [2005] find that a hypothetical unanticipated 25-basis-point cut in the Federal Funds Rate target is associated with about a 1% increase in broad stock indices.

We hypothesize that the frequency of bad news forecasts is higher on days with scheduled releases of macroeconomic news, relatively to other days and relatively to good news forecasts.[3]

Next, we examine cross-sectional variation in the strategic timing of bad news forecasts. We presume a strategic timing of voluntary disclosures is not costless, and, therefore, predict that the likelihood of issuing bad news forecasts on days with scheduled releases of macroeconomic news is greater for firms with stronger incentives to doing so. Specifically, we hypothesize that this likelihood is greater for firms with higher ex-ante shareholders' litigation risk and with a greater magnitude of forecast surprise. We also predict that the likelihood of issuing bad news forecasts concurrently with scheduled releases of macroeconomic news is smaller when the cost of doing so is greater. For example, managers may have self-interested incentives to make their bad news disclosures more, rather than less, transparent. For example, managers have little incentive to dampen the stock price response to bad news prior to receiving stock option grants, and may therefore be less inclined to issue bad news forecasts on such days.

Our second set of tests focuses on the responsiveness of stock prices to management's voluntary disclosure. As discussed above, the notion of investor inattention is one of the underlying motivations for our hypothesis that managers time their disclosure of bad news forecasts such that they coincide with the scheduled release of major macroeconomic news. If the responsiveness of stock prices to bad news disclosures indeed depends on the level of investor attention, one would expect less immediate response to management forecasts when investor attention is more limited. Such under-reaction, to the extent there is any, is unlikely to be permanent, as market participants will gradually incorporate into their valuation assessments the implications of the bad news. Thus, bad news forecasts made on days with more limited

[3] In contrast to bad news forecasts, there is no reason to expect that managers issue good news forecasts concurrently with scheduled releases of macroeconomic news. Thus, examining changes in the frequency of good news forecasts provides a benchmark against which to assess changes in the frequency of bad news forecasts.

investor intention will be associated with a delayed, post-disclosure, stock price response.[4] However, if investor inattention is not the primary reason why managers strategically time their bad news forecasts, we will not find a difference in immediate or delayed stock price reaction between forecasts issued concurrently with macroeconomic news and those issued at other times.

We test our two sets of predictions using a sample of 21,843 management earnings forecasts issued between January 1995 and December 2007. We focus on earnings forecasts as a form of voluntary disclosure because, unlike other discretionary disclosures, earnings forecasts are followed by a confirmatory report in the form of mandatory earnings announcement, often within just a few weeks. Thus, this form of voluntary disclosure comprises both bad and good news announcements, making it a suitable setting in which to test the strategic timing hypothesis. In contrast, managers have weaker incentives to promptly release non-earnings-related bad news.

To test our predictions we consider macroeconomic news releases that are likely to be important to capital market participants and are exogenously pre-scheduled. Scheduled releases of macroeconomic news allow managers who wish to issue a bad news forecast concurrently with market-wide news an opportunity do so. While there are additional macroeconomic news releases which are scheduled in advance, we focus on the FOMC announcement of the *Federal Funds Rate* (the "FOMC report") and the Bureau of Labor Statistics announcement of the *Employment Situation Summary* (the "employment report"). These two macroeconomic news releases are considered by many as the most important ones for investors (see, e.g., Nofsinger and Prucyk [2003]; Melessa [2012]). There are eight scheduled FOMC meetings each year. The employment report is released once a month on the third Friday following the week which includes the 12th of the month; typically this date occurs on the first Friday of the month. The

[4] This is a test of the joint hypothesis that (i) investor attention to firm-specific disclosures is more limited on days with macroeconomic news, and that (ii) earnings-related information is not reflected in firms' equity values until investors "pay attention" to it.

fact that the employment report is released on a Friday enables us to conduct within-Friday tests of our predictions, and contrast our findings with those of prior studies that have tested the strategic timing hypothesis by comparing Friday and non-Friday earnings announcements.

Findings from our first set of tests strongly support our hypothesis that firms strategically time their disclosures of bad news forecasts around scheduled release of major macroeconomic news. Specifically, we find a significant increase in the frequency of bad news forecasts issued on days with pre-scheduled releases of FOMC or employment reports. This finding is unique to bad news forecasts; there is no evidence for a similar increase in the frequency of good news forecasts. We also find that the increased frequency of bad news forecasts on employment report days does not reflect a more general "Friday effect", as some studies suggest. Specifically, we find that the frequency of both good and bad news forecasts issued on Fridays is smaller than on other days. Yet, on Fridays with a scheduled release of the employment report (one Friday a month), there are significantly more bad news forecasts than on other Fridays; there is no similar evidence for good news forecasts. These findings support our prediction that managers strategically time their bad news forecasts to coincide with the release of macroeconomic news.

We also find that the strategic timing of bad news forecasts is particularly pronounced for firms with greater incentives to doing so. Specifically, the likelihood that a bad news forecast coincides with a scheduled release of FOMC or employment report is greater for firms with higher ex-ante litigation risk and greater forecast surprise. This finding is consistent with our hypothesis that the strategic timing of bad news forecasts is motivated by firms' concern about securities litigation. Also consistent with our prediction, the likelihood that a bad news forecast coincides with a scheduled release of FOMC or employment report is smaller when top executives have an impending stock option grant. Taken together, the disclosure frequency and

cross-sectional tests are consistent with managers strategically timing their bad news forecasts around the scheduled release of macroeconomic news.

Interestingly, findings from our second set of tests provide no evidence for a stock price effect. Inconsistent with the notion of mispricing, we find no difference in stock price reaction – immediate and delayed – between forecasts issued concurrently with macroeconomic news releases and those issued at other times. These findings are robust to controlling for the potential self-selection bias, and to using other proxies for inattention to firm-specific announcements. Overall, our findings from the stock-price-based tests provide no evidence for investor inattention, and cast some doubt on inferences in the prior literature that inattention plays a significant role in the processing of firm disclosures.

Taken together, our findings indicate that managers strategically time bad news forecasts around scheduled releases of market-wide economic news, but this disclosure strategy does not affect the stock price reaction. One interpretation is that the strategic timing is motivated by reasons other than to alter the stock price response. In particular, the commingling of stock price effects related to the contemporaneous release of management bad news forecasts and other macroeconomic news can help mitigate the expected litigation cost. An alternative interpretation is that managers believe (erroneously) that investor attention to firm-specific announcements is more limited on days with scheduled releases of macroeconomic news, and time their bad news forecasts accordingly. Under this interpretation, managers appear to be overestimating the level of market inefficiency with respect to the processing of their firms' information disclosures.

The remainder of the paper is organized as follows. Section 2 reviews prior research and outlines our empirical predictions. Section 3 details the sample, section 4 describes the empirical tests and reports the findings, and section 5 concludes.

2. Related Literature and Research Questions

2.1. Related literature

Much of the prior literature on voluntary disclosure focuses on the information content of discretionary disclosures. Consistent with the prediction emerging from information economics theory that managers are more inclined to disclose good news than bad news (Verrecchia [1983], [2001]; Dye [1985]), earlier studies document that the stock price reaction to management forecasts is on average positive (Patell [1976]; Penman [1980]; Waymire 1984]). However, more recent studies document a reaction that is zero or negative (McNichols [1989]; Pownall et al. [1993]), and a higher frequency of bad news forecasts (Skinner [1994]; Kasznik and Lev [1995]).[5] This prompted researchers to hypothesize that firms issue bad news forecasts in an attempt to reduce the expected damages arising from shareholder litigation.[6]

Skinner [1994] argues that forecasting errors are more costly when earnings realizations fall below expectations, and, consequently, managers have an incentive to voluntarily disclose bad news that prepares investors for a disappointing earnings announcement. Consistent with this view, Kasznik and Lev [1995] find that managers are more inclined to voluntarily preempt negative earnings surprises than positive surprises, and that the likelihood of a warning increases with the magnitude of surprise. Although several studies document that the early disclosure of bad news triggers lawsuits (Francis et al. [1994]; Skinner [1997]), more recent research suggests this relation is driven by the endogenous relation between disclosure and litigation risk. Using a simultaneous equations methodology, Field et al. [2005] find evidence consistent with both the

[5] The prevalence of bad news forecasts is not necessarily inconsistent with the notion that managers are more inclined to disclose good news. Much of the literature focuses on earnings forecasts, a subset of firms' voluntary disclosures. Using a stock-price-based measure for firms' overall voluntary disclosures, Kothari et al., [2009] and Roychowdhury and Sletten [2011] conclude that firms are more inclined to withhold bad news than good news.

[6] Prior studies also suggests firms issue voluntary disclosures to reduce information asymmetry and increase liquidity (Diamond and Verrecchia [1991]; Brown et al. [2004]), signal managerial ability (Trueman [1986]) and satisfy investor demand for information (Ajinkya et al. [2005]). However, these incentives generally do not distinguish between good and bad news disclosures.

preemption effect and deterrence effect; firms with higher litigation risk are more likely to issue earnings warnings, and firms that disclose early lower their expected litigation risk.[7]

We contribute to this literature by focusing on the strategic timing of management forecasts in the face of securities litigation risk. In particular, we examine the notion that firms issue bad news concurrently with market-wide economic news as a way to mitigate expected litigation cost. Other recent research exploring the strategic timing of management forecasts focuses on managers' self-interested incentives. For example, Aboody and Kasznik [2000] find that top executives opportunistically time their earnings guidance to increase the value of their stock option awards. Specifically, because stock options are granted with a fixed exercise price equal to the stock price on the award date, executives have an incentive to delay announcements of good news until after grant date and rush forward bad news to precede the grant.[8]

We also contribute to the literature on investor inattention. Several recent studies argue that investor attention plays a role in determining asset prices, as information about companies is not reflected in equity prices until investors "pay attention" to it (Hirshleifer and Teoh [2003]). Investor inattention can be attributable to "bounded rationality" (Peng and Xiong [2006]) or other psychological biases. Much of the extant literature on investor inattention focuses on mandatory earnings announcements, and provides mixed evidence. Penman [1987], Damodaran [1989], Bagnoli et al. [2005], and DellaVigna and Pollet [2009] document a "Friday effect" in earnings announcements; there is a larger fraction of negative earnings announcements on Fridays. Della Vigna and Pollet [2009] also document a smaller immediate response to Friday's

[7] It has been argued that earnings guidance enhances equity values by managing the sign and magnitude of end-of-period earnings surprises. This reflects the view that investors dislike negative surprises and will penalize firms that do not issue earnings warnings. Although prior research (Kasznik and Lev [1995]; Hutton et al. [2003]) documents that the combined stock price reaction to the earnings news is more negative for firms that issue earnings warnings, this finding reflects the longer term nature of bad news for warning firms (Kasznik and Lev [1995];Tucker [2007]).

[8] Other studies test whether managers opportunistically time their voluntary disclosures around expected insider trades (Noe [1999]; Cheng and Lo [2006]) and firms' financing transactions, such as stock repurchases (Brockman et al. [2008]) and stock-based business acquisitions (Ahren and Sosyura [2014]).

announcements, and a greater post-earnings-announcement drift, relative to announcements on other days. They interpret the delayed response to Friday announcements as evidence for limited investor attention on Fridays, and argue that this motivates firms to time their bad news earnings announcements such that they occur on Fridays, when investor attention is more limited.

However, more recent studies challenge this interpretation. Doyle and Magilke [2009] find that the "Friday effect" in earnings announcements is insignificant after controlling for firm fixed effects, casting doubt on the notion that firms strategically time earnings announcements in an attempt to hide bad news. Michaely et al. [2013]) find no difference in the stock price response after controlling for firm characteristics and other fixed effects, and Melessa [2012] finds that the smaller immediate response to Friday's earnings announcements is attributable to heightened economic uncertainty rather than investor inattention. Similarly, deHaan et al. [2014] use non-stock-price measures of investor attention (e.g., abnormal Google search volume) and find that attention is the same or even higher on Fridays, inconsistent with the notion that Friday earnings announcements receive less attention from investors. [9]

We focus on management forecasts in testing the hypothesis that firms strategically time their disclosure of bad news. We believe management forecasts are more suitable for studying the strategic timing hypothesis, as firms have greater discretion in timing these disclosures. Many firms follow regular schedules for their quarterly earnings announcements, and often provide an advanced notice for when they plan to make an earnings announcement.[10] This

[9] There are fewer earnings announcements on Fridays compared to other days. Specifically, only 6% of earning announcements between 1990 and 2007 are made on Fridays, less than a third of the frequency on other days. This also is the case for adverse earnings announcements; less than 9% of adverse earning news are made on Friday.

[10] Very few companies regularly announce quarterly earnings on Fridays. Thus, another explanation for why Friday earnings announcements tend to be more negative is that firms with adverse earnings news are more likely than firms with good earnings news to have delays in their earnings announcements (due to disagreements with auditors or further deliberations by the Board). Thus, the "Friday effect" documented by prior studies may be attributable to the fact that earnings announcements on Fridays are more likely to be unscheduled, and as such, are more likely to be negative than positive. These delays do not have to be strategic for the "Friday effect" to occur.

increases the visibility of earnings announcements, including those on Fridays. In contrast, firms rarely pre-commit to a fixed voluntary disclosure schedule, and we are unaware of notices in advance of such disclosures. We therefore believe management forecasts are a more natural setting in which to investigate the strategic timing of disclosures and its effects on stock prices.

We also contribute to the literature by relaxing the assumption made by prior studies that investor attention is more limited on Friday. By examining scheduled releases of employment reports we are able to conduct within-Friday tests of the strategic timing hypothesis. This allows us to design more powerful tests than those comparing Friday and non-Friday disclosures.[11]

2.2. Research questions

Our objective is to investigate whether firms strategically time their forecasts, particularly those containing bad news, around scheduled releases of major macroeconomic news, and whether such disclosure strategy plays a role in determining how equity values reflect these disclosures. We form our research questions as testable empirical hypotheses, grouped into two sets of predictions. Our first set of predictions focuses on the strategic timing of management forecasts. We begin by forming predictions relating to the frequency of bad news forecasts on days with scheduled releases of macroeconomic news:

H1(a): The frequency of management forecasts containing bad news ("negative surprise") is higher on days with scheduled releases of macroeconomic news.

