SPREADING THE WORD: CAPITAL MARKET CONSEQUENCES OF BUSINESS PRESS COVERAGE OF MANAGEMENT EARNINGS GUIDANCE

A Dissertation

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ABSTRACT

This study investigates the role of the business press in disseminating management earnings guidance news to capital market participants. Using a unique sample of over 55,000 articles that relate specifically to management guidance, I find that 48 percent of all guidance receives coverage in the business press, with substantial within-firm variation. I then identify firm and guidance characteristics that are associated with the likelihood that guidance receives press coverage. Controlling for the endogeneity of press coverage, I find that dissemination in the press has a significant impact on the market reaction to guidance, and this effect is economically large. This study is the first to provide evidence that there is systematic variation in the extent to which guidance news is disseminated through the press, and that this variation has a significant effect on the market consequences of guidance.

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I. INTRODUCTION

Management earnings guidance is a primary means by which the market adjusts its expectations of firms' earnings performance (Penman 1980; Cotter et al. 2006; Beyer et al. 2010).[1] One of the main reasons managers choose to issue earnings guidance is to reduce information asymmetry and align market expectations of firm performance with their own private information (Ajinkya and Gift 1984; King et al. 1990). However, the capital market consequences of issuing earnings guidance are dependent on the guidance being effectively communicated to the market. In this study, I examine the extent to which the business press facilitates this process by disseminating the information contained in management earnings guidance to market participants. I first identify firm and guidance characteristics that affect the likelihood that management guidance receives press coverage. I then examine the effects of guidance dissemination in the business press on market participants' reactions to the information contained in the guidance.

Empirical evidence of variation in guidance dissemination and the associated market effects can increase our understanding of how information flows from managers to the market and provide evidence on an important link between managers' voluntary actions and the effects of those actions. Prior research on management guidance provides extensive evidence that the market reacts to the magnitude of the earnings news in the guidance as well as the credibility of the guidance (e.g., Jennings 1987; Hutton and Stocken 2009; Yang 2012). Implied in most studies is the assumption that the extent of guidance dissemination, or the timing and degree to which market participants are made aware of the guidance, is irrelevant. I propose that the role of the business press in disseminating guidance news to the market is critical because earnings

[1] For example, Beyer et al. (2010) find that management earnings guidance provides 59 percent of all accounting-based information used by the market, while Cotter et al. (2006) report that 47 percent of analysts revise their forecasts within five days after guidance. Note that I use the terms "management earnings guidance" and "management earnings forecast" interchangeably throughout the paper.

guidance disclosures are voluntary and typically unexpected (Doyle and Magilke 2012). I hypothesize that the market reaction to the information contained in management guidance is a function of the extent to which the guidance is disseminated to market participants.

My predictions are based on prior empirical studies that examine the effects of information dissemination in other settings and on theoretical models that are based on the limited attention and information processing power of individuals. Several recent empirical studies provide evidence that the extent and method by which information is disseminated to investors can significantly impact firms' information environments and stock prices. These studies examine various dissemination channels such as the business press (e.g., Bushee et al. 2010; Engelberg and Parsons 2011; Li et al. 2011), internet searches (Drake et al. 2012), social media (Blankespoor et al. 2013), and online financial message boards (Lerman 2011). Hirshleifer and Teoh (2003) and Bloomfield (2002) provide a theoretical basis for the notion that the manner in which information is communicated to investors is relevant to prices. Hirshleifer and Teoh (2003) develop a model in which informationally equivalent disclosures have different effects on investor perceptions, depending on how and where the information is presented. Bloomfield (2002) posits that, because press coverage substantially reduces information acquisition costs, the dissemination of disclosures in the press should be associated with greater price reactions to the information contained in the disclosures, a conjecture I explicitly test within the context of management earnings guidance.

The above empirical and theoretical evidence suggests that press coverage may have a significant effect on the capital market consequences of management guidance. However, a long-held assumption in capital markets research is that once a firm publicly discloses value-relevant information, it is instantaneously incorporated into prices, making the mechanism through which the information is disseminated to market participants irrelevant (Merton 1987). If sophisticated

market participants such as institutional investors and financial analysts closely monitor the firms within their purview, they may not depend on the business press for information, particularly with respect to an important, value-relevant corporate disclosure such as earnings guidance (Beyer et al. 2010). In addition, numerous other mechanisms now exist that convey corporate disclosures to market participants; these include corporate websites, email alerts, social media, webcasts, broadcast media, and EDGAR (Blankespoor et al. 2013). Thus, whether press coverage has a significant effect on the pricing of guidance news is ultimately an empirical question.

I obtain management earnings guidance data from First Call and business press data from RavenPack. My sample of guidance consists of 66,598 management forecasts issued during the years 2001 to 2010. RavenPack is a news analytics firm with a special partnership with Dow Jones (DJ). Through this partnership, RavenPack is able to provide access to the full DJ news archives, which consists of all *DJ Newswire* and *Wall Street Journal* (WSJ) articles. RavenPack provides information on the firm(s) to which the articles relate, the exact time the articles were published, and most importantly for the sake of this study, the news events to which the articles pertain.[2] Because the focus of my analysis is on the information dissemination role of the business press, I use newswire articles alone to identify guidance press coverage (Soltes 2010; Li et al. 2011), although I utilize the full DJ news archives to measure control variables related to press coverage. Using those newswire articles identified by RavenPack as relating specifically to management earnings guidance, I classify 48 percent of the guidance observations in my sample as having received coverage in the business press.[3]

[2] Refer to the concluding section of the paper for a discussion of the advantages and disadvantages associated with using the DJ news archives as a source of business press data. Also, Section 6 discusses results using an alternative source of business press articles.

[3] As a comparison, in untabulated analysis I find that 79 percent of all quarterly earnings announcements for my sample firms received coverage in the business press. This difference likely reflects the greater

Using this unique measure of management earnings guidance press coverage, I first identify guidance and firm characteristics that are associated with the likelihood that guidance receives coverage in the business press. I find that guidance is more likely to receive press coverage when it contains more absolute earnings news, when it is a quarterly earnings forecast (as opposed to annual), when it is bundled with an earnings announcement, and when it is issued on a slower news day. I also find that firms with more prior press coverage, firms in a major stock index, and firms with higher levels of institutional ownership are more likely to receive guidance press coverage. Additionally, I find evidence of significant within-firm variation in guidance press coverage.

Next, I examine the effect of press coverage on investors' reaction to the earnings news provided by management guidance. If the dissemination of guidance information by the business press increases investor awareness, then guidance press coverage should be associated with a stronger price reaction to the earnings news contained in the guidance. Because press coverage is an endogenous choice made by reporters, I test this assertion using propensity-score and within-firm matched sample research designs to control for factors that may affect both the likelihood of guidance receiving press coverage and the capital market consequences of that coverage. This research method allows me to more clearly attribute the observed market consequences to the press coverage itself, rather than to firm or guidance characteristics associated with press coverage. I find that guidance coverage in the business press is associated with a significant increase in the abnormal price reaction to guidance news. The economic effect of this result is significant: the price reaction to guidance news nearly doubles when the guidance receives press coverage. These results suggest that dissemination in the business press substantially affects how investors respond to management earnings guidance.

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publicity and attention associated with earnings announcements relative to management guidance (Doyle and Magilke 2012).

To provide further evidence on the role of the business press in disseminating guidance news to market participants, I examine the effect of guidance press coverage on financial analysts' reaction to the guidance. I find that press coverage is significantly positively associated with the percentage of analysts who revise their forecasts immediately following the issuance of the guidance. This finding provides the first empirical evidence that the forecasting decisions of financial analysts are influenced by the business press coverage of the firms they follow. Taken together, the above results suggest that the responses of both investors and financial analysts are significantly affected by guidance press coverage.

In additional analyses, I document differences in the timing of long-window return realizations for covered and non-covered guidance. I also find that the effect of press coverage is attenuated when guidance is issued concurrently with an earnings announcement due to the publicity typically associated with earnings announcements. Next, I provide evidence that suggests my results are not driven by endogeneity related to selection due to unobservable factors or simultaneity bias. Finally, I find that my results are robust to alternative measures of business press coverage and guidance earnings news.

The results of this study contribute to the literatures on management earnings guidance and the information dissemination role of the business press. Prior research on management earnings guidance has examined numerous capital market consequences of managers' forecasting decisions, including price responses, changes in information asymmetry, reputational effects, and changes in analysts' forecasting behavior (see Hirst et al. (2008) for a review of this literature). However, this research has not explored the variation or relevance of the dissemination of guidance news to market participants. This study is the first to provide evidence that there is systematic variation in the extent to which guidance information is disseminated, and that this variation has a significant effect on the market consequences of guidance. This

evidence increases our understanding of the economic implications of firms' voluntary disclosure practices, which future research may need to consider. In addition, Bushee et al. (2010) call for research examining how managers can act to improve the dissemination of their disclosures by the press. Understanding the determinants of press coverage of management guidance is a useful step in this direction. Managers can use this information, as well as the evidence provided in this study regarding the market consequences of press coverage of earnings guidance, to determine appropriate voluntary disclosure strategies for their firms.

II. HYPOTHESES DEVELOPMENT

Under the expectations-adjustment hypothesis, managers issue earnings guidance in order to align market expectations of firm performance with their own private information (Ajinkya and Gift 1984; King et al. 1990). The impounding of this private information into stock prices reduces information asymmetries in the market and provides firms with numerous potential benefits including a reduced cost of capital, lower investor transaction costs, lower stock price fluctuations, and better relations with analysts (Coller and Yohn 1997; Hutton and Stocken 2009; Feng and Koch 2010). However, managers' ability to successfully align market expectations with their own is contingent on the extent to which market participants incorporate the guidance into their belief revision and decision-making processes (Hirst et al. 2007; Feng and McVay 2010).

Beginning with Jennings (1987), prior research has generally taken the market reaction to management earnings guidance to be a function of the information contained in the guidance and the credibility (i.e., believability) of the guidance (e.g., Williams 1996; Mercer 2004; Yang 2012; Ng et al. 2013). Building on the findings of recent empirical and theoretical research in accounting and finance, I propose that the market reaction to guidance is also a function of the extent to which the guidance information is disseminated to market participants. Loosely adapted from the framework of Feng and Koch (2010), Figure 1 summarizes my framework for analyzing the market consequences of management guidance. In this setting, managers issue earnings guidance in order to align market expectations with their own private information. However, before market participants can evaluate the information content and credibility of the guidance, the information must first be brought to their attention.

Prior research examining the market consequences of management earnings guidance generally relies on the (typically implied) assumption of instantaneous information diffusion and

efficient processing of publically available information by market participants.[4] Under this assumption, the mechanism by which the information is disseminated to the market becomes irrelevant, and the market reaction is solely a function of the information content and credibility of the disclosure. However, the findings of recent studies suggest that the business press can play an economically significant role in disseminating information to investors. For example, Bushee et al. (2010) provide evidence that press coverage during earnings announcement periods reduces bid-ask spreads and improves market depths. Additionally, Li et al. (2011) document significant market reactions to newswire alerts related to previously publicly available 10-K and 10-Q filings.

Although the business press is widely assumed to be the largest and most broadly disseminated source of corporate information (Fang and Peress 2009; Bushee et al. 2010), there are a number of alternative methods for market participants to obtain information regarding firm disclosures.[5] Market participants can actively seek disclosure information through channels such as corporate websites, internet searches, and EDGAR; firms can "push" the information to users via direct-access information technologies such as RSS feeds, email alerts, or social media posts; and information can be provided by other sources including broadcast media and financial blogs. Recent research provides evidence that these other dissemination channels can also affect market activity. For example, Drake et al. (2012) find that the amount of effort expended by investors in obtaining company-specific financial news through Google searches has a significant impact on the price discovery process around earnings announcements, while Blankespoor et al. (2013)

[4] Refer to Bloomfield (2002), Merton (1987), Diamond (1985), and Grossman and Stiglitz (1980) for more information regarding this assumption. One prior management guidance study that does consider information dissemination is Bamber and Cheon (1998). They argue that guidance issued in press releases reach a broader audience than guidance issued in meetings with analysts or reporters. However, their discussion is in the context of the pre-Reg FD period, and they do not examine the capital market effects of these different venue choices.

[5] See Blankespoor et al. (2013) for a more detailed discussion of the various mechanisms that transmit disclosures to market participants, and Bushee et al. (2010) for a discussion of the role of the business press as an information intermediary.

find that corporate postings on the social media site Twitter reduce bid-ask spreads and improve market depths.

The dissemination channel examined in this study is the business press, and the *Dow Jones (DJ) Newswires* in particular. Prior research has shown that the business press, in its role as an information intermediary, can have a substantial influence on market activity (e.g., Huberman and Regev 2001; Kothari et al. 2009b; Engelberg and Parsons 2011; Rees et al. 2012). Additionally, numerous prior studies have used DJ to measure firms' press coverage (e.g., Barber and Odean 2008; Tetlock 2010, 2011; Engelberg et al. 2012). Tetlock (2007) argues that the *DJ Newswires* are a natural choice for a business press data source that impacts the market, due to their large circulation and influence. Similarly, Chan (2003, 230) notes that, "by far the sources with the most complete coverage across time and stocks are the *DJ Newswires*. This source does not suffer from gaps in coverage, and it is the best approximation of public news for traders."

Under the framework proposed above, coverage in the business press increases market participants' awareness of the information provided in management earnings guidance, thereby enabling them to appropriately respond to the information content and credibility of the disclosure. Similar to the argument made in Barber and Odean (2008) regarding stock purchases, market participants must first be made aware of management guidance before they can respond to it. In the words of Barber and Odean (2008, 785), "preferences determine choices *after* attention has determined the choice set."

There is also theoretical support for the notion that the extent and method by which information is disseminated to the market can have economic implications. For example, the model presented in Hirshleifer and Teoh (2003) departs from the assumption in traditional disclosure models that investors are fully rational and capable of efficiently processing all

relevant information. In their model, investors have limited attention and processing power, and must therefore allocate their attention on a cost-benefit basis, potentially neglecting value-relevant information. Accordingly, information that is more easily obtained and processed will have a stronger impact on investor perceptions.[6] A similar argument is made in Bloomfield (2002), who predicts that firm disclosures that are disseminated in the press should be associated with greater market reactions because dissemination in the business press represents an inverse measure of the costs of identifying and collecting relevant information. By reducing the information acquisition costs associated with searching for and processing firm news, the business press can increase the amount of information that is efficiently assimilated by market participants (Merton 1987).

Based on the above empirical and theoretical evidence, I hypothesize that market participants react more strongly to the information provided by management earnings guidance when the guidance receives coverage in the business press. To empirically test this proposition, I examine the responses of two key groups of market participants to press coverage of management guidance: investors and financial analysts.[7] My primary hypothesis is stated in alternative form as follows:

> *H_1: There is a positive relation between business press coverage of management earnings guidance and the market reaction to the information contained in the guidance.*

[6] Referring to the problem that limited attention may cause investors to fail to identify and process some aspect of the economic environment correctly, Hirshleifer and Teoh (2003, 345) state that, "the problem can be ameliorated in part if an individual can *hire an intermediary* to pay attention on his behalf." This could implicitly occur when an investor subscribes to a business press publication.

[7] In addition to investors, analysts are a key consumer of management earnings guidance, and managers often issue guidance in order to influence analysts' expectations (Graham et al. 2005; Cotter et al. 2006). Evidence in prior research suggests that, similar to investors, analysts also have limited attention and processing power (Hirshleifer and Teoh 2003), and that their ability to process and react to information is affected by both the complexity of the information (Plumlee 2003; Bradshaw et al. 2009), as well as the manner in which the information is presented (Hirst and Hopkins 1998; Hopkins et al. 2000).

III. SAMPLE SELECTION AND COMPOSITION

My sample of management earnings guidance is obtained from First Call's Company Issued Guidance (CIG) database. During my sample period of 2001 to 2010, the CIG database contains 89,725 unique quantitative (i.e., point or range) management forecasts of quarterly or annual earnings per share denoted in U.S. dollars.[8] I remove guidance issued after the end of the forecasting period in order to focus on forecasts of earnings rather than pre-announcements of actual earnings (Hirst et al. 2008; Koch and Park 2011). I also eliminate guidance issued by firms without stock price and returns data available from CRSP and financial information available from Compustat, as well as guidance issued by firms without sufficient analyst coverage and actual earnings data.[9] Of the 66,598 management earnings forecasts in my final sample, 9,286 are "stand-alone" forecasts, or management guidance that is not bundled with an earnings announcement or issued on the same day as another forecast by the same firm. The sample selection process is detailed in Panel A of Table 1.

My sample of business press articles comes from RavenPack, a news analytics firm. Through a unique partnership with Dow Jones (DJ), RavenPack is able to provide access to the full DJ news archives, which consists of all *DJ Newswire* and *Wall Street Journal* articles.

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[8] Following prior literature, I exclude open-ended and qualitative guidance that does not provide a numerical value of earnings per share necessary to identify the earnings news contained in the guidance (e.g., Rogers and Stocken 2005; Hilary and Hsu 2011). Including open-ended guidance, where the upper/lower bound of the guidance is used to calculate guidance news, does not change my inferences. Chuk et al. (2013) identify several issues related to the coverage of the CIG database, particularly with regards to guidance issued prior to the enactment of Reg FD, and guidance issued by firms without analyst coverage. These issues are not a concern in my study as I focus on the post-Reg FD period and I require analyst coverage. Further, I do not compare firms that issue guidance to those that do not, which eliminates the need to make any assumptions about firms not found in the CIG database.

[9] I require the issuance of earnings forecasts by at least two unique analysts within 90 days prior to the guidance date in order to calculate guidance earnings news, as described in the following section. Additionally, I eliminate guidance issued by firms with a stock price lower than $2.00 in order to mitigate the small denominator problem. Including pre-announcements and guidance issued by firms with an analyst following of one or a stock price lower than $2.00 does not affect my inferences. Results are also robust to including only quarterly or annual guidance in the regressions separately, as well as eliminating financial services and utility firms from the sample.

During my sample period of 2001 to 2010, the DJ news archives contain roughly 24.7 million articles. In addition to providing information on the firm(s) the articles relate to and the exact time the articles were published, RavenPack uses proprietary algorithms to identify the news events to which the articles pertain.[10]

Although I use the full sample of business press articles in calculating several of my control variables (discussed in the following sections), my primary interest lies in newswire articles that relate specifically to management earnings guidance. I use newswire articles alone to identify guidance press coverage because the focus of my analysis is on the information dissemination role of the business press (Soltes 2010; Li et al. 2011). During my sample period of 2001 to 2010, there are 55,971 *DJ Newswires* articles identified by RavenPack as relating to management earnings guidance. I code management guidance as receiving coverage in the business press if there was a guidance-related article written about the firm on the same day that the guidance was announced by the firm (day t).[11] Using this methodology, I classify 31,955 of the 66,598 management forecasts in my final sample as having received press coverage.