H1(b): The difference in the frequencies of bad news forecasts and good news forecasts is higher on days with scheduled releases of macroeconomic news.

These predictions stem from the notion that managers issue earnings warnings to mitigate the expected litigation cost associated with the imminent release of adverse earnings news. There

[11] One might argue that the lower frequency of Friday earnings announcements indicates greater, not lower, investor attention. Hirshleifer et al. [2009] use the number of earning announcements per day as a proxy for investor attention. Under their measure, the fewer earning announcements are made, the more attention each can receive.

are two potential motivations for our hypothesis that managers strategically time the issuance of bad news forecasts such that they coincide with other, market-wide news. First, although managers have an incentive to disclose bad news early to preempt claims that they withheld adverse earnings information, they might also prefer that these disclosures draw less attention. If markets are inefficient and investor inattention affects stock prices, managers may strategically time their bad news forecasts around scheduled release of macroeconomic news, when attention to firm-specific announcements may be more limited. Under the premise of investor inattention, this disclosure strategy might mitigate the extent of the stock price decline. Whether or not investor inattention can lead to a more gradual incorporation of corporate disclosures into stock prices is an empirical question. Yet, as long as managers believe such information inefficiency exists, they may have an incentive to time their disclosures accordingly.[12]

The second, alternative motivation stems from the notion that macroeconomic news is associated with increased stock price volatility, potentially making it difficult for investors to discern the incremental effect of firm-specific disclosures. The commingling of stock price effects related to the contemporaneous release of the macroeconomic news and bad news forecast can help reduce expected litigation cost. This motivation – unlike the one based on investor inattention - does not rely on market inefficiency in processing firms' disclosures.

Next, we form predictions related to cross-sectional variation in the strategic timing of management forecasts. These predictions reflect the notion that disclosure timing is not without cost.[13] Hence, we do not expect a "corner solution" whereby all bad news forecasts are

[12] One may argue that if the objective of managers was to minimize the attention given to their bad news forecasts, we should not expect to see bad news forecasts in the first place. However, we presume managers do have underlying incentives to disclose bad news, but, all else equal, may prefer that they draw less attention.

[13] For example, delaying the issuance of a bad news forecast (such that it coincides with the scheduled release of macroeconomic news) could itself lead to increased litigation cost, by lengthening the "class period" or delaying the execution of an insider stock sale (due to the "disclose-or-abstain" doctrine).

strategically timed to coincide with scheduled releases of macroeconomic news. Instead, we expect that the likelihood of issuing bad news forecasts on days with scheduled releases of macroeconomic news is greater for firms and managers with stronger incentives and lower costs to doing so. Specifically, we hypothesize that:

H2: The likelihood of bad news management forecasts on days with scheduled releases of macroeconomic news is:

(a) higher for firms with greater ex-ante litigation risk,
(b) higher for firms with larger forecast surprise, and,
(c) smaller prior to executive stock option grants.

Testing H2 (a) and (b) allows us to assess the extent to which the decision to issue bad news forecasts concurrently with scheduled releases of macroeconomic news enables relates to managerial concern about securities litigation. Testing H2 (c) allows us to assess the extent to which managers believe the strategic timing of bad news forecasts can affect stock price. Following Aboody and Kasznik [2000], we presume managers have self-interested incentives to make bad news disclosures more, rather than less, transparent prior to stock option grants. Thus, evidence consistent with H2 (c) would suggest managers believe investor attention to firm-specific disclosures is more limited on days with important macroeconomic news.[14]

Our second set of predictions focuses on the stock price effects associated with issuing management forecasts concurrently with macroeconomic news. Several studies investigate whether investor attention plays a role in determining stock prices in the context of mandatory earnings announcements, but provide mixed evidence. Thus, it is an empirical question as to

[14] Under the null hypothesis of no relation between the timing of bad news forecasts and the scheduled release of macroeconomic news, managers do not believe this disclosure strategy can help mitigate the expected litigation cost. This would be the case if managers do not believe investor attention plays a role in determining asset prices or that market-wide price fluctuations do not mitigate firm-specific litigation risk. The null hypothesis also can reflect the notion that some managers have incentives to make their disclosure of bad news more – and not less - transparent. This would be the case if, for example, the primary motivation for issuing bad news forecasts was to enhance management reputation for transparency in financial disclosure.

whether investor attention to firm-specific disclosures is limited on days with macroeconomic news, and whether the issuance of bad news forecasts on limited attention days can delay the incorporation of the adverse information into equity values. If the responsiveness of stock prices to bad news forecasts indeed depends on the level of investor attention, one would expect less immediate response to forecasts issued when attention is more limited. Such under-reaction, to the extent it exists, will not be permanent, as investors will gradually incorporate into their valuation assessments the implications of the bad news. Thus, bad news forecasts made on days with limited investor attention will be associated with a delayed, post-disclosure, stock price response. We form the following predictions relating to the potential effects of investor attention to firm-specific announcements on days with scheduled releases of macroeconomic news:

H3(a): The immediate stock price response is smaller for management forecasts that are issued on days with scheduled releases of macroeconomic news.

H3(b): The delayed (post-forecast) stock price response is greater for management forecasts that are issued on days with scheduled releases of macroeconomic news.

However, if investor inattention is not the primary reason managers strategically time their bad news forecasts, we would not expect to find a difference in stock price reaction between forecasts issued concurrently with macroeconomic news releases and those issued at other times.

3. Sample and Data

3.1. Sample selection

Table 1, panel A describes our sample selection process. We begin by obtaining from First Call's Company Issued Guidelines (CIG) database all managements earnings forecasts issued between January 1, 1995 and December 31, 2007. We include all earnings forecasts, whether they are for quarterly or annual periods and whether they are specified as a point, range,

or a qualitative estimate. We limit the sample to companies traded on a U.S. stock exchange and with financial reporting data in COMPUSTAT and stock returns in CRSP.

Our primary research question is whether managers time their earnings forecasts around the scheduled release of macroeconomic news. This imposes two additional sample selection criteria. First, we exclude 32,264 earnings forecasts that are issued concurrently with earnings announcements; we presume the timing of earnings announcements is less discretionary than that of management forecasts, and therefore less likely to be strategic (Doyle and Magilke [2012]). Second, we exclude 8,597 forecasts issued by firms with multiple forecasts on the same day.[15] We do so because our tests examine bad and good news forecasts separately, but firms that issue multiple forecasts may have both bad and good news forecasts. Our selection criteria yield a sample of 21,843 management earnings forecasts issued between 1995 and 2007.

We classify each forecast as a negative surprise ("bad news"), positive surprise ("good news") or no surprise forecast based on the classification in the CIG database; the "description code" classifies the forecast by comparing it to earnings expectations (based on the consensus analyst forecast).[16] Table 1, panel B details the frequency of forecasts falling into the three groups. 7,052 of the 21,843 (32.3%) are classified as a negative surprise, 2,608 (11.9%) are classified as a positive surprise, and 12,183 (55.8%) are classified as a no surprise forecast. The finding that there are nearly three times more negative surprise forecasts than positive surprise forecasts is consistent with prior studies. The high frequency of "no surprise" forecasts can reflect the fact that many management forecasts simply reaffirm prior projections and/or analyst forecasts (Clement et al. [2003]). However, this group may also capture misclassifications due

[15] Specifically, we excluded 7,098 forecasts issued by firms with two concurrent forecasts, 1,042 forecasts by firms with three forecasts, and 458 forecasts by firms with four or more concurrent forecasts.
[16] We use the terms "bad news" and "negative surprise" ("good news" and "positive surprise") interchangeably.

to ambiguity about current earnings expectations. Although we conduct our tests separately for all three groups, our empirical predictions focus primarily on the negative surprise group.[17]

Panel C provides year, month, and day-of-the-week frequency distribution for the 21,843 sample forecasts, and, separately, for the subsamples of 7,052 and 2,608 negative and positive surprises. Interestingly, there is an increasing trend in the frequency of forecasts between 1995 and 2001, but a decreasing trend after 2001. The increasing trend is not unexpected given the expanded firm population and improved coverage by First Call. Yet, the decrease in more recent years is somewhat surprising and may reflect firms' reluctance to issue guidance following the passage of Regulation Fair Disclosure in 2000. We also observe some seasonality within the year, as some months have relatively high or low frequency of forecasts. Similarly, there is a strong day-of-the-week effect; substantially fewer forecasts are issued on Friday compared to Monday through Thursday across all forecast surprise categories.[18] We therefore control in our estimation models for year, month, and day-of-the-week fixed effects.

3.2. Scheduled Macroeconomic News Releases

We select macroeconomic news releases that are important to capital market participants and are exogenously pre-scheduled. Scheduled releases of macroeconomic news allow managers to strategically issue bad news forecasts concurrently with market-wide newsworthy events. While there are several macroeconomic news releases which are scheduled in advance, we focus on the FOMC announcement of the *Federal Funds Rate* and the Bureau of Labor Statistics release of *Employment Situation Summary*. These two economic indicators are considered by

[17] We focus on the CIG classification of the sign of the surprise because it is based on ex-ante earnings expectation. As a specification check, we consider an alternative classification based on the price reaction. We find that 77.4% (68.4%) of forecasts classified by CIG as negative (positive) surprises have returns below (above) −1% (1%), indicating a returns-based classification is consistent with that based on CIG. Interestingly, 40.62% (40.18%) of the forecasts classified as "no surprise" have stock returns below (above) −1% (1%), suggesting a non-trivial amount of potential misclassification for that group. Our empirical findings are robust to using the returns-based classification.

[18] Less than 0.5% of the forecasts are issued on the weekend. Thus, our calendar time tests exclude weekend days.

many as the most important ones for investors. Thus, media and investor attention around the issuance of FOMC and employment reports is focused on these events, and stock prices react significantly to their release.[19] Below we discuss the two macroeconomic news events.

3.2.1. Federal Open Market Committee (FOMC) meetings

FOMC Date is an indicator variable based on whether or not the management earnings forecast is issued concurrently with an FOMC meeting. There are eight regularly scheduled FOMC meetings each year; most meetings are one day events (generally on a Tuesday) and some are two days long (Tuesday-Wednesday). Immediately following the meeting the Fed releases a policy statement regarding its decision, including the funds rate target and any forward-looking statements on inflation and real growth risks.[20] In addition to the eight regularly scheduled meetings there are some unscheduled ones, which may or may not be followed by a statement. However, *FOMC Date* equals one only on scheduled meetings.[21]

We obtain the dates of scheduled FOMC meetings from the Federal Reserve website. There are 104 scheduled FOMC meetings during our sample period, January 1995 to December 2007. Many FOMC meetings are initially scheduled as a two-day event, and we therefore classify both days as an FOMC event.[22] Because FOMC meeting dates are known in advance, a manager who wishes to issue an earnings warning concurrently with an FOMC meeting can plan

[19] We find that the absolute value of the daily return on the Standard & Poor's 500 Composite Index is significantly greater on days with scheduled releases of FOMC and employment reports than on other weekdays; *p*-values for differences in means and medians are of 0.07 and 0.01, respectively.

[20] There have been a number of policy changes regarding the information release by the Fed. Prior to 1994, most decisions were not publicly announced. Nonetheless, Poole and Rasche [2003] conclude from searching press articles that, between August 1989 and February 1994, in all but four cases, market participants learned about the policy action within a day. Our sample begins in 1995 and, therefore, the policy change does not affect our analysis.

[21] Beginning December 2004, minutes of regularly scheduled meetings are released three weeks after the date of the policy decision. Prior to December 2004, the minutes were released only after the next meeting. Minutes of unscheduled meetings are released together with minutes of the next regularly scheduled meeting.

[22] Extending the FOMC event to two days also mitigates the erroneous classification of the many forecasts that are issued after the market has already closed and will therefore appear in the press only the following day. Our findings are robust to limiting the definition of the FOMC event to the day on which the FOMC statement is made (generally the second day of a two-day meeting).

to do so. However, there are only eight such events each year, potentially liming the power of our tests detect strategic timing of management forecasts.

3.2.2. Employment Situation Report

EMPL Date is an indicator variable based on whether or not the management forecast is issued on days with a scheduled release of the *Employment Situation Report* by the Bureau of Labor Statistics. This report is a comprehensive report on the state of the labor market, and it is issued once a month on the third Friday following the "reference week" (the week that includes the 12th), at precisely 8:30 a.m. ET. Typically this occurs on the first Friday in the month.[23]

The *Employment Situation Report*, commonly referred to as the *Employment Report* or *Labor Report*, comprises two surveys. The first, the "establishment survey", is based on more than 400,000 businesses, and covers about one-third of all non-farm workers nationwide. It presents statistics such as non-farm payrolls, hours worked and hourly earnings. It primarily covers goods, construction and manufacturing companies, and excludes farm workers, private household employees, non-profit organization employees, and government employees.

The second survey, the "household survey", is based on more than 60,000 households and produces a figure representing the national unemployment rate. The data are compiled by the U.S. Census Bureau with assistance from the Bureau of Labor Statistics. The figure released is the change in nonfarm payrolls, representing the number of jobs added or lost in the economy over the last month, not including jobs relating to the farming industry.[24]

The *Employment Situation Report* is the single best way to understand the state of the labor force, and is generally regarded as the most influential monthly macroeconomic news

[23] On only four occasions over our sample period 1995-2007 the *Employment Situation Report* was issued on a Thursday rather than a Friday. This happens when the first Friday in July coincides with the July 4th holiday.
[24] Economists have settled on 150,000 jobs as the level that defines economic growth; gains of more than 150,000 jobs indicate expansion of the labor force, while anything below that indicates a weak job market.

release. It can have a significant effect on the foreign exchange market, bond market, and stock market, particularly when indicators surprise Wall Street. Carnes and Slifer [1991] describe the employment report as the "king of kings" among economic indicators, and prior research supports the assertion that employment statistics provide more impactful information about the state of the economy than other scheduled macroeconomic indicators. For example, Flannery and Protopapadakis [2002] and Brenner et al. [2009] find that the employment report has the largest effect on stock return volatility and trading volume in both the equity and bond markets.