One potential concern with this approach to identifying whether or not management earnings guidance received coverage in the business press is that if many of the guidance-related articles were published in the days following day t, rather than on the date the guidance was

[10] RavenPack provides ISIN firm identifiers, which enables their data to be easily merged with Compustat and other commonly used databases. RavenPack also provides a relevance score (0 to 100), which indicates the relevance of the article to the company. Any article with an event category (i.e. management earnings guidance) assigned to it by definition has a relevance score of 100. Based on discussions with RavenPack representatives, I require a relevance score of 90 or above for my control variables that are not based on a specific event category. I also remove press releases, articles designated by RavenPack as "Tabular Material", and any articles relating to equity market trade imbalances from my sample. Relaxing these restrictions does not affect my results.

[11] I use an indicator variable equal to one if there were one or more guidance-related articles published on the day the guidance was announced, rather than a count of the number of articles. Newswires often issue multiple updates within a short period of time, but these updates are unlikely to further disseminate the original information (Soltes 2010). The use of an indicator variable is consistent with prior research (e.g., Barber and Odean 2008; Tetlock 2010; Engelberg et al. 2012), although I find similar results using a count of the number of articles. Also, Solomon and Soltes (2012) note that a one-day window is appropriate when measuring press coverage of an earnings event.

announced, or if the dates in the RavenPack and CIG databases are misaligned, then my measure of guidance press coverage could contain measurement error. To address this concern, Figure 2 provides a mapping of the guidance-related article dates from RavenPack into the guidance issuance dates from the CIG database. I find that of the 66,598 management forecasts in my sample, 31,955 have press coverage on day t, while only 502 management forecasts are classified as having press coverage on any of the six days surrounding day t. This evidence suggests that my measure is accurately capturing guidance press coverage.

To provide some descriptive evidence regarding the composition of my sample, Panels B, C, and D, of Table 1 present the distribution of the sample across years, industries, and weekdays, respectively. As shown in Panel B of Table 1, the guidance observations are relatively evenly distributed throughout the sample period, with an average of 6,660 observations per year. Additionally, 47.9% of the guidance in my sample received press coverage, while, on average, 64.8% of my sample firms received at least some guidance press coverage during a given year. Panel C of Table 1 presents the composition of the sample across industries. Although there are differences in press coverage across industries, these differences do not appear to be substantial, with the percentage of guidance receiving coverage ranging from a low of 39.4% in the telecom industry to a high of 57.3% in the chemical industry. As shown in Panel D of Table 1, guidance is most frequently issued on Thursdays, with far fewer announcements made on Mondays and Fridays. However, the percentage of guidance receiving press coverage is relatively consistent across the different days of the week, ranging from 46.0% on Tuesdays to 49.6% on Thursdays.

Finally, Figure 3 provides an examination of the within-firm variation in guidance press coverage. There are 2,914 unique firms in my sample, of which 1,939 received guidance press coverage at least once during my sample period of 2001 to 2010. For these 1,939 firms, I identify the percentage of their guidance issued during this time that received press coverage, and call

this variable *Press_Cover_%*. A firm whose guidance always (50% of the time) received press coverage would have a value of *Press_Cover_%* equal to 1.0 (0.5). The distribution of *Press_Cover_%* thus captures the degree of within-firm variation in guidance press coverage in my sample. As shown in Figure 3, there is substantial variation in within-firm guidance press coverage, as 50% of the firms that received some guidance press coverage received it for less than 60% of their guidance (median = 0.56), and less than 10% of these firms received guidance press coverage for 90% or more of their guidance (90th percentile = 0.87). This suggests that it is more than characteristics of the firm itself that determine guidance press coverage, and thus motivates the inclusion of guidance characteristics in the determinants of coverage analysis discussed in the following section.

IV. DETERMINANTS OF GUIDANCE PRESS COVERAGE

4.1 Research Method

The first stage of my analyses is an examination of the factors that determine business press coverage of management earnings guidance. Because the coverage decisions of the press are not exogenous (Bushee et al. 2010), it is important to control for these factors in my subsequent analyses. To provide evidence on the determinants of guidance press coverage, I estimate the following pooled cross-sectional logistic regression with standard errors clustered by firm:[12]

$$\begin{aligned} \text{Press_Cover} = {} & \alpha + \beta_1\text{Abs_Guide_News} + \beta_2\text{Bad_Guide_News} + \beta_3\text{Guide_Reputation} \quad (1) \\ & + \beta_4\text{Annual} + \beta_5\text{Horizon} + \beta_6\text{Range} + \beta_7\text{Bundled} + \beta_8\text{Multiple} + \text{P_Guide_Press_Cover} \\ & + \beta_{10}\text{P_Month_Press_Cover} + \beta_{11}\text{SP1500} + \beta_{12}\text{Instit_Own} + \beta_{13}\text{Ln_MVE} + \beta_{14}\text{BTM} \\ & + \beta_{15}\text{ROA} + \beta_{16}\text{Loss} + \beta_{17}\text{Q_ERC} + \beta_{18}\text{Meet_Beat_Hist} + \beta_{19}\text{P_Month_Abn_Ret} \\ & + \beta_{20}\text{P_Month_Ret_Vol} + \beta_{21}\text{P_Month_Turn} + \beta_{22}\text{Ln_Follow} + \beta_{23}\text{Dispersion} \\ & + \beta_{24}\text{After_Hours} + \beta_{25}\text{Other_Press_Cover} + \beta_i\text{Industry_FE} + \beta_i\text{Year_FE} \\ & + \beta_i\text{Month_FE} + \beta_i\text{Day_Of_Week_FE} + \varepsilon. \end{aligned}$$

The dependent variable in the above regression equation, *Press_Cover*, is an indicator variable equal to one if the guidance received press coverage, and zero otherwise. The independent variables in Equation (1) represent various guidance and firm characteristics that are likely to influence the likelihood that management guidance receives press coverage. The first guidance characteristic is the absolute value of the earnings news contained in the guidance (*Abs_Guide_News*), where guidance earnings news is defined as the guidance minus the prevailing consensus analyst forecast, scaled by stock price as of two days prior to the guidance.

[12] Results for this and all other reported regressions are robust to clustering standard errors by both firm and day, firm and year, industry and day, or industry and year, after removing the corresponding fixed effects from the model (Petersen 2009; Gow et al. 2010).

Solomon and Soltes (2012) document a positive relation between earnings news and press coverage of earnings announcements. For guidance that is bundled with an earnings announcement, I use the measure of conditional guidance news developed in Rogers and Van Buskirk (2012), which specifically accounts for the information provided by the earnings announcement.[13] In addition to the level of earnings news, the sign of the news is also likely to influence press coverage (Dyck and Zingales 2003; Green et al. 2012). Thus, I include *Bad_Guide_News*, an indicator variable equal to one if the guidance contains negative earnings news, and zero otherwise.

Other guidance-related factors that may be associated with press coverage include the firm's historical reputation for issuing accurate guidance (*Guide_Reputation*; Hutton and Stocken 2009), whether the guidance is for quarterly or annual earnings (*Annual*; Pownall et al. 1993), and the forecasting horizon (*Horizon*; Baginski and Hassell 1990) and precision (*Range*; Baginski et al. 1993) of the guidance. Guidance issued with an earnings announcement (*Bundled*; Rogers and Van Buskirk 2012), and guidance issued on the same day that the firm issues guidance for other periods (*Multiple*), should generate greater press attention. Guidance press coverage is also likely to be positively associated with coverage of the firm's prior earnings guidance (*P_Guide_Press_Cover*).

In terms of firm characteristics, I first consider the firm's recent general coverage in the business press (*P_Month_Press_Cover*), as this likely serves as a strong indication of the interest

[13] I calculate the consensus analyst forecast as the mean of the most recent forecast issued by each individual analyst during the 90 day period ending three days prior to the guidance date. All results presented throughout the paper are robust to using the median consensus forecast instead of the mean, as well as shortening the pre-guidance window to 60 or 30 days or using the single most recent analyst forecast. Not adjusting bundled guidance earnings news using the conditional expectations model of Rogers and Van Buskirk (2012) does not affect my results. Refer to their paper for a detailed explanation of how the conditional guidance news measure is calculated. See Section 6 for a discussion of additional measures of guidance earnings news. Also, I use analyst forecasts that are not split adjusted (Payne and Thomas 2003). Therefore, I use shares split factors provided in CRSP to ensure that the analyst forecasts and management guidance are based on the same number of shares.

that the press has in the firm. Next, both discussions with reporters and the findings of prior research (e.g., Chen et al. 2004; D'Souza et al. 2010; Li et al. 2011) suggest that firms whose shares are included in major market indexes have increased investor awareness, and are thus of primary interest to the business press. I therefore include an indicator variable equal to one if the firm's stock is included in the S&P 500, S&P MidCap 400, or S&P SmallCap 600 index (*SP1500*). Further, institutional investors are a key clientele of newswire services (Li et al. 2011), which suggests that guidance issued by firms with greater institutional ownership will be more likely to receive press coverage (*Instit_Own*). I also include firm size as a more general proxy for the market's demand for information about the firm (*Ln_MVE*; Bushee et al. 2010).

Based on prior research (e.g., Engelberg 2008; Gaa 2009; Li et al. 2011), other firm characteristics included in my determinants of press coverage model are the book-to-market ratio (*BTM*), return on assets (*ROA*), and an indicator variable equal to one for loss firms (*Loss*). I expect guidance press coverage to be positively associated with the market's response to the firm's recent earnings news (*Q_ERC*), as well as the firm's history of meeting or beating earnings expectations (*Meet_Beat_Hist*). The firm's recent stock returns (*P_Month_Abn_Ret*), return volatility (*P_Month_Ret_Vol*), and stock turnover (*P_Month_Turn*), as well as analyst following (*Ln_Follow*) and forecast dispersion (*Dispersion*), are also likely to be associated with guidance press coverage.

Finally, to proxy for supply-side constraints, I include an indicator for guidance issued after trading hours (*After_Hours*; Doyle and Magilke 2012), and a count of the number of other firms covered in the press on the day the firm announced the guidance (*Other_Press_Cover*).[14]

[14] Reporters typically specialize in a particular industry. Thus, as an alternative proxy for supply-side constraints, I include *Other_Ind_Press_Cover*, equal to the number of other firms in the same industry that received press coverage on the guidance date, in Equation (1). In untabulated analysis, the coefficient on this variable is negative and statistically significant (p-value = 0.001) when the industry fixed effects are omitted from the model.

Because press coverage likely varies across industries (Solomon and Soltes 2012), as well as time, I include industry, year, month, and day of the week fixed effects in this and all subsequent regressions (Hirshleifer et al. 2009).

4.2 Empirical Results

I provide descriptive statistics for the variables included in Equation (1) in Panel A of Table 2. Approximately 48 percent of the guidance in my full sample (66,598 observations) received coverage in the business press. With regards to characteristics of the guidance, 49 percent of the management forecasts in my sample contain negative earnings news, 58 percent are annual earnings forecasts, as opposed to quarterly, and 75 percent of the guidance is bundled with an earnings announcement. Additionally, roughly 70 percent of the firms in my sample belong to a major stock index, and the mean firm in my sample reports institutional ownership of 68 percent and return on assets equal to 5 percent.

Panel B of Table 2 presents the results of estimating Equation (1) on my full sample of guidance (coefficients on industry and time fixed effects not reported). The model appears to fit well, with an area under the receiver operator characteristic (ROC) curve of 0.724, indicating that the model has sufficient discriminatory power (Hosmer and Lemeshow 2000). Further, the p-value of 0.409 on the Hosmer and Lemeshow goodness-of-fit test suggests that I am unable to reject the null hypothesis of good model fit.[15] To simplify the interpretation of the logistic regression coefficients, the final column of Panel B provides odds ratios for a one standard deviation increase in the continuous independent variables, and a change from zero to one in the indicator variables.

In examining the effects of guidance characteristics on the likelihood of guidance receiving press coverage, I find that guidance containing greater amounts of absolute earnings

[15] Multicollinearity does not appear to be a serious concern, as variance inflation factors in this and all other reported regressions are all below three (Belsley et al. 1980).

news (*Abs_Guide_News*), guidance containing positive earnings news (*Bad_Guide_News*), quarterly guidance (*Annual*), range (as opposed to point) guidance (*Range*), guidance bundled with earnings announcements (*Bundled*), guidance issued simultaneously with other guidance (*Multiple*), and guidance issued by firms whose prior guidance received press coverage (*P_Guide_Press_Cover)*, have significantly greater probabilities of receiving coverage in the business press relative to other guidance (all p-values < 0.001). As examples of the economic magnitude of these effects: a one standard deviation increase in *Abs_Guide_News* is associated with a 9.5% increase in the odds of guidance receiving press coverage; annual guidance are 12.6% less likely to receive coverage than quarterly guidance (*Annual*); and bundled guidance (*Bundled*) are 51.4% more likely to receive coverage than unbundled guidance.

Several firm characteristics are also systematically associated with the likelihood that guidance will receive press coverage. Specifically, the firm's overall coverage in the business press during the prior month (*P_Month_Press_Cover*), inclusion in a major stock index (*SP1500*), institutional ownership (*Instit_Own*), the market's response to the firm's recent earnings news (*Q_ERC*), and the firm's recent history of meeting or beating earnings expectations (*Meet_Beat_Hist*), are all positively associated with the probability of guidance receiving coverage in the business press. Meanwhile, firm size (*Ln_MVE*), stock return volatility during the prior month (*P_Month_Ret_Vol*) and the incidence of press coverage of other firms (*Other_Press_Cover*) are negatively associated with guidance press coverage.[16] With regard to economic magnitude, a one standard deviation increase in *P_Month_Cover* (*Instit_Own*) is

[16] The negative coefficient on *Ln_MVE* is inconsistent with expectations. It should be noted that the univariate correlation between *Press_Cover* and *Ln_MVE* is positive and significant (p-value = 0.001). However, the correlations between *Ln_MVE* and *P_Month_Press_Cover*, *SP1500*, and *Ln_Follow* are all positive, significant, and greater than 30 percent. Including these variables together in the determinants model appears to induce the negative association documented between *Ln_MVE* and *Press_Cover*.

associated with a 26.2 (5.2)% increase in the odds of guidance receiving press coverage, while being listed on a major stock index (*SP1500*) increases the probability of coverage by 20.9%.

Overall, a comparison of management earnings guidance that received press coverage to guidance that did not receive coverage reveals a number of systematic differences between the two sets of observations. Because many of these firm and guidance characteristics may also affect the observed capital market responses to guidance, it is important to appropriately control for these factors in my analyses of the market consequences of guidance press coverage. This motivates the use of a matched sample research design in my subsequent tests, as discussed in the following section.

V. MARKET REACTION TO GUIDANCE PRESS COVERAGE

5.1 Research Method

My primary hypothesis posits that market participants react more strongly to management earnings guidance that receives coverage in the business press. To empirically test this hypothesis, I estimate the following pooled cross-sectional OLS regressions, again with standard errors clustered by firm:[17]

$$\text{Abn_Return}(0,1) = \alpha + \beta_1\text{Guide_News} + \beta_2\text{Press_Cover} + \beta_3\text{Guide_News*Press_Cover} + \beta_4\text{Fraction} + \beta_5\text{Guide_Reputation} + \beta_6\text{Horizon} + \beta_7\text{Range} + \beta_8\text{P_Month_Press_Cover} + \beta_9\text{Instit_Own} + \beta_9\text{Ln_MVE} + \beta_{10}\text{BTM} + \beta_{12}\text{Ln_Follow} + \beta_{13}\text{Dispersion} + \beta_i\text{Industry_FE} + \beta_i\text{Year_FE} + \beta_i\text{Month_FE} + \beta_i\text{Day_Of_Week_FE} + \varepsilon. \quad (2)$$

$$\text{Fraction} = \alpha + \beta_1\text{Abs_Guide_News} + \beta_2\text{Press_Cover} + \beta_3\text{Abs_Guide_News*Press_Cover} + \beta_4\text{Abs_Abn_Return}(0,1) + \beta_5\text{Guide_Reputation} + \beta_6\text{Horizon} + \beta_7\text{Range} + \beta_8\text{P_Month_Press_Cover} + \beta_9\text{Instit_Own} + \beta_9\text{Ln_MVE} + \beta_{10}\text{BTM} + \beta_{12}\text{Ln_Follow} + \beta_{13}\text{Dispersion} + \beta_i\text{Industry_FE} + \beta_i\text{Year_FE} + \beta_i\text{Month_FE} + \beta_i\text{Day_Of_Week_FE} + \varepsilon. \quad (3)$$

Equations (2) and (3) estimate the effects of press coverage on the investor and analyst reactions to guidance earnings news, respectively. In Equation (2), the dependent variable (*Abn_Return(0,1)*) is defined as the raw buy-and-hold stock return over the two day period beginning the day the guidance was announced less the buy-and-hold return to one of the benchmark portfolios formed based on size, book-to-market, and momentum (5*5*5), similar to

[17] I winsorize all continuous variables except for stock returns at the first and 99th percentiles to alleviate the effects of outliers on the analysis. To provide confirmation that my results are not unduly affected by outliers, I estimate this and subsequent models using robust regressions based on MM-estimation as well as median regressions and find consistent results (Leone et al. 2012).

Hirshleifer et al. (2009) and Drake et al. (2012).[18] In Equation (3), the dependent variable (*Fraction*) is defined as the number of analysts who revise their earnings forecasts for the firm during the same two day period, scaled by the total number of analysts following the firm's stock, similar to Cotter et al. (2006) and Kross and Suk (2012).[19]

The first two independent variables in Equations (2) and (3) are the earnings news contained in the guidance (*Guide_News* or *Abs_Guide_News*) and the press coverage indicator variable (*Press_Cover*), as defined previously. The coefficient on the interaction term of these two variables (β_3) in Equation (2) indicates the extent to which business press coverage affects the stock price reaction to the earnings news provided by the guidance, while the interaction coefficient in Equation (3) provides evidence on the influence of guidance press coverage on the fraction of analysts who immediately revise their forecasts in response to the guidance.[20] A positive and significant β_3 in these regressions thus provides support for H_1. Because the investor and analyst reactions likely affect each other, I control for the analyst reaction in the investor reaction regression, and vice versa. I also include several other variables to control for factors that prior research has shown to affect the market reaction to guidance (e.g., Hutton and Stocken 2009; Ball et al. 2012; Yang 2012).[21]

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[18] The use of market-adjusted returns, size-adjusted returns, a three day (-1 to 1) return window, or a five day (-2 to 2) return window does not affect my inferences. Results are also robust to standardizing *Abn_Return(0,1)* by the standard deviation of returns over the prior month (Ball et al. 2012). I assign firms to size, book-to-market, and momentum portfolios in June of each year. When a firm cannot be assigned to a particular portfolio in a year, I use size-adjusted returns instead. Eliminating these firms from the sample does not impact my results.

[19] I find similar results when I measure *Fraction* over a five day window (Kross and Suk 2012).

[20] The main effect of *Press_Cover* captures the effect of press coverage that relates to any information conveyed in the announcement that is not reflected in the guidance news. For example, Clement et al. (2003) find that confirming guidance (i.e., *Guide_News* = 0) elicits a positive market reaction, which they attribute to a reduction in uncertainty.