4. Empirical Analyses

4.1. Strategic timing of management forecasts

4.1.1. Descriptive statistics

Table 2 provides frequency distribution for the sign of forecast surprise and whether or not the forecast coincides with the scheduled release of FOMC or employment reports. Most forecast are not issued on FOMC or employment report dates; this is not surprising given there are only eight FOMC meetings and twelfth employment reports each year. However, and more importantly, the likelihood that a bad news forecast coincides with an *FOMC Date* or *EMPL Date* is significantly greater than that for a good news forecast. Panel A shows that 543 (7.7%) of the 7,052 bad news forecasts are issued on *FOMC Date*, compared with 151 (5.8%) of the 2,608 good news forecasts (*p*-value from a chi-square test of the difference is 0.001). Similarly, panel B shows that 262 (3.7%) of the 7,052 bad news forecasts are issued on *EMPL Date*, compared with 75 (2.9%) of the 2,608 good news forecasts (*p*-value from a chi-square test of the difference is 0.047). These frequencies provide descriptive evidence consistent with our prediction that managers time their disclosure of bad news forecasts around scheduled releases of macroeconomic news. However, our inferences are based on the regression analyses below.

4.1.2. Regression analyses

Our first set of tests is based on 3,391 weekdays between January 1, 1995 and December 31, 2007. The dependent variable is the total number of forecasts issued during a given day (separately for "all", "negative surprise", "positive surprise" and "no surprise" forecasts), and the main experimental variables are *FOMC Date* or *EMPL Date*. We also include in our regression models indicator variables to control for day-of-the-week, month, and year fixed effects, and the one-week-lag daily number of forecasts to control for temporal clusters in corporate disclosures. Because of the "count" nature of the dependent variable, daily number of forecasts, we estimate the model using a negative binomial regression.[25] Table 3 presents summary statistics from regressions using all 3,391 weekdays. Panel A presents results based on total daily number of forecasts, regardless of forecast surprise. The coefficient estimates on *FOMC Date* and *EMPL Date* are both significantly positive; t-statistic for *FOMC Date* (*EMPL Date*) is 3.35 (2.75). This finding suggests managers issue more earnings forecasts on days with scheduled releases of macroeconomic news. Many of the untabulated day-of-the-week, month and year indicator variables are statistically significant. Also, the lag daily number of forecasts is significantly positive, consistent with time-based clustering in forecasting activity[26].

More importantly for our research question, panels B and C present the estimation results when the dependent variable, the daily number of forecasts, is limited to bad news (panel B) and good news forecasts (panel C). The evidence from panels B and C indicates that the higher frequency of management earnings forecasts on FOMC or employment report days documented

[25] A Poisson (log-linear) regression is commonly used when the dependent variable takes nonnegative integer or count values. However, the Poisson regression forces the conditional mean of the outcome to equal the conditional variance. Because we find over-dispersion in the management forecast data (variance of daily number of forecasts, 29.2, is substantially greater than the mean, 6.4), a negative binomial regression is more suitable (Cameron and Trivedi [1986, 1996]). Our inferences are robust to estimating Poisson and OLS models.

[26] The explanatory power of the model is 32.3% (using OLS), suggesting our experimental and control variables capture a non-trivial portion of the variation across time in the daily number of management earnings forecasts.

in panel A is attributable to bad news forecasts. In the negative surprise specification, the coefficient estimate on *FOMC Date* is 0.276 (t-statistic = 4.01), and that on *EMPL Date* is 0.307 (t-statistic = 3.22). In contrast, in the positive surprise specification, the coefficient estimate on *FOMC* days is –0.001 (t-statistic = –0.01), and that on *EMPL Date* is 0.159 (t-statistic = 1.05).[27] In panel D we compare bad and good news forecasts by subtracting, for each day, the number of good news forecasts from the number of bad news forecasts. The coefficient estimates on *FOMC Date* and *EMPL Date* are significantly positive (t-statistics 3.62 and 3.56, respectively), consistent with more bad news relative to good news forecasts on days with scheduled releases of macroeconomic news. Finally, for completeness, we examine the "no surprise" group. Although we have no priors for the relation between the number "no surprise" forecasts and our experimental variables, panel E reveals the coefficient estimate on *FOMC Date* is significantly positive (t-statistic = 2.26), and that on *EMPL Date* is insignificant (t-statistic = 1.32).[28] Overall, these findings are consistent with our prediction that managers are more likely to issue bad news forecasts concurrently with scheduled releases of macroeconomic news. We do not find a similar effect for good news forecasts, suggesting the increased frequency we document for bad news forecasts is not attributable to some unrelated increase in news volume on these days.

Next, we focus on forecasts issued on Fridays. The fact that the employment report is released once a month on a Friday allows us to conduct within-Friday tests of our predictions. This allows us to relax the assumption made by prior studies that investor attention is more limited on Friday, and design more powerful tests than those comparing Friday and non-Friday

[27] The coefficient estimates for *FOMC Date* and *EMPL Date* indicate that the log daily number of bad news forecasts on FOMC or employment report days is higher by 0.276 and 0.307, respectively. This translates to approximately 20% more forecasts than in other days (the unconditional mean number of forecasts is 6.4).

[28] Our findings are robust to limiting *FOMC Date* to the day on which the statement is made. Similarly to the tabulated findings in Table 3, the coefficient estimate for *FOMC Date* is significantly positive (coefficient estimate = 0.230; t-statistics = 2.40) in the negative surprise specification, and negative but insignificant (coefficient estimate = –0.178; t-statistics = –1.18) in the "positive surprise" specification.

disclosures. Table 4 presents summary statistics from regressions similar to those in Table 3 but using only the 678 Fridays between 1995 and 2007 (rather than all 3,391 weekdays). Our focus here is on *EMPL Date*; we exclude *FOMC Date*, as there are no FOMC meetings on Fridays.

Panel A presents results based on total daily number of forecasts, regardless of forecast surprise. The coefficient estimate on *EMPL Date* is significantly positive (t-statistic = 3.35), consistent with managers issuing more forecasts on Fridays with scheduled releases of the employment report. More importantly, panels B and C reveal that the higher frequency of forecasts on employment report days is attributable to bad news forecasts. Specifically, in the negative surprise specification, the coefficient estimate on *EMPL Date* is 0.333 (t-statistic = 3.41), whereas in the positive surprise specification, the coefficient estimate is 0.132 (t-statistic = 0.93). Similarly, panel D shows that coefficient estimates on *EMPL Date* in this specification is positive (t-statistic = 3.77), indicating the number of bad news relative to good news forecasts increases on days with scheduled releases of employment reports. In the "no surprise" specification (panel E), *EMPL Date* is marginally significant (t-statistic = 1.88).

Relatedly, Table 5 replicates Table 3 using *Friday* in lieu of *FOMC Date* and *EMPL Date* as the main experimental variable. *Friday* equals one for Fridays and zero for other weekdays; we estimate this model using the 3,235 weekdays between 1995 and 2007, excluding Fridays with employment reports. We find that the frequency of both bad and good news forecasts is significantly smaller on Fridays (t-statistics –15.04, –10.12 and –8.53 for "all forecasts", "bad news" and "good news", respectively). This suggests the increased frequency of bad news forecasts on Fridays with employment reports does not reflect a more general "Friday effect", as some studies suggest, and provides further supports to our hypothesis that firms strategically time their bad news forecasts around scheduled release of important macroeconomic news.

4.1.3. Cross sectional regression analyses

Our next set of tests focuses on cross-sectional variation in the likelihood of issuing bad news forecasts concurrently with scheduled releases of macroeconomic news. Unlike Tables 3-5 where the unit of analysis was the daily number of management forecasts, in Table 6 we estimate logit regressions using the 7,052 bad news and 2,608 good news forecasts. This specification allows us to test H2(a)-H2(c) by including firm-specific covariates. The dependent variable is an indicator variable that equals one when the forecast is issued on days with scheduled releases of FOMC or employment reports, and zero otherwise.

The baseline model (Model I) includes an indicator, *BadNews*, taking the value of one (zero) for negative (positive) surprise forecasts, and indicators for year- and month-fixed effects. Consistent with the univariate findings in Table 2, the coefficient estimate on *BadNews* is significantly positive (*Z* statistic = 2.85), indicating the likelihood of a bad news forecast on days with FOMC or employment reports is greater than that for good news forecasts.

Next, we test our cross-sectional predictions H2(a) – H2(c). To test H2(a), we compute a firm-specific measure of ex ante litigation risk based on factors identified in prior literature to be associated with securities litigation (Alexander [1991]; Francis et al. [1994]; Jones and Weingram [1996]; Skinner [1997]; Johnson, Kasznik and Nelson [2000]). More specifically, we estimate a litigation risk model similar to Model 3 from Table 7 of Kim and Skinner [2012], regressing an indicator variable for whether or not firm *i* was subject to securities litigation in year *t*, on industry membership and lagged values of firm size, sales growth, share turnover, stock returns, and return volatility and skewness. Appendix A describes the model and reports the estimation results. We compute the predicted probability of a lawsuit for each firm-year observation, and use it as a proxy for ex ante litigation risk, denoted *LitigationRisk*.

To test H2(b), we include *Surprise*, an indicator taking the value of one (zero) when forecast surprise is above (below) sample median. The forecast surprise is computed as the absolute value of the difference between management forecast and median analyst forecast (based on the most recent forecast issued by each analyst during the 90 days preceding the management forecast), deflated by stock price at the beginning of the quarter. To test H2(c), we include *OptionGrant*, an indicator taking the value of one when the CEO has a stock option grant within the 45 days after the forecast date, and zero otherwise.

Model II includes *LitigationRisk* and *OptionGrant* as main effects and interactively with *BadNews*. Model III also includes *Surprise* (as a main effect and interactively with *BadNews*).[29] Our tests of H2(a)–H2(c) are based on the coefficient estimates for the interactive terms. We predict positive coefficients for the interactions of *BadNews* with *LitigationRisk* and *Surprise*, and a negative coefficient for the interactions of *BadNews* with *OptionGrant*.

Table 6 reports the estimation results for Models II and III. Consistent with H2(a), the coefficient estimate for *BadNews*×*LitigationRisk* is significantly positive (*Z* statistics = 1.92 in Model II and 2.09 in Model III), indicating the decision to issue bad news forecasts concurrently with scheduled releases of macroeconomic news is associated with the firm's litigation risk.[30] Consistent with H2(b), the coefficient estimate for *BadNews*×*Surprise* is positive in Model III, but only marginally so (Z statistic = 1.62). Consistent with H2(c), the coefficient estimate for *BadNews*×*OptionGrant* is significantly negative (*Z* statistics –3.09 in Model II and –3.48 in

[29] Due to analyst forecast availability, *Surprise* can be measured for 5,080 of the 7,052 bad news forecasts and 1,875 of the 2,608 good news forecasts; the remaining observations have no data on analyst forecasts within the 90 days prior to management forecast. We therefore present the analyses with (Model III) and without (Model II) *Surprise*.

[30] In sensitivity analysis we use a litigation risk measure derived from a more parsimonious model than that used to generate *LitigationRisk*. Specifically, *Industry_risk* is an indicator equal one when the firm is from an industry with a high frequency of lawsuits, and zero otherwise (this is analogous to Model (1a) from Kim and Skinner [2012]). These industries include Bio-technology (SIC 2833-2836), Computer Hardware (SIC 3570-3577), Electronics (SIC 3600-3674), Retail (SIC 5200-5961), Software (SIC 7371-7379), and R&D and Testing Services (SIC 8731-8734). *Industry_risk*, unlike *LitigationRisk*, does not require time series of returns data and is therefore available for all sample firm-years. Untabulated estimation results provide inferences similar to those based on Table 6.

Model III), indicating managers with impending stock option grants have a disincentive to release bad news forecasts concurrently with scheduled releases of macroeconomic news.

Taken together, our findings provide evidence consistent with cross-sectional variation in firms' strategic timing of management earnings forecasts. We find that the likelihood of issuing bad news forecasts on days with scheduled releases of macroeconomic news is greater for firms with stronger incentives to do so (e.g., when litigation risk is high and the magnitude of forecast surprise is large), but smaller when managers have self-interested incentives to make their bad news disclosures more transparent, such as immediately before stock option grants.

4.2. Stock price effects

4.2.1. Research design

The finding that managers time the issuance of bad news forecasts around scheduled releases of macroeconomic news is consistent with two explanations, both related to litigation risk. First, it may reflect management belief that investor attention to firm-specific disclosures is more limited on days with macroeconomic news. If the responsiveness of stock prices to firm disclosures depends on investor attention, this disclosure strategy can help dampen the adverse stock price reaction to bad news forecasts, and, consequently, mitigate expected litigation cost. A second, alternative explanation is that the release of macroeconomic news leads to increased volatility. Thus, the commingling of stock price effects related to the issuance of bad news forecasts and macroeconomic news could make it difficult for market participants to discern the incremental effect of the firm-specific disclosure, and help mitigate expected litigation cost. Our stock price tests can help distinguish between the two explanations. If investor inattention exists, and if it is the primary reason managers strategically time their bad news forecasts, there should

be less immediate price reaction (H3a) and more delayed post-disclosure reaction (H3b) for forecasts issued concurrently with macroeconomic news.

We stock return measure is derived from a market model. For each sample firm we estimate a regression of daily stock returns on the value-weighted market index (including dividends) over a period from 300 to 46 trading days prior to the forecast issuance. We then use the estimated *beta* to compute buy-and-hold abnormal returns (BHAR) for the period starting on forecast date and ending on each of the following 75 trading days. We focus on a window of 75 trading days to ensure it includes the quarterly earnings announcement, which should largely resolve any remaining information asymmetry related to the forecast. We denote this measure $BHAR_{(0,t)}$, where $t = 1,\ldots,75$. We have $BHAR_{(0,t)}$ estimates for 18,903 sample observations.[31]

Our measure of immediate stock price response is based on a two-day window starting on forecast date, $BHAR_{(0,1)}$.[32] Our measure of delayed stock price response is based on a window starting two trading days, and ending 75 trading days, after the forecast date, $BHAR_{(2,75)}$. We also examine stock returns for the combined window, $BHAR_{(0,75)}$; we do not expect returns over such window to be sensitive to whether or not the forecast was issued on a limited attention day. We test these predictions using our main experimental variables, *FOMC Date* and *EMPL Date*.