[21] Results are robust to including interaction terms of *Guide_News* or *Abs_Guide_News* with all of the control variables, although this introduces substantial multicollinearity into the model.

5.2 Matched Samples

As noted in prior studies, press coverage is not an exogenous variable in capital markets research (e.g., Bushee et al. 2010; Soltes 2010). In my setting, reporters may decide to cover management guidance based on firm or guidance characteristics that also influence the market reaction to the guidance. Failure to control for this selection bias when estimating Equations (2) and (3) could lead to biased inferences. Conceptually, I am interested in the difference between the observed outcome for guidance that received press coverage and the counterfactual outcome (i.e., the market reaction if the guidance had not received press coverage). Because my study, like most empirical accounting research, is observational in nature, the counterfactual outcome is unobservable. Accordingly, I examine the market consequences of guidance press coverage by comparing guidance that received press coverage to two matched samples of guidance that did not receive press coverage. This research method allows me to more clearly attribute the observed market consequences to the press coverage itself, rather than to firm or guidance characteristics associated with press coverage.

I first use propensity-score matching (PSM) to identify a sample of guidance that did not receive press coverage, but is otherwise similar across all observable dimensions to the covered guidance (Armstrong et al. 2010). For my second matched sample of guidance, I match each covered guidance observation with a non-covered guidance observation issued by the same firm within one year of the covered guidance (Christensen et al. 2012). I present results throughout the paper using both samples of matched guidance. I also base my discussions throughout the remainder of the paper on results obtained from using the stand-alone guidance sample because stand-alone guidance is more discretionary in nature than bundled guidance (Kim et al. 2012), and the focus of this paper is on voluntary (i.e., discretionary) disclosures. In addition, there are significant difficulties associated with disentangling the market consequences of bundled

guidance from the effects of the related earnings announcements (Rogers and Van Buskirk 2012). However, my results are robust to using the full sample of guidance, after adjusting bundled guidance news using the conditional expectations model developed in Rogers and Van Buskirk (2012), and these results are presented alongside the results using the stand-alone guidance sample for the sake of generalizability.

In order to identify the PSM sample of guidance, I estimate Equation (1) on my sample of 9,286 stand-alone guidance observations. I then match (without replacement) each guidance observation that received press coverage with a non-covered guidance observation from another firm in the same year that has the closest propensity-score, or predicted value, from Equation (1), within a maximum distance of 1 percent.[22] This process results in a final sample of 2,499 covered stand-alone guidance observations and 2,499 matched (non-covered) observations. To ensure that the covered and matched guidance samples are similar across all observable dimensions except for the treatment effect (i.e., press coverage), I examine covariate balance in Table 3. As shown in the final two columns of Table 3, there are no significant differences in the means of the independent variables in Equation (1) upon completion of the matching process, and only two of the nineteen variables exhibit a significant difference in medians.[23] These results indicate that covariate balance is achieved along relevant variable dimensions (Tucker 2011).

[22] I require the treatment and control guidance to come from different firms in order to ensure unique control samples between the PSM and within-firm matched samples. I use the nearest neighbor matching method of PSM with common support. My inferences do not change if I increase the maximum distance in propensity scores to 5, 10, or 15 percent, or match with replacement. Refer to Li and Prabhala (2007), Tucker (2011), and Lennox et al. (2012) for more detailed discussions on the implementation of PSM, as well as its advantages and disadvantages.

[23] In untabulated analysis, the results of non-parametric Kolmogorov-Smirnov homogenous distributions tests indicate that 15 of the 19 variables in Equation (1) have statistically equivalent distributions. The four variables that do not are *Abs_Guide_News*, *Horizon*, *P_Month_Press_Cover*, and *Dispersion*. To be conservative, these variables are included as control variables in my subsequent analyses. Additionally, including all of the variables from the first stage model as control variables in my subsequent tests does not affect my results.

In addition to PSM, I employ a second matching procedure in which a firm is used as its own control. For each covered guidance observation, I identify a non-covered guidance observation issued by the same firm within one year of the covered guidance. I also require each pair of covered and non-covered guidance to be comparable with respect to forecasting quarterly or annual earnings, and I only allow a non-covered guidance observation to be used once (i.e., matching without replacement). If more than one possible match is found, I select the matched pair with the closest levels of earnings news. This results in a sample of 1,046 covered stand-alone guidance observations and 1,046 matched observations. The advantage of this design is that it removes across-firm heterogeneity in observable or unobservable characteristics of the firms that may influence both press coverage and the market consequences of guidance (e.g., firm visibility). The use of both across-firms (PSM) and within-firm matched samples of guidance allows me to more clearly attribute the observed market consequences to press coverage itself, and I present results throughout the paper using both samples of matched guidance. In addition, all results are robust to using the full (non-matched) sample of guidance (untabulated).

5.3 Empirical Results

Table 4 presents descriptive statistics for the variables in Equations (2) and (3) for the full, PSM, and within-firm matched samples of stand-alone guidance. Although many of the control variables exhibit significantly different means between the samples of covered and non-covered guidance before matching, these differences are generally eliminated after matching. Further, unsigned measures of the investor and analyst reactions to guidance (*Abs_Abn_Return(0,1)* and *Fraction*) remain significantly different across the two groups of guidance after matching. Specifically, average absolute price reactions are more than a percentage point greater for covered guidance in both matched samples, and the fraction of

analysts who revise their forecasts immediately after the guidance increases from 26.16% to 42.07% when the guidance receives press coverage in the PSM sample (an increase of 60.82%). These results provide preliminary evidence that press coverage is associated with an increased market reaction to guidance, even after controlling for factors that may influence press coverage through matching.

Panel A of Table 5 presents the results of estimating Equation (2), my primary investor reaction model. Columns 1-4 contain results using the PSM sample of stand-alone guidance, the PSM sample of all guidance, the within-firm matched sample of stand-alone guidance, and the within-firm matched sample of all guidance, respectively. As expected, the coefficient on *Guide_News* is positive and significant in all four samples, indicating that investors respond positively to the earnings news contained in management guidance. More importantly, the coefficient on the interaction term of guidance news and press coverage (*Guide_News*Press_Cover*) is positive and significant in each regression, consistent with H_1. With respect to economic magnitude, the results in the first column indicate that a one standard deviation increase in *Guide_News* for guidance *without* press coverage is associated with an average two day abnormal stock return of 2.14% (2.381*0.009), holding all else constant. However, a one standard deviation increase in *Guide_News* for guidance *with* press coverage is associated with an average return of 4.07% ((2.381+2.144)*0.009). In other words, guidance press coverage results in an average 90% increase in the investor reaction to the information contained in the guidance.[24]

[24] As an alternative way of thinking about the economic magnitude of this result, consider the following example: Firm A has a consensus analyst forecast of $2.00 prior to announcing guidance of $2.10, and firm A's stock price is $20.00. Firm A's value of *Guide_News* would be 0.005 (($2.10-$2.00)/$20.00). If firm A's guidance *did not* receive press coverage, we would expect the price reaction to firm A's guidance news to be 1.19% (2.381*0.005), ceteris paribus. However, if the guidance *did* receive press coverage, we would expect the price reaction to the guidance news to be 2.26% ((2.381+2.144)*0.005).

Panel B of Table 5 presents the estimation results for Equation (3), which examines the analyst reaction to press coverage of guidance. The coefficient on *Abs_Guide_News*Press_Cover* is positive and significant at the one percent level in all four regressions. These results suggest that press coverage significantly increases the percentage of analysts who revise their earnings forecasts immediately following the announcement of guidance. Taken together, the results presented in Table 5 are consistent with H_1 and provide strong evidence that the business press plays an important role in disseminating management earnings guidance information to market participants.[25]

[25] In untabulated analyses, I also examine the effect of press coverage on other measures of the investor and analyst reactions to guidance. I find that press coverage is positively associated with the abnormal trading volume reaction to guidance (Ball et al. 2012), as well as the amount of guidance news incorporated by analysts into their subsequent forecast revisions (Merkley et al. 2012), and the average speed with which analysts revise their forecasts following the guidance announcement (Kross and Suk 2012). In addition, there is a greater increase (decrease) in analyst forecast accuracy (dispersion) following guidance announcements when the guidance receives press coverage.

VI. ADDITIONAL ANALYSES

The results thus far indicate that there is systematic variation in the extent to which management earnings guidance news is disseminated through the business press, and that this variation has a significant effect on the market reaction to guidance. In this section, I extend these results by first examining the effect of guidance press coverage on subsequent stock price drift and the distribution of long-window returns. I also explore differences in my results across various sample partitions, as well as the sensitivity of my findings to alternative econometric specifications and empirical measures.

6.1 Price Drift

In my primary analyses I document a significant increase in the initial price reaction to guidance news when the guidance receives coverage in the business press. A natural extension of this result is to examine stock price drift subsequent to the announcement of guidance. Recent research provides evidence of an association between investor attention and post-earnings announcement drift (PEAD). For example, Hirshleifer et al. (2009) find that PEAD is greater when more firms announce earnings on the same day, and Dellavigna and Pollet (2009) report that PEAD is larger for Friday earnings announcements. If press coverage results in a more complete initial reaction to guidance news, then we may observe a reduced delayed reaction (i.e., less price drift) when guidance receives press coverage.