4.2.2. Primary stock returns findings

Table 7 reports the results of univariate tests comparing abnormal returns across the various subsamples. Panel A compares mean and median $BHAR_{(0,t)}$ for management forecasts

[31] We also use an alternative measure of abnormal returns which is based on matching each sample firm to a control firm with similar size and book-to-market ratio (Barber and Lyon [1997]). The matched-sample approach mitigates some of the measurement problems associated with calculating long-run abnormal returns using either a reference portfolio or an asset pricing model (Kothari and Warner [1997]). To do that, for each sample firm we identify a control firm with the closest book-to-market ratio at the beginning of the event year among all firms with market value between 70% and 130% of that for the sample firm. We then compute $BHAR_{(0,t)}$ where $t = 1,\ldots,75$ for each sample firm using the matched firm as a benchmark. We have $BHAR_{(0,t)}$ estimates for 19,708 observations. Our inferences from tests based on the matched-sample measure are identical to those we tabulate.

[32] We include the day after the forecast date to capture cases where the forecast is issued after trading hours. We presume the effect of limited attention, to the extent such effect does exist, persists for more than just one day.

issued on days with FOMC meetings and those issued on other days. Not surprisingly, the immediate stock price response, $BHAR_{(0,1)}$, to bad (good) news forecasts is negative (positive). However, inconsistent with H3(a), there is no evidence that $BHAR_{(0,1)}$ is smaller (in absolute value) for forecasts issued concurrently with macroeconomic news. For example, mean $BHAR_{(0,1)}$ is –0.1040 (–0.0995) for bad news forecasts that do (do not) coincide with FOMC events; *p*-value for difference is 0.513. Similarly, mean $BHAR_{(0,1)}$ is 0.0531 (0.0571) for good news forecasts that do (do not) coincide with FOMC events; *p*-value for difference is 0.673. We find similar findings with median values.

Interestingly, both bad news and good news forecasts exhibit a post-disclosure drift, consistent with delayed stock price reactions to earnings forecasts. However, inconsistent with H3(b), the downward (upward) drift for bad (good) news forecasts is not more pronounced for forecasts issued on FOMC days. Mean $BHAR_{(2,75)}$ is –0.0009 (–0.0001) for bad news forecasts that do (do not) coincide with FOMC events; *p*-value for difference is 0.942. Similarly, mean $BHAR_{(2,75)}$ is 0.0544 (0.0715) for good news forecasts that do (do not) coincide with FOMC events; *p*-value for difference is 0.524.

Panel B compares mean and median $BHAR_{(0,t)}$ for forecasts issued on days with scheduled releases of employment reports and those issued on other days. Similarly to the findings in panel A and inconsistent with H3(a), we find no evidence that the immediate response to bad news forecasts is smaller on employment report days. Also, inconsistent with H3(b), we find no no evidence that the post-forecast drift is more pronounced for forecasts issued on employment report days. Taken together, these univariate findings do not support the notion that issuing management forecasts on days with scheduled releases of macroeconomic news can affect the stock price response to the firm's disclosure.

To control for potential differences between firms that issue forecasts concurrently with FOMC or employment report and firms that do not, we regress *BHAR* on our experimental variables, *FOMC Date* and *EMPL Date*, along with *Log(Assets)* and *Book-to-Market* to control for potentially omitted risk factors, and *Surprise_magnitude*, to control for the forecast surprise (difference between management forecast and median analyst forecast, deflated by stock price at the beginning of the quarter). We estimate OLS regressions separately for bad news and good news forecasts, using $BHAR_{(0,1)}$, $BHAR_{(2,75)}$, and $BHAR_{(0,75)}$ as alternative dependent variables. Because we run each regression using data pooled across firms and years, our t-statistics are based on two-way cluster-robust standard errors (Cameron et al. [2006]; Gow et al. [2010]; Thompson [2011]); our findings are robust to controlling for firm- and year-fixed effects.

Table 8 reports regression estimation results for bad news (panel A) and good news (panel B) forecasts. Consistent with the univariate tests, the coefficient estimates for both *FOMC Date* and *EMPL Date* are insignificant in all *BHAR* specifications, with the exception of $BHAR_{(2,75)}$ for good news forecasts. We obtain similar inferences in Table 9 where we limit the analysis to forecasts issued on Fridays. *EMPL Date* is insignificant for bad news forecasts across all windows, and significantly positive in the $BHAR_{(2,75)}$ for good news forecasts.[33]

4.2.3. Controlling for self-selection

Our primary findings suggest managers time bad news forecasts around the scheduled release of macroeconomic news. Yet, our stock-price-based tests provide no evidence that this seemingly strategic disclosure strategy alters the price reaction to forecast issuance, and provide no support for the notion of investor inattention in the context of management forecasts. In this

[33] We also estimate the stock return models with raw returns in lieu of market-adjusted returns. Some of the hypothesized incentives for strategic timing of management forecasts pertain to raw returns. Untabulated findings indicate our inferences are identical.

section we investigate whether these inferences are attributable to a potential self-selection bias stemming from the fact that the decision to issue a forecast is a managerial "choice", and that we therefore only observe the outcome of the disclosure choice made but not the outcome of the no-disclosure-choice not made (Tucker [2007]). We presume our setting is less susceptible to self-selection with respect to the decision to issue a forecast, as we compare forecasts issued concurrently with other economic news with those issued at other times. Yet, we attempt to control for a potential self-selection bias related to the decision to issue the forecast concurrently with a scheduled release of macroeconomic news. To do this, we conduct two sets of tests.

First, we follow the Heckman [1979] two-step approach. In the first step we use Probit to estimate a "choice model" similar to that described in Model III, Table 6. In the second step we compute the Inverse Mills Ratio, *IMR*, and include it as an explanatory variable in our stock return regressions.[34] Table 10 reports the regression estimation results for bad news (panel A) and good news (panel B) forecasts, with *IMR* as an additional variable. This specification is otherwise identical to that Table 8. We find that in most specifications, *IMR* is insignificant, with the exception of the $BHAR_{(0,1)}$ regression for bad news forecasts. More importantly, none of the coefficient estimates for *FOMC Date* and *EMPL Date* in the bad news sample is significant. Overall, our inferences regarding stock price effects associated with firms' decision to issue forecasts on days with scheduled releases of macroeconomic news are robust to controlling for the potential selection bias related to making this disclosure choice.

Second, we replicate our stock return tests while replacing *FOMC Date* and *EMPL Date* with a measure of the extent of "breaking news". Unlike FOMC and employment reports that are pre-scheduled and therefore allow managers to strategically time their forecasts, "breaking

[34] The Inverse Mills Ratio is the ratio of the standard normal probability density function (pdf) over the standard normal cumulative distribution function (cdf).

news" is exogenous to the disclosure choice. Thus, by examining the stock price reaction to forecasts issued concurrently with breaking news, we can test the investor inattention hypothesis independently of the disclosure choice, mitigating the concern about a self-selection bias.

Following Eisensee and Stromberg [2007], we measure the availability of newsworthy material as the median number of minutes across the three main television news broadcasts (ABC, CBS, and NBC) devoted to the first three news segments in a given day. [35] Appendix B demonstrates the calculation of the "news pressure" Index, which takes a value between (close to) 0 and 30. Figure B1 plots the daily "news pressure" index and shows the index is stable over our sample period, with values ranging between 5 and 10; mean (median) value is 8.1 (7.0), and the inter-quartile range is 6.3–9.2. The index exceeds 20 only six times, including the three days following the 9/11 attack. Table B1 lists the two dates with the highest "news pressure" index each year; we observe that high values coincide with major news events.

Table 11reports the estimation results for our stock return regressions, with *NEWS Date* in lieu of *FOMC Date* and *EMPL Date*; the model is otherwise identical to that in Table 8. *NEWS Date* is an indicator for days with a "news pressure" index of 12 or more, corresponding to the upper 10% of the distribution. The investor inattention hypothesis would predict that, less investor attention is devoted to firm-specific announcements. The notion that investor attention is subject to capacity constraints would suggest less attention can be devoted to a firm-specific announcement when there is a great deal of other breaking news.[36] Yet, consistent with our inferences from the primary stock-based findings, the findings in Table 11 provide no evidence for investor inattention in the context of management forecasts. Specifically, *NEWS Date* is insignificant in the $BHAR_{(0,1)}$ regression for both bad news (panel A) and good news (panel B)

[35] Eisensee and Stromberg [2007] examine whether "competing" news events can have a negative effect on media attention and on the U.S. government response to natural disasters around the world.
[36] This assumes investor attention is sensitive to both business- and non-business-related "breaking news".

forecasts, suggesting no difference in the immediate stock price reaction between forecasts issued concurrently with competing news events and those issued at other times. Moreover, *NEWS Date* is significantly positive in the $BHAR_{(2,75)}$ regression for bad news forecasts, contrary to the notion of a delayed negative price reaction in the post-forecast period.[37]

4.3. Additional analyses

We perform several sensitivity analyses and additional tests. First, we replicate our disclosure timing tests using a random pseudo event date in lieu of the dates with scheduled releases of macroeconomic news. If the schedule of macroeconomic news releases happens to coincide with omitted factors related to within-quarter variation in the disclosure frequencies of bad and good news forecasts, our findings could be driven by these omitted factors. To examine this possibility, we re-run the analyses in Table 3 using a pseudo event date which is 90 days subsequent to the FOMC report date; we use 90 days to capture any within-quarter variation in disclosure frequencies. Untabulated results provide no evidence that the pseudo event date is associated with more management forecasts. The coefficient estimate on the pseudo event date in the bad news specification is insignificant (t-statistics = –0.12), contrary to the finding in Table 3 using *FOMC Date*. We obtain similar insignificant results in all other specifications.

Second, we examine whether the market reaction to management forecasts issued on a Friday is different than that for other weekdays. To do that, we conduct an analysis similar to that in Table 8 but using *Friday* in lieu of *FOMC Date* and *EMPL Date*.[38] We find that the coefficient estimate for *FRIDAY* is insignificant in all *BHAR* models for bad news forecasts, indicating there is no difference in either the immediate or delayed price reaction between bad

[37] This measure of news pressure captures events that are less predictable than scheduled releases of macroeconomic news. We find that the frequency of bad news forecasts on a *NEWS Date* (14.5%) is marginally greater than that for positive surprise forecasts (14.1%); the difference is not statistically significant (p-value = 0.492). This finding is not surprising given it is not feasible to strategically time voluntary disclosures around breaking news events.
[38] We exclude Fridays with scheduled releases of employment reports.

news forecasts issued on Fridays and those issued on other days. Similarly, for good news forecasts, *FRIDAY* is insignificant in the $BHAR_{(0,1)}$ model, and negative (t-statistic = –2.77) in the $BHAR_{(2,75)}$ model, contrary to the notion of delayed reaction. Thus, consistent with our primary findings, we find no evidence for investor inattention to forecasts issued on a Friday.[39]

Finally, we replicate the stock return tests using abnormal trading volume as a measure of market reaction in lieu of abnormal returns. We measure abnormal trading volume (*VOLUME*) as the difference between the average percentage of shares outstanding traded on forecast date and next day, and the percentage of shares outstanding traded during a control period; the control period includes the 15 trading days ending five days prior to forecast date. Untabulated estimation of a specification similar to that in Table 8, but using *VOLUME* in lieu of $BHAR_{(0,1)}$ as the dependent variable, provides no evidence that issuing forecasts on days with scheduled releases of macroeconomic news attenuates trading volume. The coefficient estimates for *FOMC Date* and *EMPL Date* are insignificant for both bad news (t-statistics 0.40 and 0.02) and good news forecasts (t-statistics 1.40 and –0.52). Similarly, *EMPL Date* in the Friday-only specification (similar to Table 9), is insignificant for both bad news (t-statistic = –0.77) and good news forecasts (t-statistic = –0.36).[40] These results corroborate our findings from the stock-return-based tests and provide no support to the notion that the market reacts differently when management forecasts are issued concurrently with scheduled releases of macroeconomic news.

5. Summary and Conclusions

We find that managers strategically time their bad news forecasts around scheduled releases of macroeconomic news. Specifically, we find a significant increase in the frequency of

[39] Doyle and Magilke [2012] also find no differential reaction to Friday and non-Friday announcements.
[40] We find similar results when we estimate the trading volume model with *NEWS Date* lieu of *FOMC Date* and *EMPL Date*.

bad news forecasts on days with scheduled releases of FOMC and employment reports. This finding is unique to bad news forecasts; there is increase in the frequency of good news forecasts on such days. We also find that the increased frequency of bad news forecasts on Fridays with employment reports does not reflect a more general "Friday effect". In fact, the frequency of both good and bad news forecasts is substantially smaller on Fridays, but there is a significant increase in the frequency of bad news forecasts on Fridays with a scheduled release of the employment report. We also find that the strategic timing of bad news forecasts is particularly pronounced for firms with greater incentives to do so. Specifically, the likelihood that a bad news forecast coincides with scheduled releases of FOMC or employment reports is greater for firms with higher ex-ante litigation risk and greater forecast surprise, but smaller when managers have self-interested incentives to make their bad news disclosures more, rather than less, transparent, such as before stock option grants. The disclosure frequency and cross-sectional tests support our hypothesis that managers strategically time their bad news forecasts to coincide with scheduled releases of important macroeconomic news.

Interestingly, we find no difference in either the immediate or delayed stock price reaction between forecasts issued on days with macroeconomic news releases and those issued at other times, inconsistent with the notion of investor inattention to firm-specific disclosures on days with macroeconomic news. These findings cast some doubt on inferences in the prior literature that investor inattention plays a significant role in the processing of firm disclosures, at least in the context of management earnings forecasts.

Taken together, our findings indicate that managers strategically time their bad news forecasts around the scheduled release of market-wide economic news, but that this disclosure strategy does not affect the stock price reaction to the forecast. One interpretation of these

findings is that the strategic timing behavior is motivated by reasons other than to alter investors' reaction. In particular, the commingling of stock price effects related to the contemporaneous release of bad news forecasts and market-wide economic news can help mitigate the expected litigation cost related to the firm's adverse announcement. A second, alternative interpretation is that managers believe (erroneously) that investor attention to firm-specific disclosures is more limited on days with scheduled releases of macroeconomic news, and time the issuance of bad news forecasts accordingly. Under this latter interpretation, our findings suggest managers overestimate the level of market inefficiency with respect to the processing of their firms' information disclosures.

References

Aboody, D., Kasznik, R., 2000. CEO stock option awards and the timing of corporate voluntary disclosures. *Journal of Accounting and Economics* 29, 73-100.

Ahren, K. R., Sosyura, A. D., 2014. Who writes the news? Corporate press releases during merger negotiations. *Journal of Finance* 69, 241–291.

Ajinkya, B. B., Bhojraj, S., Sengupta, P., 2005. The association between outside directors, institutional investors and the properties of management earnings forecasts. *Journal of Accounting Research* 43, 343-376.

Alexander, J. C., 1991. Do the merits matter? A study of settlements in securities class actions. *Stanford Law Review* 43, 497-598.

Bagnoli, M.E., Clement, M.B., Watts, S.G., 2005. Around-the-clock media coverage and the timing of earnings announcements. Working paper, Purdue University.

Barber, B.M., Lyon, J.D., 1997. Detecting long-run abnormal stock returns: The empirical power and specification of test statistics. *Journal of Financial Economics* 43, 341-372.

Bernanke, B. S. Kuttner, K. N., 2005. What explains the stock market's reaction to federal reserve policy? *The Journal of Finance* 60, 1221–1257.

Brenner, M., Pasquariello, P., Subramanyam, M., 2009. On the volatility and comovement of U.S. financial markets around macroeconomic news announcements. *Journal of Financial and Quantitative Analysis* 44, 1265-1289.

Brockman, P., Khurana, I.K., Martin, X., 2008. Voluntary disclosures around share repurchases. *Journal of Financial Economics* 89, 175-191.

Brown, S., Hillegeist, S.A., Lo, K., 2004. Conference calls and information asymmetry. *Journal of Accounting & Economics* 37, 343-366.

Cameron, A.C., Gelbach, J.B., Miller, D.L., 2006. Robust inference with multi-way clustering. NBER Working Paper No. T0327.

Cameron, A.C., Trivedi, P.K., 1986. Econometric models based on count data: comparisons and applications of some estimators and tests. *Journal of Applied Econometrics* 1, 29-54.

Cameron, A. C., Trivedi, P. K., 1996. Count data models for financial data. Handbook of Statistics, Vol. 14 (Statistical Methods in Finance), 363-392, Amsterdam, North-Holland.

Carnes, W., Slifer, S., 1991. The atlas of economic indicators. New York, Harper Collins Publishers.

Cheng, Q., Lo., K., 2006. Insider trading and voluntary disclosures. *Journal of Accounting Research* 44, 815-848.

Clement, M., Frankel, R., Miller, J., 2003. Confirming Management Earnings Forecasts, Earnings Uncertainty, and Stock Returns. *Journal of Accounting Research* 41, 653–679.

Damodaran, A., 1989. The weekend effect in information: A study of earnings and dividend announcements. *Review of Financial Studies* 4**,** 607–623.

deHaan, E., Shevlin, T., Thornock, J., 2014. Market (in)attention and earnings announcement timing. Working paper, University of Washington.

DellaVigna, S. and J. M. Pollet, 2009. Investor inattention and Friday earnings announcements. *Journal of Finance*, 64, 709-749.

Diamond, D.W., Verrecchia, R.E., 1991. Disclosure, liquidity, and the cost of capital. *Journal of Finance* 46, 1325-59.

Doyle, J.T., Magilke, M.J., 2009. The timing of earnings announcements: an examination of the strategic disclosure hypothesis. *The Accounting Review* 84: 157-182.

Doyle, J.T., Magilke, M.J., 2012. The strategic timing of management forecasts. Working paper, Utah State University and Claremont McKenna College.

Dye, R.A., 1985. Disclosure of nonproprietary information. *Journal of Accounting Research* 23, 123-145.

Eisensee, T., and Strömberg, D., 2007. News droughts, news floods, and U.S. disaster relief. *The Quarterly Journal of Economics* 122, 693-728.

Field, L., Lowry, M., and Shu, S., 2005. Does disclosure deter or trigger litigation? *Journal of Accounting and Economics* 39, 487-507.

Flannery, M., Protopapadakis, A., 2002. Macroeconomic factors *do* influence aggregate stock returns. *Review of Financial Studies* 15, 751-782.

Francis, J., Philbrick, D., Schipper , K., 1994. Shareholder litigation and corporate disclosures. *Journal of Accounting Research* 32, 137-164.

Gow, I.D., Ormazabal, G., Taylor, D.J., 2010. Correcting for cross-sectional and time-series dependence in accounting research. *The Accounting Review* 85,483-512.

Heckman, J. J., 1979. Sample selection bias as a specification error. *Econometrica* 47, 153–161.

Hirshleifer, D., Teoh. S.H., 2003. Limited attention, information disclosure, and financial reporting, *Journal of Accounting and Economics* 36, 337-386.

Hirshleifer, D., Lim, S.S., Teoh, S.H., 2009. Driven to distraction: extraneous events and underreaction to earnings news. *Journal of Finance* 64, 2289-2325.

Hutton, A.P., Miller, G.S., Skinner, D.J., 2003. The role of supplementary statements with management earnings forecasts. *Journal of Accounting Research* 41, 867-890.

Johnson, M.F., Kasznik, R., Nelson, K.K., 2001. The impact of securities litigation reform on the disclosure of forward-looking information by high technology firms. *Journal of Accounting Research* 39, 297-327.

Jones, C. L., Weingram, S. E., 1996. The determinants of 10b-5 litigation risk. Working paper.

Kasznik, R., Lev, B., 1995. To warn or not to warn: management disclosures in the face of an earnings surprise. *The Accounting Review* 70, 113-134.

Kim. I., Skinner, D., 2012. Measuring securities litigation risk. *Journal of Accounting and Economics* 53, 290-310.

Kothari, S.P., Shu, S., Wysocki, P., 2009. Do managers withhold bad news? *Journal of Accounting Research*, forthcoming.

Kothari, S.P., Warner, J., 1997. Measuring long-horizon security price performance. *Journal of Financial Economics* 43, 301-339.

McNichols, M., 1989. Evidence of informational asymmetries from management earnings forecasts and stock returns. *The Accounting Review* 64, 1-27.

Melessa, S., 2012. Monthly employment reports and the pricing of firm-level news. Working paper, University of Iowa.

Michaeli, R., Rubin, A., Vedrashko, A., 2013. Firm heterogeneity and investor inattention to Friday earnings announcements. Working paper, Cornell University.

Nofsinger, J. R., Prucyk, B., 2003. Option volume and volatility response to scheduled economic news releases. *Journal of Futures Market* 23, 315–345.

Noe, C.F., 1999. Voluntary disclosures and insider transactions. *Journal of Accounting & Economics* 27, 305-326.

Patell, J.M., 1976. Corporate forecasts of earnings per share and stock price behavior: empirical tests. *Journal of Accounting Research* 14, 246-276.

Peng, L. Xiong, W., 2006. Investor inattention, overconfidence, and category learning. *Journal of Financial Economics* 80, 563-602.

Penman, S. H., 1980. An empirical investigation of the voluntary disclosure of corporate earnings forecasts. *Journal of Accounting Research* 18, 132-160.

Penman, S.H., 1987. The distribution of earnings news over time and seasonalities in aggregate stock returns. *Journal of Financial Economics* 18, 199-228.

Poole, W., Rasche, R.H., 2003. The impact of changes in FOMC disclosure practices on the transparency of monetary policy: are markets and the FOMC better 'synched'? *Federal Reserve Bank of St. Louis Review* 85, 1-9.

Pownall, G., Wasley, C., Waymire, G., 1993. The stock price effects of alternative types of management earnings forecasts. *The Accounting Review* 68, 896-912.

Roychowdhury, S., Sletten, E., 2011, Voluntary disclosure incentives and earnings informativeness. Working Paper, Boston College and MIT.

Skinner, D., 1994. Why firms voluntarily disclose bad news. *Journal of Accounting Research* 32, 38-60.

Skinner, D., 1997. Earnings disclosures and stockholder lawsuits. *Journal of Accounting and Economics* 23, 249-282.

Thompson, S., 2011. Simple formulas for standard errors that cluster by both firm and time. *Journal of Financial Economics* 99, 1-10.

Trueman, B., 1986. Why do managers voluntarily release earnings forecasts? *Journal of Accounting and Economics* 8, 53-71.

Trueman, B., 1997. Managerial disclosures and shareholder litigation. *Review of Accounting Studies* 2, 181-199.

Tucker, J.W., 2007. Is openness penalized? Stock returns around earnings warnings. *The Accounting Review* 82, 1055–1087.

Verrecchia, R., 1983. Discretionary disclosure. *Journal of Accounting and Economics* 5, 179-194.

Verrecchia, R., 2001. Essays on Disclosure. *Journal of Accounting and Economics* 32, 97-180.

Waymire, G., 1984. Additional evidence on the information content of management earnings forecasts. *Journal of Accounting Research* 22, 703-718.

Table 1: Sample selection and frequency distribution

Panel A: Sample Selection

	No. of Observations
Management forecasts from First Call's Company Issued Guidance database between 1995-2007 with data on CRSP or COMPUSTAT [1]	62,704
Exclude:	
Observations that are concurrent with an earnings announcement	(32,264)
Guidance issued concurrently to multiple fiscal period[2]	(8,597)
Final sample of management earnings forecasts	21,843

Panel B: Frequency Distribution

News (as identified in the CIG file)	N	%
Negative surprise ("bad news")	7,052	32.3
Positive surprise ("good news")	2,608	11.9
No surprise	12,183	55.8
Total	21,843	100.0

[1] Sample is limited to companies traded on a U.S. stock exchange with management guidance of earnings. We exclude forecasts with a horizon of more than 750 days, as well as any forecast issued more than 100 days after the end of the fiscal period to which it pertains.

[2] 7,098 firms issued two concurrent earnings forecasts, 1,042 issued concurrent forecasts for three periods, 288 issued concurrent forecasts for four periods, and 170 issued concurrent forecasts for five or more periods.

Table 1 – (Continued):

Panel C: Frequency Distribution

	All Forecasts		Negative Surprise		Positive Surprise	
Year	N	%	N	%	N	%
1995	719	3.29	215	3.05	32	1.23
1996	1,075	4.92	447	6.34	83	3.18
1997	1,467	6.72	619	8.78	124	4.75
1998	2,082	9.53	844	11.97	190	7.29
1999	2,054	9.40	655	9.29	173	6.63
2000	1,942	8.89	771	10.93	228	8.74
2001	2,771	12.69	1,145	16.24	238	9.13
2002	2,168	9.93	557	7.90	316	12.12
2003	1,747	8.00	432	6.13	229	8.78
2004	1,787	8.18	403	5.71	293	11.23
2005	1,450	6.64	362	5.13	206	7.90
2006	1,352	6.18	339	4.81	171	6.56
2007	1,229	5.63	263	3.73	325	12.46
Total	21,843	100.00	7,052	100.00	2,608	100.00
Month						
January	2,364	10.82	713	10.11	296	11.35
February	1,383	6.33	315	4.47	150	5.75
March	1,898	8.69	624	8.85	220	8.44
April	2,143	9.81	739	10.48	309	11.85
May	1,208	5.53	290	4.11	155	5.94
June	1,945	8.90	722	10.24	211	8.09
July	2,092	9.58	806	11.43	246	9.43
August	1,053	4.82	269	3.81	102	3.91
September	2,231	10.21	826	11.71	182	6.98
October	2,461	11.27	913	12.95	309	11.85
November	1,271	5.82	266	3.77	230	8.82
December	1,794	8.21	569	8.07	198	7.59
Total	21,843	100.00	7,052	100.00	2,608	100.00
Day of the Week						
Monday	4,080	18.68	1,460	20.70	488	18.71
Tuesday	4,535	20.76	1,428	20.25	570	21.86
Wednesday	4,745	21.72	1,473	20.89	546	20.94
Thursday	5,692	26.06	1,781	25.26	728	27.91
Friday	2,691	12.32	886	12.56	272	10.43
Saturday	23	0.11	4	0.06	0	0.00
Sunday	77	0.35	20	0.28	4	0.15
Total	21,843	100.00	7,052	100.00	2,608	100.00

Table 2: Frequency distribution of the sign of forecast surprise and whether or not the forecast coincides with the scheduled release of FOMC report (panel A) or employment report (panel B). *FOMC Date* is a day with a scheduled release of the Federal Open Market Committee decision about interest rates; there are eight regularly scheduled FOMC meetings each year. *EMPL Date* is a day with a scheduled release of the *Employment Situation Report* by the Bureau of Labor Statistics; The employment report is released once per month on the third Friday following the "reference week" (week which includes the 12th), typically the first Friday of the month. "Surprise" is based on the classification in the First Call's Company Issued Guidance database. Sample of 21,483 management earnings forecasts between 1995 and 2007.