To test this assertion, I regress future abnormal returns measured over two windows (2,10 and 2,30, where day 0 is the guidance date) on the earnings news contained in the guidance, the press coverage indicator variable, and their interaction term. Because price drift is strongest amongst firms with relatively extreme earnings news (Bernard and Thomas 1989, 1990), I follow prior research in sorting *Guide_News* into quintiles by year, and including only those guidance observations in the top and bottom quintiles in the sample in order to obtain a

more powerful test (e.g., Hirshleifer et al. 2008, 2009; Dellavigna and Pollet 2009; Boulland et al. 2012). I then include an indicator variable equal to one for the highest quintile of *Guide_News* (*Top_Q_Guide_News*) in the regressions. I also include the same set of control variables as Equation (2), as well as the initial price reaction (*Abn_Return(0,1)*).

The results of this analysis are presented in Table 6. In order to ensure that the effect captured here is independent of PEAD, I only use stand-alone (i.e., non-bundled) guidance observations in these regressions. The first and second columns contain results using the PSM matched sample with abnormal returns measured over a (2,10) and (2,30) day window, respectively. The third and fourth columns contain the same results using the within-firm matched sample. In three of the four regressions, I find a positive and significant coefficient on *Top_Q_Guide_News*, providing evidence of price drift following the announcement of stand-alone guidance. In each of the three regressions, I also find a negative and significant coefficient on the interaction term *Top_Q_Guide_News*Press_Cover* (p-values < 0.05), suggestive of a reduction in drift when guidance receives press coverage. However, I also find significantly positive coefficients on the main effect of press coverage (*Press_Cover*), and as shown in the last row of the table, F-tests of *Top_Q_Guide_News*Press_Cover* + *Press_Cover* = 0 are all statistically insignificant. These results suggest that the total effect of guidance press coverage on subsequent price drift is not statistically different from zero.

6.2 Long-Window Returns Portfolios

The results in Table 5 indicate that business press coverage increases the initial (0,1) price reaction to guidance news, while Table 6 examines the effect of press coverage on price drift subsequent to guidance announcements over the (2,10) and (2,30) windows. In this section, I combine these time periods and compare the timing of return realizations for covered and non-covered guidance. Specifically, I first sort guidance observations into quintiles by year based on

the firms' abnormal returns over days (0,10) or (0,30). I then examine the distribution of mean returns within each return quintile across days (0,1) and (2,10) or (2,30) for covered and non-covered guidance separately, and compare differences between the two types of guidance.[26] This methodology not only matches guidance on ex ante characteristics (through the use of PSM and within-firm matched samples), but guidance is also matched (sorted) on ex post returns. To the extent that returns over these longer windows capture the total information content of the guidance, this sorting process ensures that covered and non-covered guidance observations within the same quintiles provided the market with similar amounts of information. While the long-term information content of the guidance within each total return quintile is equivalent, I expect the returns of covered guidance to be concentrated in days (0,1), and the returns for non-covered guidance to be concentrated in days (2,10 or 2,30).

The results of this analysis are presented in Table 7. I focus my discussion on the results in the first four rows based on the PSM sample of stand-alone guidance, although I obtain similar results using the within-firm matched sample of guidance, as presented in the final four rows. I find that in the lowest quintile of long-window returns, covered guidance has a more negative initial (0,1) reaction than non-covered guidance. Similarly, in the highest quintile of total returns, covered guidance has a more positive initial reaction than non-covered guidance. However, these relations are reversed in the delayed price reactions (2,10 or 2,30), where non-covered guidance has a more negative delayed reaction in the lowest quintile of total returns, and a more positive delayed reaction in the highest quintile of total returns. These differences are all significant at the five percent level. The final column of Table 7 provides p-values for tests of the equality of *Guide_News* across covered and non-covered guidance within each total return quintile. The lack of significant differences here indicates that these results are not being driven

[26] I find similar results using median returns (untabulated).

by differences in the quantitative information contained in the guidance. Taken together, the results in Table 5-7 provide strong evidence that press coverage significantly effects the market consequences of management earnings guidance, and these relations hold even when controlling for ex ante firm and guidance characteristics (through matching), as well as long-window returns (through sorting).

6.3 Comparison of Stand-Alone and Bundled Guidance

In this section, I examine the moderating effect of guidance bundling with earnings announcements on the investor reaction to guidance press coverage. Due to the publicity associated with earnings announcements, I expect bundled guidance to be more expected by the market and less dependent on dissemination through the business press relative to stand-alone guidance (Doyle and Magilke 2012). To test this assertion, I compare the effect of press coverage on the investor reaction to guidance news for my sample of stand-alone guidance to the same effect for my sample of bundled guidance. The results of re-estimating Equation (2) for these two samples are presented in Table 8. I find that press coverage has a larger effect on the investor reaction to stand-alone guidance compared to bundled guidance. This difference appears to be substantial, as the coefficient on *Guide_News*Press_Cover* in the stand-alone guidance sample (2.212) is more than four times larger than the same coefficient in the bundled guidance sample (0.542). The 1.670 difference between these coefficients is significant at the one percent level.

6.4 Heckman Selection Model

The use of both across-firms (PSM) and within-firm matched samples of guidance in my main tests allows me to more clearly attribute the observed market consequences to press coverage itself, rather than to firm or guidance characteristics associated with press coverage. As an alternative, non-matching based approach to addressing potential selection bias, I use a

Heckman two-stage selection model (Heckman 1979). To implement this approach, I use my determinants of guidance press coverage model (Equation 1) as the first stage probit model. The Heckman selection model requires the identification of an exogenous independent variable in the first stage model that can be validly excluded from the second stage model (Lennox et al. 2012). For my exclusion restriction, I select *P_Guide_Press_Cover*, as Table 2 documents that press coverage of the firm's prior guidance is significantly associated with current guidance press coverage, and this variable should not be associated with the market reaction to the current guidance (including it in the regressions confirms this lack of association).

The results of the second stage regressions (Equations 2 and 3) including the inverse Mills ratio (*Inv_Mills*) are shown in Table 9. For expositional purposes I only report the coefficients and p-values on the variables of interest in each test. Although the coefficients on *Inv_Mills* and *Guide_News*Inv_Mills* or *Abs_Guide_News*Inv_Mills* are significant in several of the regressions, I continue to find results consistent with those presented in Table 5 after controlling for selection due to unobservable factors. The positive and significant coefficients on *Guide_News*Inv_Mills* and *Abs_Guide_News*Inv_Mills* suggest that unobservable factors related to guidance press coverage are associated with stronger market reactions to guidance news.[27]

6.5 Simultaneity Bias

Table 5 documents that business press coverage significantly increases the stock price reaction to guidance. A potential alternative explanation for this finding is that guidance press coverage is endogenously determined with the price reaction. In other words, it is possible that the press decides to cover an event because it elicits a strong price reaction immediately upon its

[27] The price drift results presented in Table 6 are also robust to the use of a Heckman selection model (untabulated). As discussed in Lennox et al. (2012), multicollinearity is a concern when using the Heckman model. However, the variance inflation factors in all of the regressions reported in Table 9 are below 3.

release.[28] This is unlikely to be the case in my setting, as newswire reporters typically issue articles within a matter of seconds or minutes after receiving the information (Soltes 2010; Rogers et al. 2013), and therefore must make their coverage decisions independent of any subsequent market-based information.[29]

Nevertheless, to address any potential endogeneity concerns related to simultaneity bias, I re-estimate my investor reaction model (Equation 2) on the sub-sample of management guidance that was issued after the market closed (from 4:01pm through 11:59pm). I also calculate the price reactions for day t (the day the guidance was issued) and day t+1 separately, instead of the two-day windows used in my primary analyses. Because these management forecasts were issued after market hours, the investor reaction should occur on the following day. Therefore, because press coverage is measured on day t, the investor reaction (on day t+1) cannot influence the press coverage decision, but press coverage can influence the subsequent investor reaction. As expected, using only those guidance observations that were issued after the market closed, I find no price reaction to guidance press coverage on day t. However, when examining the investor reaction on day t+1, I find results consistent with those of my primary analyses. These results suggest that simultaneity bias is not a primary explanation for my findings.[30]

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[28] Bushee et al. (2010, 12) document a positive relation between firms' general press coverage around earnings announcements and the price reaction to the announcements. They note that while this may indicate that the press views large price reactions as newsworthy, it is also consistent with the notion that the press coverage is influencing the price reactions. Because their focus is on information asymmetry, they do not attempt to distinguish between these two explanations.

[29] My conversations with newswire reporters confirm that their goal is to release their articles in the shortest amount of time possible, and accordingly, they do not wait to base their coverage decisions on the market reaction. This is consistent with Rogers et al. (2013), who find that the majority of DJ Newswire articles related to insider trading events are published in less than two minutes following the EDGAR filing.

[30] Of the 4,998 observations in the PSM sample of stand-alone guidance, 1,625 were issued after the market closed. A further 2,357 were issued before the market opened (from 12:01am to 9:29am), and more than 90% of these before hours guidance observations that received press coverage received their first

6.6 Alternative Empirical Measures

Finally, I examine the robustness of my results to the use of alternative measures of guidance press coverage and guidance earnings news. As an alternative measure of guidance press coverage, I use a database provided by RavenPack consisting of all articles published in the following sources: Associated Press, Wall Street Horizon, Midnight Trader, RTT News, and Canadian Press. Because RavenPack does not provide articles from these sources prior to 2007, the sample period for this analysis is 2007 to 2010. In untabulated analysis, I find results consistent with those of my primary analyses measuring guidance press coverage using only these alternative sources.[31]

As my first alternative measure of guidance earnings news, I sort *Guide_News* into quintiles by year, and use the quintile rankings in my regressions. Quintile rankings do not require a monotonic association between guidance earnings news and the dependent variables such as stock returns (Armstrong et al. 2010). Quintiles also have the advantage of alleviating the effects of outliers and skewness in the distribution of guidance earnings news. Replacing *Guide_News* with its quintile rank, I find results qualitatively similar to those presented in Table 5 (untabulated). I also find consistent results using a non-scaled measure of *Guide_News* (Cheong and Thomas 2011). Lastly, because prior research finds that there is an asymmetric price reaction to good and bad news guidance (Skinner 1994; Kothari et al. 2009a), I estimate Equation (2) separately for good and bad news guidance. In untabulated analysis, I find strong evidence of a price reaction to press coverage of both good and bad news guidance. I also find

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article before the market opened. Thus, the investor reaction is not likely to have influenced the coverage decisions of these observations as well.

[31] The magnitude of the effect of guidance press coverage is generally larger in this analysis relative to those of my primary analyses using DJ Newswires. This is not surprising given that only 7% of my sample of stand-alone guidance received coverage in one of these sources, compared to over 30% in DJ. Because these sources are less likely to cover guidance compared to DJ, when they do cover guidance, it is likely an indication that the guidance received widespread dissemination elsewhere as well.

that the difference across the coefficients on *Guide_News*Press_Cover* in the two sample partitions is not statistically significant (p-value = 0.447).

VII. CONCLUSIONS

In this study, I provide evidence on the role of the business press in disseminating management earnings guidance news to capital market participants by examining the determinants and consequences of guidance press coverage. Based on the findings of recent empirical and theoretical studies, I hypothesize that the capital market consequences of management guidance are dependent on the effective communication of guidance news to the market, and that the business press, in its role as an information intermediary, facilitates this process by disseminating the information contained in guidance to market participants. I find that both investors and analysts react significantly more strongly to guidance that receives coverage in the business press. This study is the first to provide evidence that there is systematic variation in the extent to which guidance information is disseminated, and that this variation has a significant effect on the market consequences of guidance. This study is also the first to provide evidence that the forecasting decisions of financial analysts are affected by the press' coverage of the firms they follow.

Managers whose guidance receives press coverage can have their private information more fully impounded into stock prices and thus reduce information asymmetry (Ajinkya and Gift 1984; Hutton and Stocken 2009). Prior research has generally taken the market reaction to management guidance to be a function of the earnings news provided by the guidance and the credibility of the guidance (Jennings 1987). However, the results of this study indicate that dissemination in the business press is an additional determinant of the market response to guidance, and an economically significant one. Developing a greater understanding of the factors that explain the variation in market reactions to management earnings guidance should be of interest to researchers, investors, analysts, regulators, and managers themselves.

One potential limitation of this study is that the sample of articles is restricted to those articles contained within the *DJ Newswires*. Thus, it is possible that management earnings guidance identified as not receiving press coverage could have received coverage in some other source. However, *DJ* has been utilized in numerous prior studies in accounting and finance (e.g., Barber and Odean 2008; Tetlock 2010, 2011; Engelberg et al. 2012).[32] As noted in prior research, identifying the firms discussed in business press articles, classifying articles as firm- or press-initiated, and identifying the relevance of an article to a specific firm are difficult and error-prone tasks using traditional sources of business press data such as Factiva or Lexis-Nexis (e.g., Engelberg 2008; Soltes 2010). A significant advantage of the business press data used in this study, as provided by RavenPack, is that it enables me to accurately identify the firm discussed in the article, the relevance of the article to the firm, and most importantly for the sake of this study, the event discussed in the article, which would be difficult using an alternative data source. Accordingly, the sample used in this study is likely to be an effective proxy for business press coverage of management guidance. To the extent that this proxy contains measurement error, that measurement error should bias against my ability to find significant results.

[32] As Chan (2003, 230) notes, "by far the sources with the most complete coverage across time and stocks are the DJ newswires. This source does not suffer from gaps in coverage, and it is the best approximation of public news for traders." Chan also reports that his results are unchanged when he restricts his sample to the DJ news archives to the exclusion of the other eight business press sources in his sample (footnote 3). Additionally, Tetlock (2011, 5) states that, "the DJ Newswires represent the most widely circulated financial news in the United States, and the DJ Newswire arguably has the most comprehensive coverage."

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APPENDIX A

FIGURES AND TABLES

FIGURE 1
FRAMEWORK FOR ANALYZING THE MARKET CONSEQUENCES OF MANAGEMENT EARNINGS GUIDANCE

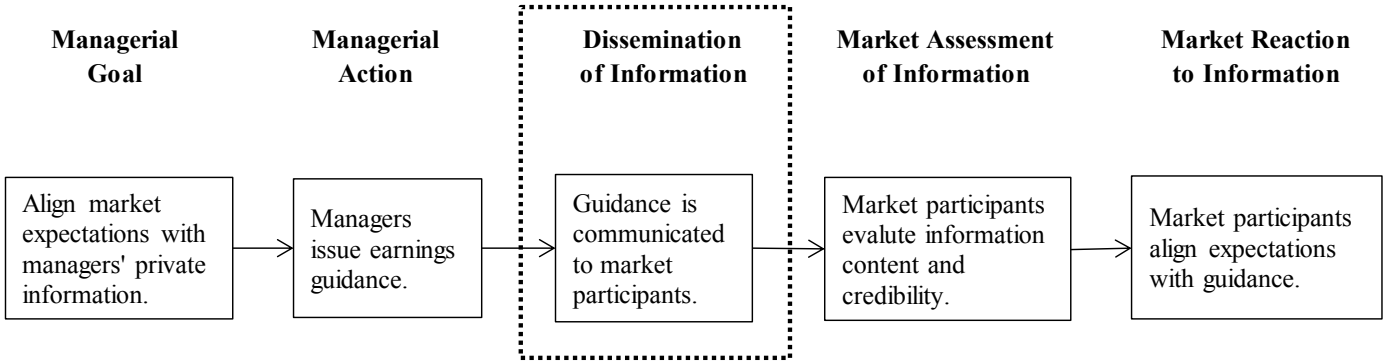
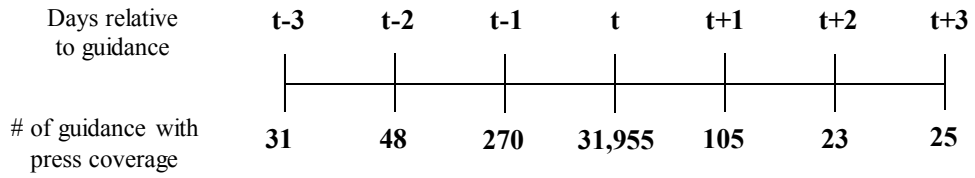
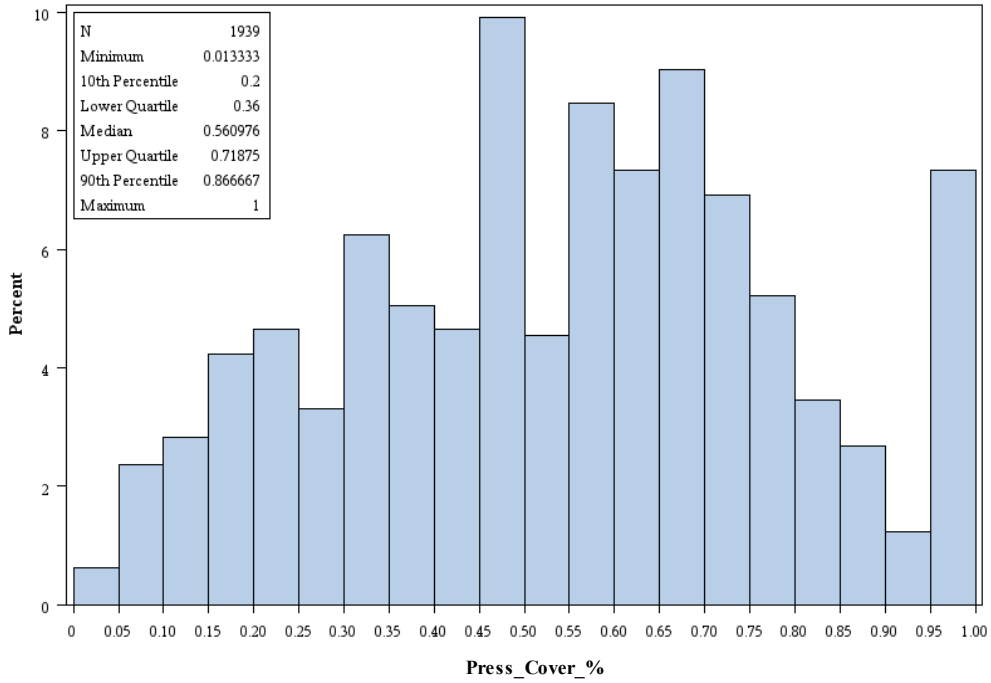


FIGURE 2
TIMELINE OF PRESS COVERAGE OF MANAGEMENT EARNINGS GUIDANCE



This figure illustrates the mapping of guidance press coverage from the DJ news archives into guidance observations obtained from First Call's Company Issued Guidance database. The total number of guidance is 66,598. Of these 66,598 management earnings forecasts, 31,955 had press coverage on the day of the guidance (day t), while only 502 had press coverage on any of the six days surrounding the day of the guidance.