Panel A: Forecast surprises and FOMC Date

	FOMC Date		
Surprise	No	Yes	Total
Negative	6,509	543	7,052
	92.3%	7.7%	
Neutral	11,374	809	12,183
	93.4%	6.6%	
Positive	2,457	151	2,608
	94.2%	5.8%	
Total	20,340	1,503	21,843

p-value of a Chi-Square test = 0.001

Panel B: Forecast surprises and EMPL Date

	EMPL Date		
Surprise	No	Yes	Total
Negative	6,790	262	7,052
	96.3%	3.7%	
Neutral	11,799	384	12,183
	96.9%	3.1%	
Positive	2,533	75	2,608
	97.1%	2.9%	
Total	21,122	721	21,843

p-value of a Chi-Square test = 0.047

Table 3: Summary statistics from negative binomial regression of the number of forecasts issued on a given day on indicator variables for whether or not that date coincides with the scheduled release of macroeconomic news. *FOMC Date* is an indicator taking the value of one for days with a scheduled release of Federal Open Market Committee decision about interest rates, and zero otherwise. *EMPL Date* is an indicator taking the value of one for days with a scheduled release of *Employment Situation Report* by the Bureau of Labor Statistics, and zero otherwise. The employment report is released once per month on the third Friday following the "reference week" (week which includes the 12th), typically the first Friday of the month.. Also included are the one-week-lag number of forecasts and indicator variables for day-of-the-week, month and year. Management forecast data is based First Call's Company Issued Guidance database. CIG classifies forecasts as "negative surprise", "positive surprise", or "no surprise" forecasts. **Analysis is based on all 3,391 weekdays between January 1, 1995 and December 31, 2007.**

Panel A: Dependent variable: Daily number of all forecasts

Independent variables	Coefficient	*t*-statistic
Intercept	-	-
FOMC Date	0.163***	3.35
EMPL Date	0.179***	2.75
Lag(number of forecasts)	0.019***	7.89
Year_Indicator_Variables	Untabulated	
Month_Indicator_Variables	Untabulated	
Day_Indicator_Variables	Untabulated	

Panel B: Dependent variable: Daily number of negative surprise ("bad news") forecasts

Independent variables	Coefficient	*t*-statistic
Intercept	-	-
FOMC Date	0.276***	4.01
EMPL Date	0.307***	3.22
Lag(number of forecasts)	0.025***	7.37
Year_Indicator_Variables	Untabulated	
Month_Indicator_Variables	Untabulated	
Day_Indicator_Variables	Untabulated	

Panel C: Dependent variable: Daily number of positive surprise ("good news") forecasts

Independent variables	Coefficient	*t*-statistic
Intercept	-	-
FOMC Date	–0.001	–0.01
EMPL Date	0.159	1.05
Lag(number of forecasts)	0.010**	2.10
Year_Indicator_Variables	Untabulated	
Month_Indicator_Variables	Untabulated	
Day_Indicator_Variables	Untabulated	

Table 3 -- (Continued):

Panel D: Dependent variable: Daily number of "bas news" minus "good news" forecasts

Independent variables	Coefficient	*t*-statistic
Intercept	-	-
FOMC Date	0.288***	3.62
EMPL Date	0.383***	3.56
Lag(number of forecasts)	0.026***	6.69
Year_Indicator_Variables	Untabulated	
Month_Indicator_Variables	Untabulated	
Day_Indicator_Variables	Untabulated	

Panel E: Dependent variable: Daily number of "no news" forecasts

Independent variables	Coefficient	*t*-statistic
Intercept	-	-
FOMC Date	0.123**	2.26
EMPL Date	0.100	1.32
Lag(number of forecasts)	0.015***	5.59
Year_Indicator_Variables	Untabulated	
Month_Indicator_Variables	Untabulated	
Day_Indicator_Variables	Untabulated	

*, **, *** denote significance (based on two-tail tests) at 0.10, 0.05 and 0.01 levels, respectively.

Table 4: Summary statistics from negative binomial regression of the daily number of forecasts on an indicator variable, *EMPL Date*, taking the value of one for days with a scheduled release of the *Employment Situation Report* by the Bureau of Labor Statistics, and zero otherwise. The employment report is released once per month on the third Friday following the "reference week" (week which includes the 12th), typically the first Friday of the month.. Also included in the regression are the one-week-lag number of forecasts and indicator variables for month and year. Management forecast data is based First Call's Company Issued Guidance database. CIG classifies forecasts as "negative surprise", "positive surprise", or "no surprise" forecasts. **Analysis is based 678 Fridays between January 1, 1995 and December 31, 2007**.

Panel A: Dependent variable: Daily number of all forecasts

Independent variables	Coefficient	*t*-statistic
Intercept	-	-
EMPL Date	0.199***	3.35
Lag(number of forecasts)	0.036***	4.29
Year_Indicator_Variables	Untabulated	
Month_Indicator_Variables	Untabulated	

Panel B: Dependent variable: Daily number of negative surprise ("bad news") forecasts

Independent variables	Coefficient	*t*-statistic
Intercept	-	-
EMPL Date	0.333***	3.41
Lag(number of forecasts)	0.036***	2.67
Year_Indicator_Variables	Untabulated	
Month_Indicator_Variables	Untabulated	

Panel C: Dependent variable: Daily number of positive surprise ("good news") forecasts

Independent variables	Coefficient	*t*-statistic
Intercept	-	-
EMPL Date	0.132	0.93
Lag(number of forecasts)	–0.002	–0.11
Year_Indicator_Variables	Untabulated	
Month_Indicator_Variables	Untabulated	

Table 4 -- (Continued):

Panel D: Dependent variable: Daily number of "bas news" minus "good news" forecasts

Independent variables	Coefficient	*t*-statistic
Intercept	-	-
EMPL Date	0.422***	3.77
Lag(number of forecasts)	0.037***	2.40
Year_Indicator_Variables	Untabulated	
Month_Indicator_Variables	Untabulated	

Panel E: Dependent variable: Daily number of "no news" forecasts

Independent variables	Coefficient	*t*-statistic
Intercept	-	-
EMPL Date	0.132*	1.88
Lag(number of forecasts)	0.041***	4.14
Year_Indicator_Variables	Untabulated	
Month_Indicator_Variables	Untabulated	

*, **, *** denote significance (based on two-tail tests) at 0.10, 0.05 and 0.01 levels, respectively.

Table 5: Summary statistics from negative binomial regression of the daily number of forecasts on an indicator variable, *Friday*, taking the value of one for Fridays and zero for all other week days. Also included in the regression are the one-week-lag number of forecasts and indicator variables for month and year. Management forecast data is based First Call's Company Issued Guidance database. CIG classifies forecasts as "negative surprise", "positive surprise", or "no surprise" forecasts. **Analysis is based 3,235 weekdays between January 1, 1995 and December 31, 2007 (excluding Fridays with scheduled release of the employment report**.

Panel A: Dependent variable: Daily number of <u>all</u> forecasts

Independent variables	Coefficient	*t*-statistic
Intercept	-	-
Friday	–0.546***	–15.04
Lag(number of forecasts)	0.022***	9.08
Year_Indicator_Variables	Untabulated	
Month_Indicator_Variables	Untabulated	

Panel B: Dependent variable: Daily number of negative surprise ("<u>bad news</u>") forecasts

Independent variables	Coefficient	*t*-statistic
Intercept	-	-
Friday	–0.550***	–10.12
Lag(number of forecasts)	0.028***	8.34
Year_Indicator_Variables	Untabulated	
Month_Indicator_Variables	Untabulated	

Panel C: Dependent variable: Daily number of positive surprise ("<u>good news</u>") forecasts

Independent variables	Coefficient	*t*-statistic
Intercept	-	-
Friday	–0.723***	–8.53
Lag(number of forecasts)	0.015***	3.21
Year_Indicator_Variables	Untabulated	
Month_Indicator_Variables	Untabulated	

*, **, *** denote significance (based on two-tail tests) at 0.10, 0.05 and 0.01 levels, respectively.

Table 6: Summary statistics from a logistic regression of an indicator for whether or not a management earnings forecast is issued concurrently with the scheduled release of economic news, on variables hypothesized to explain the disclosure timing decision. The dependent variable equals one when the forecast is issued on the same day as the scheduled release of the Federal Open Market Committee (FOMC) decision about interest rates or the same day as the scheduled release of the *Employment Situation Report* (the "Labor Report") by the Bureau of Labor Statistics, and zero otherwise. Sample of 7,052 (2,608) management forecasts between 1995 and 2007 included in First Call's Company Issued Guidance (CIG) database and characterized as "negative" or "positive" surprises.

		Model I		Model II		Model III	
Independent variables	Prediction	Coefficient	*Z* Statistic	Coefficient	*Z* Statistic	Coefficient	*Z* Statistic
Intercept	n/a	–2.822***	–11.48	–2.630***	–4.01	–2.557***	–3.59
BadNews	+	0.233***	2.85	0.145	1.12	–0.103	–0.53
LitigationRisk	n/a			–5.146**	–2.00	–5.775**	–2.26
OptionGrant	n/a			0.769***	3.01	1.078***	3.93
Surprise	n/a					0.011	0.06
BadNews × *LitigationRisk*	+			4.985**	1.92	5.594**	2.09
BadNews × *OptionGrant*	–			–0.938***	–3.09	–1.133***	–3.48
BadNews × *Surprise*	+					0.350*	1.62
Year_Indicator_Variables	n/a	Untabulated		Untabulated		Untabulated	
Month_Indicator_Variables	n/a	Untabulated		Untabulated		Untabulated	
N		9,660		7,480		5,728	
Pseudo R^2		3.9%		4.5%		5.8%	

BadNews is an indicator equals one (zero) when the First Call's Company Issued Guidance database classifies the management earnings forecast as a negative (positive) surprise.

LitigationRisk is a measure of ex-ante litigation risk. It is estimated using a model similar to Model 3 from Table 7 of Kim and Skinner [2012]. We estimate *LitigationRisk* at the firm-year level. See Appendix A for a description of the model and estimated coefficients.

OptionGrant is an indicator variable equals one when the CEO has a stock option grant within the 45 days after the management forecast date, and zero otherwise.

Surprise is an indicator equals one (zero) when the forecast surprise is above (below) sample median; forecast surprise is computed as the absolute value of the difference between the management earnings forecast and the consensus analyst forecast (measured as the median value of forecasts issued within 90 days prior to management forecast), scaled by stock price at the beginning of the quarter.

p-values of Wald Chi-Square statistics are based on one-tail tests for coefficient estimates with a predicted sign. *, **, *** denote significance at 0.10, 0.05 and 0.01 levels, respectively.

Table 7: Buy-and-Hold Abnormal Returns (BHAR) based on a market model. Subsamples of management earnings forecasts with negative/positive/no surprise and based on whether or not forecasting date coincides with the scheduled release of economic news.

Panel A: Federal Open Market Committee release of its decision on interest rates (FOMC Date)

Forecast Surprise	BHAR Window	FOMC Date	N of obs.	Mean BHAR	*p*-value	Median BHAR	*p*-value
Negative Surprise	(Day 0,1)	No	5,657	–0.0995		–0.0738	
Negative Surprise	(Day 0,1)	Yes	461	–0.1040	0.513	–0.0759	0.898
Negative Surprise	(Day 2,…,75)	No	5,651	–0.0001		–0.0183	
Negative Surprise	(Day 2,…,75)	Yes	461	–0.0009	0.942	–0.0066	0.534
Negative Surprise	(Day 0,…,75)	No	5,651	–0.0994		–0.1096	
Negative Surprise	(Day 0,…,75)	Yes	461	–0.1049	0.698	–0.1137	0.746
No Surprise	(Day 0,1)	No	9,850	–0.0046		–0.0002	
No Surprise	(Day 0,1)	Yes	703	–0.0021	0.568	0.0002	0.629
No Surprise	(Day 2,…,75)	No	9,841	0.0289		0.0029	
No Surprise	(Day 2,…,75)	Yes	703	0.0447	0.221	0.0061	0.902
No Surprise	(Day 0,…,75)	No	9,841	0.0244		–0.0007	
No Surprise	(Day 0,…,75)	Yes	703	0.0426	0.189	0.0039	0.726
Positive Surprise	(Day 0,1)	No	2,036	0.0571		0.0415	
Positive Surprise	(Day 0,1)	Yes	118	0.0531	0.673	0.0548	0.487
Positive Surprise	(Day 2,…,75)	No	2,036	0.0715		0.0325	
Positive Surprise	(Day 2,…,75)	Yes	118	0.0544	0.524	0.0493	0.898
Positive Surprise	(Day 0,…,75)	No	2,035	0.1286		0.0816	
Positive Surprise	(Day 0,…,75)	Yes	118	0.1075	0.523	0.0900	0.930

Table 7 -- (Continued):

Panel B: Bureau of Labor Statistics release of the Employment Situation Report (EMPL Date)

Forecast Surprise	BHAR Window	EMPL Date	N of obs.	Mean BHAR	*p*-value	Median BHAR	*p*-value
Negative Surprise	(Day 0,1)	No	5,889	–0.0993		–0.0738	
Negative Surprise	(Day 0,1)	Yes	229	–0.1122	0.202	–0.0771	0.279
Negative Surprise	(Day 2,…,75)	No	5,883	0.0005		–0.0178	
Negative Surprise	(Day 2,…,75)	Yes	229	–0.0147	0.467	–0.0278	0.318
Negative Surprise	(Day 0,…,75)	No	5,883	–0.0987		–0.1087	
Negative Surprise	(Day 0,…,75)	Yes	229	–0.1269	0.231	–0.1392	0.091
No Surprise	(Day 0,1)	No	10,223	–0.0042		–0.0001	
No Surprise	(Day 0,1)	Yes	330	–0.0102	0.311	–0.0017	0.425
No Surprise	(Day 2,…,75)	No	10,215	0.0305		0.0035	
No Surprise	(Day 2,…,75)	Yes	329	0.0136	0.307	–0.0077	0.348
No Surprise	(Day 0,…,75)	No	10,215	0.0264		0.0003	
No Surprise	(Day 0,…,75)	Yes	329	0.0038	0.204	–0.0243	0.212
Positive Surprise	(Day 0,1)	No	2,088	0.0575		0.0426	
Positive Surprise	(Day 0,1)	Yes	66	0.0372	0.103	0.0270	0.066
Positive Surprise	(Day 2,…,75)	No	2,087	0.0690		0.0319	
Positive Surprise	(Day 2,…,75)	Yes	66	0.1218	0.184	0.0871	0.127
Positive Surprise	(Day 0,…,75)	No	2,087	0.1265		0.0816	
Positive Surprise	(Day 0,…,75)	Yes	66	0.1591	0.454	0.1087	0.301

Table 8: Summary statistics from regressions of market-model Buy-and-Hold Abnormal Returns (BHAR) on indicator variables for whether or not the management forecast release date coincides with *FOMC* and *EMPL* dates and on other control variables. Sample of management earnings forecasts between 1995 and 2007 included in First Call's Company Issued Guidance database and characterized as "negative" or "positive" surprises.

Panel A: "Negative Surprise" Management Earnings Forecasts:

	Dep. Var: BHAR (Day 0,1)		Dep Var: BHAR (Day 2,..,75)		Dep. Var: BHAR (Day 0,...,75)	
Independent variables	Coefficient	*t*-statistic	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Intercept	–0.212***	–17.14	–0.014	–0.27	–0.226***	–4.09
FOMC Date	–0.005	–0.84	–0.002	–0.12	–0.007	–0.40
EMPL Date	–0.018	–1.16	–0.001	–0.01	–0.018	–0.44
Log(Assets)	0.017***	15.00	0.001	0.13	0.018**	2.72
Book-to-Market	0.008*	1.69	0.028**	2.23	0.036***	2.92
Surprise_magnitude	0.121***	3.16	–0.039	–0.56	0.082	0.83
N	4,505		4,505		4,505	
Adjusted R^2	5.4%		0.3%		1.3%	

Panel B: "Positive Surprise" Management Earnings Forecasts:

	Dep. Var: BHAR (Day 0,1)		Dep Var: BHAR (Day 2,..,75)		Dep. Var: BHAR (Day 0,...,75)	
Independent variables	Coefficient	*t*-statistic	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Intercept	0.128***	6.70	0.183	3.87	0.311**	5.26
FOMC Date	–0.007	–0.77	–0.015	–0.54	–0.022	–0.63
EMPL Date	–0.016	–1.15	0.091**	2.42	0.075	1.59
Log(Assets)	–0.011***	–4.43	–0.018***	–3.52	–0.029***	–4.19
Book-to-Market	0.004	0.52	0.009	0.40	0.014	0.67
Surprise_magnitude	0.221	1.64	–0.197	–1.17	0.024	0.15
N	1,591		1,591		1,591	
Adjusted R^2	6.2%		1.1%		2.0%	

FOMC Date is an indicator taking the value of one for days with the scheduled release of Federal Open Market Committee decision about interest rates (and zero otherwise). There are eight regularly scheduled FOMC meetings each year.

EMPL Date is an indicator variable taking the value of one for days with a scheduled release of the *Employment Situation Report* (the "Labor Report") by the Bureau of Labor Statistics (and zero otherwise). The Labor Report is issued once a month on the third Friday following the "reference week" (the week which includes the 12th of the month), at precisely 8:30 a.m. ET. Typically this occurs on the first Friday of the month.

Surprise_magnitude is the management forecast surprise, computed as the difference between the management earnings forecast and the median analyst forecast (immediately prior to the management forecast date), deflated by stock price at the beginning of the quarter. *Log(Assets)* is the natural logarithm of the book value of total assets at the beginning of the year. *Book-to-market* is the ratio of book value of equity to market value of equity at the beginning of the year.

t-statistics are based on two-way (firm and year) cluster-robust standard errors. *p*-values are based on two-tail tests. *, **, *** denote significance at 0.10, 0.05 and 0.01 levels, respectively.

Table 9: Summary statistics from regressions of market-model Buy-and-Hold Abnormal Returns (BHAR) on an indicator variable for whether or not the issuance of the management forecast coincides with the scheduled release of the Employment Situation Report by the Bureau of Labor Statistics and on other control variables. Sample of management earnings forecasts between 1995 and 2007 included in First Call's Company Issued Guidance database and characterized as "negative" or "positive" surprises. **Analysis is limited to forecasts issued on Friday**.

Panel A: "Negative Surprise" Management Earnings Forecasts:

	Dep. Var: BHAR (Day 0,1)		Dep Var: BHAR (Day 2,..,75)		Dep. Var: BHAR (Day 0,...,75)	
Independent variables	Coefficient	*t*-statistic	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Intercept	–0.210***	–10.16	0.017	0.35	–0.194***	–3.59
EMPL Date	–0.017	–1.27	0.003	0.11	–0.014	–0.38
Log(Assets)	0.017***	8.11	–0.003	–0.49	0.015**	2.30
Book-to-Market	0.008	0.70	0.010	0.37	0.018	0.71
Surprise_magnitude	0.344***	2.95	–0.212**	–2.23	0.132	0.76
N	560		560		560	
Adjusted R^2	7.8%		0.1%		0.4%	

Panel B: "Positive Surprise" Management Earnings Forecasts:

	Dep. Var: BHAR (Day 0,1)		Dep Var: BHAR (Day 2,..,75)		Dep. Var: BHAR (Day 0,...,75)	
Independent variables	Coefficient	*t*-statistic	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Intercept	0.083	1.74	–0.086	–0.98	–0.003	–0.04
EMPL Date	–0.009	–0.53	0.137**	2.27	0.128*	1.91
Log(Assets)	–0.010*	–1.90	0.007	0.70	–0.003	–0.31
Book-to-Market	0.052	1.21	0.111	1.54	0.164*	2.02
Surprise_magnitude	1.03	1.42	–1.095	–0.95	–0.065	–0.04
N	161		161		161	
Adjusted R^2	15.1%		5.5%		5.4%	

EMPL Date is an indicator variable taking the value of one for days with a scheduled release of the *Employment Situation Report* (the "Labor Report") by the Bureau of Labor Statistics (and zero otherwise). The Labor Report is issued once a month on the third Friday following the "reference week" (the week which includes the 12th of the month), at precisely 8:30 a.m. ET. Typically this occurs on the first Friday of the month.

Surprise_magnitude is the management forecast surprise, computed as the difference between the management earnings forecast and the median analyst forecast (immediately prior to the management forecast date), deflated by stock price at the beginning of the quarter. *Log(Assets)* is the natural logarithm of the book value of total assets at the beginning of the year. *Book-to-market* is the ratio of book value of equity to market value of equity at the beginning of the year. *IMR* is the Inverse Mils Ratio (Heckman [1979]), derived from a Probit estimation of a "choice model" similar to that in Model III of Table 6.

t-statistics are based on two-way (firm and year) cluster-robust standard errors. *p*-values are based on two-tail tests. *, **, *** denote significance at 0.10, 0.05 and 0.01 levels, respectively.

Table 10: Summary statistics from regressions of market-model Buy-and-Hold Abnormal Returns (BHAR) on indicator variables for whether or not the management forecast release date coincides with *FOMC* and *EMPL* dates and on other control variables. Regressions include an inverse Mils ratio (Heckman [1979]) to control for the disclosure "choice".

Panel A: "Negative Surprise" Management Earnings Forecasts:

	Dep. Var: BHAR (Day 0,1)		Dep Var: BHAR (Day 2,..,75)		Dep. Var: BHAR (Day 0,...,75)	
Independent variables	Coefficient	*t*-statistic	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Intercept	–0.266***	–15.29	–0.042	–0.47	–0.308***	–3.20
FOMC Date	–0.001	–0.06	–0.008	–0.85	–0.008	–0.67
EMPL Date	–0.012	–0.64	–0.005	–0.17	–0.016	–0.43
Log(Assets)	0.016***	14.41	0.002	0.30	0.018***	3.17
Book-to-Market	0.009*	2.05	0.029**	2.22	0.039***	3.10
Surprise_magnitude	0.122***	3.01	0.015	0.15	0.137	1.04
IMR	0.033***	4.27	0.012	0.32	0.044	1.13
N	4,193		4,193		4,193	
Adjusted R^2	5.6%		0.3%		1.7%	

Panel B: "Positive Surprise" Management Earnings Forecasts:

	Dep. Var: BHAR (Day 0,1)		Dep Var: BHAR (Day 2,..,75)		Dep. Var: BHAR (Day 0,...,75)	
Independent variables	Coefficient	*t*-statistic	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Intercept	0.097***	5.35	0.162	1.64	0.259**	2.40
FOMC Date	–0.002	–0.20	–0.001	–0.05	–0.003	–0.09
EMPL Date	–0.002	–0.90	0.118**	2.78	0.106*	2.03
Log(Assets)	–0.010***	–4.06	–0.014***	–2.97	–0.024***	–4.06
Book-to-Market	0.008	0.84	0.003	0.12	0.011	0.48
Surprise_magnitude	0.170*	1.86	–0.168	–0.68	0.003	0.02
IMR	0.013	1.17	–0.008	–0.22	0.005	0.13
N	1,503		1,503		1,503	
Adjusted R^2	4.8%		0.8%		1.5%	

FOMC Date is an indicator taking the value of one for days with the scheduled release of Federal Open Market Committee decision about interest rates (and zero otherwise). There are eight regularly scheduled FOMC meetings each year.

EMPL Date is an indicator variable taking the value of one for days with a scheduled release of the *Employment Situation Report* (the "Labor Report") by the Bureau of Labor Statistics (and zero otherwise). The Labor Report is issued once a month on the third Friday following the "reference week" (the week which includes the 12th of the month), at precisely 8:30 a.m. ET. Typically this occurs on the first Friday of the month.

Surprise_magnitude is the management forecast surprise, computed as the difference between the management earnings forecast and the median analyst forecast (immediately prior to the management forecast date), deflated by stock price at the beginning of the quarter. *Log(Assets)* is the natural logarithm of the book value of total assets at the beginning of the year. *Book-to-market* is the ratio of book value of equity to market value of equity at the beginning of the year. *IMR* is the Inverse Mils Ratio (Heckman [1979]), derived from a Probit estimation of a "choice model" similar to that in Model III of Table 6.

Sample comprises management earnings forecasts between 1995 and 2007 included in First Call's Company Issued Guidance database and characterized as "negative" or "positive" surprises.

t-statistics are based on two-way (firm and year) cluster-robust standard errors. *p*-values are based on two-tail tests. *, **, *** denote significance at 0.10, 0.05 and 0.01 levels, respectively.

Table 11: Summary statistics from regressions of market-model Buy-and-Hold Abnormal Returns (BHAR) on an indicator variable for whether or not the management forecast is issued on a day with News Pressure Index in the upper decile (*NEWS Date*) and on other control variables. Sample of management earnings forecasts between 1995 and 2007 included in First Call's Company Issued Guidance database and characterized as "negative" or "positive" surprises.

Panel A: "Negative Surprise" Management Earnings Forecasts:

	Dep. Var: BHAR (Day 0,1)		Dep Var: BHAR (Day 2,..,75)		Dep. Var: BHAR (Day 0,...,75)	
Independent variables	Coefficient	*t*-statistic	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Intercept	–0.213***	–16.70	–0.022	–0.43	–0.235***	–4.40
NEWS Date	–0.002	–0.47	0.061***	3.29	0.059***	2.92
Log(Assets)	0.017***	14.72	0.001	0.10	0.018**	2.72
Book-to-Market	0.008	1.71	0.027**	2.28	0.035***	3.02
Surprise_magnitude	0.122***	3.20	–0.037	–0.54	0.084	0.86
N	4,505		4,505		4,505	
Adjusted R^2	5.3%		0.9%		1.8%	

Panel B: "Positive Surprise" Management Earnings Forecasts:

	Dep. Var: BHAR (Day 0,1)		Dep Var: BHAR (Day 2,..,75)		Dep. Var: BHAR (Day 0,...,75)	
Independent variables	Coefficient	*t*-statistic	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Intercept	0.128***	6.70	0.185***	4.04	0.312***	5.40
NEWS Date	–0.004	–0.64	0.029	1.22	0.025	0.90
Log(Assets)	–0.011***	–4.48	–0.019***	–3.63	–0.030***	–4.27
Book-to-Market	0.004	0.53	0.008	0.32	0.121	0.58
Surprise_magnitude	0.220	1.63	–0.197	–1.18	0.023	0.14
N	1,591		1,591		1,591	
Adjusted R^2	6.2%		1.0%		2.0%	

NEWS Date is an indicator variable taking the value of one for days with a News Pressure Index (see Appendix B for description) in the upper decile of the distribution, and zero otherwise.

Surprise_magnitude is the management forecast surprise, computed as the difference between the management earnings forecast and the median analyst forecast (immediately prior to the management forecast date), deflated by stock price at the beginning of the quarter. *Log(Assets)* is the natural logarithm of the book value of total assets at the beginning of the year. *Book-to-market* is the ratio of book value of equity to market value of equity at the beginning of the year.

t-statistics are based on two-way (firm and year) cluster-robust standard errors. *p*-values are based on two-tail tests. *, **, *** denote significance at 0.10, 0.05 and 0.01 levels, respectively.

Appendix A: Measurement of ex ante litigation risk

Our measure of ex ante litigation risk, *LitigationRisk*, is based on firm characteristics identified in the prior literature as being associated with private securities litigation (see, e.g., Alexander [1991]; Jones and Weingram [1996]; Skinner [1997]; Johnson, Kasznik and Nelson [2000]). For example, Johnson et al. [2000] estimate a probit model that explains class action lawsuits as a function of factors such as firm size, stock beta, stock price performance, stock volatility, share turnover, corporate governance attributes, and more. The predicted probabilities from the estimated model are then used to estimate an ex ante measure of firm-year-specific litigation risk[1].

Kim and Skinner [2012] assess the predictive ability of alternative models of litigation risk, and benchmark them against a commonly-used measure based solely on industry membership (Francis, Philbrick and Schipper [1994]). Our proxy for litigation risk is similar to Model (3) from Table 7 in their paper. Specifically, we estimate the following model:

$$SUED_t = \beta_0 + \beta_1 (FPS_t) + \beta 2 (LNASSETS_{t-1}) + \beta_3 (SALES\_GROWTH_{t-1}) + \beta_4 (RETURN_{t-1}) + \beta_5 (RETURN\_SKEWNESS_{t-1}) + \beta_6 (RETURN\_STD\_DEV_{t-1}) + \beta_7 (TURNOVER_{t-1}) + \varepsilon_t$$

$SUED_t$ equals one if the firm is subject to a private securities litigation lawsuit in year t, and zero otherwise. FPS_t equals one if the firm is in the Bio-technology (SIC codes 2833-2836), Computer Hardware (3570-3577), Electronics (3600-3674), Retail (5200-5961), Software (7371-7379), or R&D and Testing Service (8731-8734) industry, and zero otherwise. $LNASSETS_{t-1}$ is log of total assets at the end of year t–1. $SALES\_GROWTH_{t-1}$ is year t–1 sales revenue less year t–2 sales revenues, scaled by beginning of year t–1 total assets. $RETURN_{t-1}$ is the accumulated market-adjusted 12-month stock return over the period ending with year t–1 fiscal year-end month. $RETURN\_SKEWNESS_{t-1}$ is the skewness of monthly returns in year t–1. $RETURN\_STD\_DEV_{t-1}$ is the standard deviation of monthly returns in year t–1. $TURNOVER_{t-1}$

[1] This approach of measuring ex ante litigation risk purposely avoids variables that directly reflect events that trigger litigation ex post, such a significant decline in stock price. As noted by Kim and Skinner [2012], the objective of models of litigation risk is to capture factors that make firms more vulnerable to litigation before these "triggering events" occur. This is important in our setting as our goal is to investigate whether and how the risk of securities litigation affects firms' disclosure choices.

is trading volume accumulated over the 12-month period ending with year $t-1$ fiscal year-end month, scaled by beginning of year $t-1$ shares outstanding.[2]

We estimate the model using 67,205 firm-year observations, comprising all major-exchange-listed firms between 1996 and 2008 with available *Compustat* and *CRSP* data. Securities litigation data are obtained from Stanford University's Securities Class Action Clearinghouse. There are 1,573 firm-year observations with lawsuit filings in our sample (2.3% of the 67,205 firm-year observations).

The table below reports the results of estimating the litigation risk model:

Independent variables	Coefficient	*Z* Statistic
Intercept	–7.173***	–60.08
FPS_t	0.449***	7.70
$LNASSETS_{t-1}$	0.311***	22.17
$SALES\_GROWTH_{t-1}$	1.182***	10.90
$RETURN_{t-1}$	–0.224***	–5.50
$RETURN\_SKEWNESS_{t-1}$	–0.223***	–5.93
$RETURN\_STD\_DEV_{t-1}$	5.155***	18.15
$TURNOVER_{t-1}$	0.026***	21.32
N	67,205	

Z-statistics are based on standard errors clustered by firm. *, **, *** denote significance at 0.10, 0.05 and 0.01 levels, respectively.

We use the estimated model to compute the predicted probability of a lawsuit for each firm-year observation, and use it as a proxy for ex ante litigation risk (*LitigationRisk*) in our management forecast disclosure tests.

[2] Kim and Skinner [2012] also consider models with an expanded set of variables, including exchange listing, working capital, ROA, R&D intensity, goodwill intensity, fixed asset intensity, Altman's Z, market-to-book, institutional holdings, debt and equity issuances, and insider trading and holdings. They find that the inclusion of these covariates does not materially improve the predictive ability of the litigation risk model relative to that of Model (3) above. Moreover, some of these additional variables impose significant constraints on sample size. Kim and Skinner [2012] conclude that given the large cost in terms of data requirements, the payoff to including these additional variables is minor, and that their Model (3) appears to be the most cost effective option for researchers interested in measuring ex ante litigation risk.

Appendix B: Daily News Pressure Index

The Daily News Pressure Index captures the availability of newsworthy material, measured as the median number of minutes across the main TV news broadcasts (ABC, CBS, and NBC) devoted to the first three news segments in a given day. To do that, we obtain from the Vanderbilt Television News Archives a detailed list of all news segments broadcasted by the three networks on their Evening News each day between 1995 and 2007.[1] We then count, for each network, the number of seconds spent on the first three segments (excluding commercials, anchor segments, and program introductions). The daily median number of seconds is then divided by 60 to derive a daily news pressure index. Because the duration of the Evening News program is 30 minutes, the news pressure index takes a value between (close to) 0 and 30.

An example: News events on August 2, 2007: As detailed below, ABC spent 13:10 minutes, 2:50 minutes, and 0:30 minutes on its first three news segments (total of 990 seconds). CBS spent 12:30 minutes, 2:50 minutes, and 1:30 minutes (total of 1,010 seconds), and NBC spent 13:10 minutes, 2:40 minutes, and 0:30 minutes (total of 980 seconds). The median number of seconds spent on the first three news segments was 990 seconds, or 16.5 minutes.

No.	Date	Headline	Network	Begin	Length
1	08/02/2007	Preview/Introduction Charles Gibson (Minneapolis)	ABC	05:30:00 pm	00:50
2	08/02/2007	**Minneapolis, Minnesota / Bridge Collapse / The Day After**	ABC	05:30:50 pm	**13:10**
3	08/02/2007	Upcoming Items (Minneapolis: Charles Gibson)	ABC	05:44:00 pm	00:40
4	08/02/2007	(Commercial: VESIcare; Caduet; Florida orange juice.)	ABC	05:44:40 pm	02:30
5	08/02/2007	**Infrastructure**	ABC	05:47:10 pm	**02:50**
6	08/02/2007	Upcoming Items (Minneapolis: Charles Gibson)	ABC	05:50:00 pm	00:10
7	08/02/2007	(Commercial: Zetia; Gas-X; Benefiber; Centrum; Detrol.)	ABC	05:50:00 pm	03:00
8	08/02/2007	**Toy Recall**	ABC	05:53:00 pm	**00:30**
9	08/02/2007	Stock Market Report (Minneapolis: Charles Gibson)	ABC	05:53:30 pm	00:10
10	08/02/2007	Arctic Grab	ABC	05:53:40 pm	00:20
11	08/02/2007	Upcoming Items (Minneapolis: Charles Gibson)	ABC	05:54:00 pm	00:20
12	08/02/2007	(Commercial: Advair; Red Lobster; Serenity; Plavix)	ABC	05:54:20 pm	03:00
13	08/02/2007	Minneapolis, Minnesota / Bridge Collapse / Book	ABC	05:57:20 pm	01:00
14	08/02/2007	Good Night	ABC	05:58:20 pm	00:10

[1] The Vanderbilt Television News Archives contain evening news broadcasts from the major U.S. national television networks beginning August 5, 1968. We focus on ABC, CBS, and NBC broadcasts because they have retained the same format (i.e., 30 minutes aired between 5:30-6:00pm) over our sample period, 1995-2007. In contrast, CNN had varying news formats over our sample period, and Fox News is only available after 2004.

No.	Date	Headline	Network	Begin	Length
1	08/02/2007	Preview/Introduction Katie Couric (Minneapolis)	CBS	05:30:00 pm	00:50
2	08/02/2007	**Minneapolis, Minnesota / Bridge Collapse / The Day After**	CBS	05:30:50 pm	**12:30**
3	08/02/2007	Upcoming Items (Minneapolis: Katie Couric)	CBS	05:43:20 pm	00:20
4	08/02/2007	(Commercial: Hyundai; Dannon; Prilosec; Oral-B.)	CBS	05:43:40 pm	02:30
5	08/02/2007	**Minneapolis, Minnesota / Bridge Collapse / Infrastructure**	CBS	05:46:10 pm	**02:50**
6	08/02/2007	Upcoming Items (Minneapolis: Katie Couric)	CBS	05:49:00 pm	00:10
7	08/02/2007	(Commercial: Serenity; Lanacane; Caduet; Advair.)	CBS	05:49:10 pm	02:30
8	08/02/2007	**Toy Recall**	CBS	05:51:40 pm	**01:30**
9	08/02/2007	Stock Market Report (Minneapolis: Katie Couric)	CBS	05:53:10 pm	00:30
10	08/02/2007	(Commercial: "CBS Evening News"; Beano; Poligrip)	CBS	05:53:40 pm	02:50
11	08/02/2007	Minneapolis, Minnesota / Bridge Collapse	CBS	05:56:30 pm	02:20
12	08/02/2007	Good Night	CBS	05:58:50 pm	00:10

No.	Date	Headline	Network	Begin	Length
1	08/02/2007	Preview/Introduction Brian Williams (Minneapolis)	NBC	05:30:00 pm	00:30
2	08/02/2007	**Minneapolis / Bridge Collapse / The Day After**	NBC	05:30:30 pm	**13:10**
3	08/02/2007	Upcoming Items (Minneapolis: Brian Williams).	NBC	05:43:40 pm	00:30
4	08/02/2007	(Commercial: Bayer; Zetia; Hyundai)	NBC	05:44:10 pm	02:20
5	08/02/2007	**Minneapolis / Bridge Collapse / Infrastructure**	NBC	05:46:30 pm	**02:40**
6	08/02/2007	Upcoming Items (Minneapolis: Brian Williams)	NBC	05:49:10 pm	00:30
7	08/02/2007	(Commercial: Purina; Imodium; Oral-B; Flomax.)	NBC	05:49:40 pm	02:30
8	08/02/2007	**Iraq / Gates**	NBC	05:52:10 pm	**00:30**
9	08/02/2007	Toy Recall / China / Tainted Products	NBC	05:52:40 pm	01:50
10	08/02/2007	Stock Market Report (Minneapolis: Brian Williams)	NBC	05:54:30 pm	00:10
11	08/02/2007	Upcoming Items (Minneapolis: Brian Williams)	NBC	05:54:40 pm	00:10
12	08/02/2007	(Commercial: Avodart; Serenity; Red Lobster; Viagra)	NBC	05:54:50 pm	02:50
13	08/02/2007	Minneapolis, Minnesota / Bridge Collapse	NBC	05:57:40 pm	00:50
14	08/02/2007	Good Night	NBC	05:58:30 pm	00:10

In contrast, on ***August 8, 2007***, ABC spent 300 seconds on *Heat Wave*, *Global Weather*, and *Mine Cave-in*, CBS spent 220 seconds on *Mine Cave-in*, *Minneapolis Bridge Collapse*, and *Wild Weather*, and NBC spent 640 seconds on *Heat Wave*, *Shuttle Endeavour Liftoff*, and *Utah Mine Collapse*. Thus, on ***August 8, 2007*** the median number of seconds spent on the first three news segments across the three networks is 300 seconds, or 5.0 minutes. We interpret this as an indication that the "news pressure" on August 2, 2007 is greater than on August 2, 2007.[2]

[2] When the news broadcast deviates from the normal 30-minute format, typically when there are extraordinary events (e.g., on September 11, 2001), we set the index to missing value.

Figure B1: Daily News Pressure Index between January 1, 1995, and December 31. 2007:

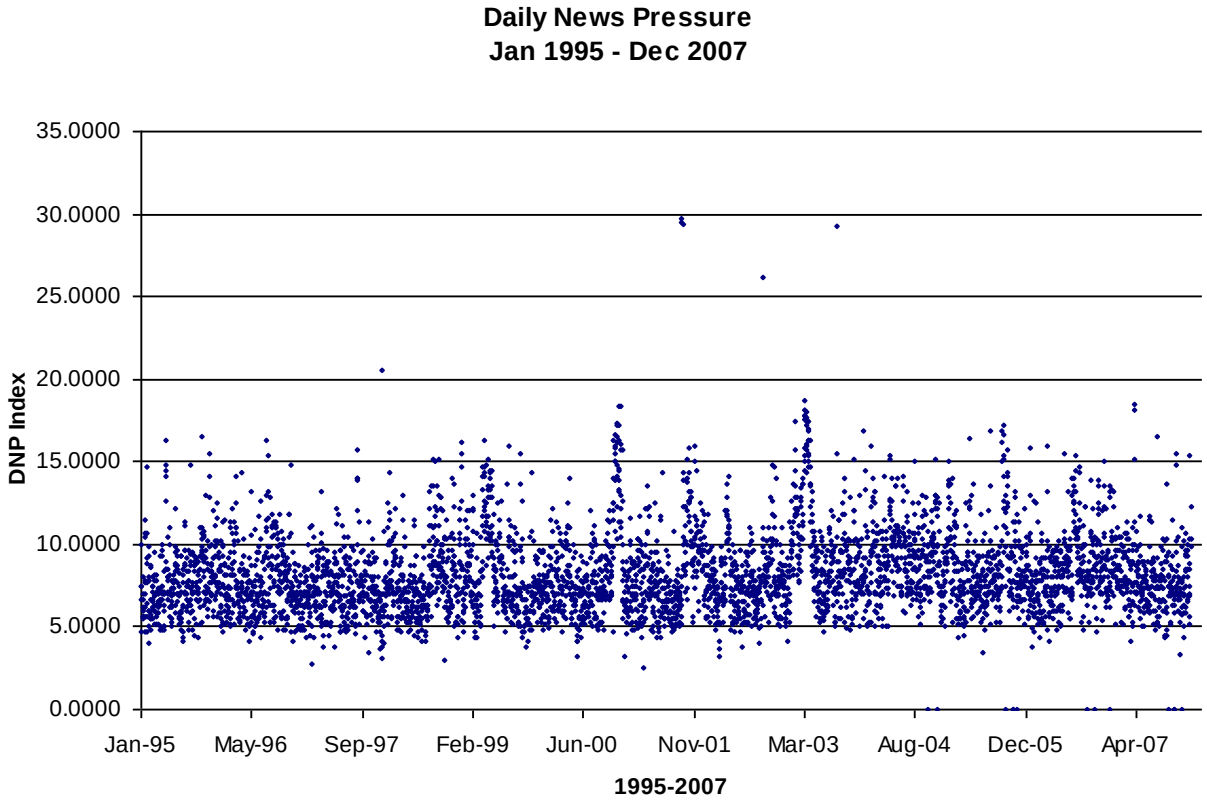

Table B1: Dates of the two highest News Pressure Index (NPI) days for each year between 1995 and 2007, along with the main news event on that day.

Year	Date	Top News Stories	NPI
2007	16 April	Virginia Tech shooting	18.50
	17 April	Virginia Tech shooting: Day 2	18.17
2006	20 March	Iraq War: Three Years Later	16.00
	4 January	West Virginia Coal Mine Explosion	15.83
2005	1 September	Hurricane Katrina	17.17
	7 July	London bombings	16.83
2004	18 January	Campaign 2004 / Iowa	15.92
	7 April	Iraq**:** Fallujah battles	15.33
2003	14 August	New York City Blackout	29.25
	22 March	Invasion of Iraq: Day 3	18.75
2002	11 September	9/11 Commemoration	26.17
	24 October	Sniper Shooting in Washington: Arrest of Suspects	14.83
2001	13 September	9/11 Attack: Day 3	29.67
	12 September	9/11 Attack: Day 2	29.50
2000	26 November	Florida Recount - Certification by Katherine Harris	18.33
	8 December	Florida Recount - Supreme Court Ruling	18.33
1999	1 April	Kosovo: U.S. Soldiers Captured	16.33
	18 July	John F. Kennedy, Junior: Plane Crash	16.00
1998	16 December	U.S. Missile Attack on Iraq	16.17
	18 December	Clinton Impeachment	15.50
1997	23 December	Oklahoma City Bombing: Trial	20.50
	31 August	Princess Diana's Death	15.67
1996	18 July	TWA Flight 800 Explosion	16.25
	27 July	Olympic Games Bombing in Atlanta	15.33
1995	3 October	O.J. Simpson Trial: The Verdict	16.50
	22 April	Oklahoma City Bombing	16.33