FIGURE 3
HISTOGRAM OF WITHIN-FIRM VARIATION IN PRESS COVERAGE OF MANAGEMENT EARNINGS GUIDANCE



This figure illustrates the degree of within-firm variation in guidance press coverage. The total number of unique firms in the sample is 2,914. Of these 2,914 firms, 1,939 received guidance press coverage at least once during the sample period. For these 1,939 firms, the above histogram displays the frequency with which their guidance received press coverage. The variable on the x-axis, *Press_Cover_%,* represents the percentage of the firm's guidance that received press coverage. The y-axis measures the percentage of the 1,939 firms with a given value of *Press_Cover_%.*

TABLE 1
SAMPLE SELECTION AND COMPOSITION

Panel A: Sample Selection	*# of Forecasts*
Total unique quantitative management earnings guidance issued during 2001-2010	89,725
Less:	
Guidance issued after the forecasting period end (earnings pre-announcements)	(7,702)
Guidance issued by firms without sufficient CRSP/Compustat data	(7,382)
Guidance issued by firms without sufficient analyst coverage and actual earnings	(8,043)
Final sample of all guidance	66,598
Less:	
Bundled guidance	(49,774)
Multiple guidance issued on the same day	(7,538)
Final sample of stand-alone guidance	9,286

Panel B: Sample Composition by Year and Press Coverage

Year	Number of forecasts (Total = 66,598)	Percentage of guidance with press coverage	Unique firms (Total = 2,914)	Percentage of firms with guidance press coverage
2001	5,222	35.4%	1,447	45.7%
2002	6,520	44.7%	1,432	58.5%
2003	6,642	44.5%	1,407	61.3%
2004	7,779	47.6%	1,511	65.7%
2005	7,551	47.5%	1,462	63.7%
2006	7,761	46.5%	1,502	66.0%
2007	7,216	52.6%	1,389	70.6%
2008	6,724	53.5%	1,221	72.2%
2009	5,389	53.7%	1,048	73.4%
2010	5,794	52.6%	1,055	71.3%
Average	6,660	47.9%	1,347	64.8%

TABLE 1 (CONTINUED)

Panel C: Sample Composition by Industry and Press Coverage

Industry:	Number of forecasts (Total = 66,598)	Percentage of guidance with press coverage
Consumer NonDurables	4,670	49.3%
Consumer Durables	1,787	48.3%
Manufacturing	6,968	54.5%
Energy	775	46.6%
Chemicals	1,748	57.3%
Business Equipment	14,926	41.1%
Telecom	683	39.4%
Utilities	3,291	45.0%
Wholesale and Retail	11,389	55.1%
Healthcare	6,611	45.2%
Finance	5,007	41.7%
Other	8,743	50.2%
Average	5,550	47.8%

Industry groupings are based on the Fama-French 12-industry classification scheme.

Panel D: Sample Composition by Weekday and Press Coverage

Industry:	Number of forecasts (Total = 66,598)	Percentage of guidance with press coverage
Monday	8,341	47.2%
Tuesday	15,817	46.0%
Wednesday	16,882	48.2%
Thursday	21,684	49.6%
Friday	3,874	47.8%
Average	13,320	47.8%

TABLE 2
DETERMINANTS OF PRESS COVERAGE OF MANAGEMENT EARNINGS GUIDANCE

Panel A: Descriptive Statistics

Variable	Mean	Std. Dev	25th	Median	75th
Press_Cover	0.4798	0.4996	0.0000	0.0000	1.0000
Abs_Guide_News	0.0036	0.0059	0.0005	0.0015	0.0038
Bad_Guide_News	0.4874	0.4998	0.0000	0.0000	1.0000
Guide_Reputation	0.2072	0.4145	0.0000	0.2174	0.4667
Annual	0.5785	0.4938	0.0000	1.0000	1.0000
Horizon	0.4198	0.3293	0.1699	0.2219	0.6795
Range	0.8658	0.3409	1.0000	1.0000	1.0000
Bundled	0.7474	0.4345	0.0000	1.0000	1.0000
Multiple	0.5169	0.4997	0.0000	1.0000	1.0000
P_Guide_Press_Cover	0.4420	0.4966	0.0000	0.0000	1.0000
P_Month_Press_Cover	0.1689	0.1558	0.0667	0.1333	0.2333
SP1500	0.6961	0.4600	0.0000	1.0000	1.0000
Instit_Own	0.6815	0.2762	0.5625	0.7556	0.8819
Ln_MVE	7.4473	1.5778	6.3146	7.2965	8.4972
BTM	0.4527	0.2961	0.2481	0.3901	0.5889
ROA	0.0504	0.0823	0.0238	0.0533	0.0895
Loss	0.1717	0.3771	0.0000	0.0000	0.0000
Q_ERC	1.9724	1.4412	1.0000	2.0000	3.0000
Meet_Beat_Hist	0.7978	0.2664	0.7500	1.0000	1.0000
P_Month_Abn_Ret	-0.0015	0.1129	-0.0614	-0.0008	0.0593
P_Month_Ret_Vol	0.0245	0.0142	0.0148	0.0208	0.0298
P_Month_Turn	0.0097	0.0075	0.0047	0.0075	0.0121
Ln_Follow	2.0404	0.6778	1.6094	2.0794	2.5649
Dispersion	0.0510	0.0642	0.0100	0.0300	0.0600
After_Hours	0.4283	0.4948	0.0000	0.0000	1.0000
Other_Press_Cover	1.4903	1.0453	0.4900	1.3200	2.3500

The sample is comprised of 66,598 management earnings guidance observations.
See Appendix B for variable definitions.

TABLE 2 (CONTINUED)

Panel B: Logistic Regression Analysis

Dependent variable: Press_Cover	Expected Sign	Coefficient	P-Value	Odds Ratio
Abs_Guide_News	+	15.359***	(0.001)	1.095
Bad_Guide_News	?	-0.081***	(0.001)	0.923
Guide_Reputation	?	-0.005	(0.903)	0.998
Annual	?	-0.135***	(0.001)	0.874
Horizon	?	-0.028	(0.478)	0.991
Range	?	0.585***	(0.001)	1.794
Bundled	+	0.396***	(0.001)	1.486
Multiple	+	0.470***	(0.001)	1.600
P_Guide_Press_Cover	+	1.228***	(0.001)	3.414
P_Month_Press_Cover	+	1.495***	(0.001)	1.262
SP1500	+	0.190***	(0.001)	1.209
Instit_Own	+	0.182**	(0.040)	1.052
Ln_MVE	+	-0.105***	(0.001)	0.848
BTM	?	-0.104	(0.124)	0.970
ROA	?	0.334	(0.122)	1.028
Loss	?	-0.056	(0.146)	0.946
Q_ERC	+	0.020**	(0.046)	1.029
Meet_Beat_Hist	+	0.114**	(0.032)	1.031
P_Month_Abn_Ret	?	-0.056	(0.555)	0.994
P_Month_Ret_Vol	?	-6.996***	(0.001)	0.906
P_Month_Turn	?	-3.865	(0.181)	0.972
Ln_Follow	+	0.008	(0.824)	1.005
Dispersion	?	0.395	(0.102)	1.026
After_Hours	-	0.023	(0.574)	1.023
Other_Press_Cover	-	-0.063***	(0.003)	0.936
Industry FE		Included		
Year, Month, Day of Week FE		Included		
Pseudo R^2		11.6%		
Area Under Roc Curve		0.724		
Hosmer-Lemeshow P-Value		0.409		
No. Obs.		66,598		

This table examines the determinants of business press coverage of management earnings guidance.
See Appendix B for variable definitions. All continuous variables, except stock returns, are winsorized at the first and 99th percentiles to alleviate the effects of outliers on the analysis.
P-values are reported in parentheses based on z-statistics calculated using White's (1980) heteroscedasticity robust standard errors clustered by firm to control for dependency in the error terms (Petersen 2009; Gow et al. 2010). Industry, year, month, and day of the week fixed effects are also included in the models (coefficients not reported).
Odds ratios are given for a one standard deviation increase in the continuous independent variables, and a change from 0 to 1 in the indicator variables.
*, **, *** indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, using a two-tailed test.

TABLE 3
COVARIATE BALANCE BETWEEN MATCHED PAIRS

	Covered		Non-Covered		Difference (Bold = Sig. at .05 level)	
Variable	Mean	Median	Mean	Median	Mean	Median
Abs_Guide_News	0.0046	0.0019	0.0046	0.0011	0.0000	**0.0008**
Bad_Guide_News	0.6307	1.0000	0.6222	1.0000	0.0084	N/A
Guide_Reputation	0.2348	0.2500	0.2388	0.2500	-0.0040	0.0000
Annual	0.5934	1.0000	0.5774	1.0000	0.0160	N/A
Horizon	0.3851	0.2356	0.3741	0.2356	0.0110	0.0000
Range	0.8671	1.0000	0.8663	1.0000	0.0008	N/A
P_Guide_Press_Cover	0.4294	0.0000	0.4562	0.0000	-0.0268	N/A
P_Month_Press_Cover	0.1967	0.1667	0.2023	0.1667	-0.0056	0.0000
SP1500	0.7391	1.0000	0.7459	1.0000	-0.0068	N/A
Instit_Own	0.6578	0.7219	0.6544	0.7279	0.0034	-0.0061
Ln_MVE	7.5953	7.4376	7.6387	7.5035	-0.0434	-0.0660
BTM	0.4588	0.4035	0.4592	0.3889	-0.0004	0.0146
ROA	0.0564	0.0551	0.0581	0.0562	-0.0017	-0.0012
Loss	0.1513	0.0000	0.1445	0.0000	0.0068	N/A
Q_ERC	1.9528	2.0000	1.9772	2.0000	-0.0244	0.0000
Meet_Beat_Hist	0.7772	0.7500	0.7833	1.0000	-0.0061	-0.2500
P_Month_Abn_Ret	-0.0079	-0.0089	-0.0076	-0.0071	-0.0003	-0.0018
P_Month_Ret_Vol	0.0247	0.0213	0.0243	0.0207	0.0004	0.0006
P_Month_Turn	0.0101	0.0077	0.0102	0.0077	-0.0001	0.0001
Ln_Follow	2.1132	2.1972	2.1271	2.1972	-0.0139	0.0000
Dispersion	0.0525	0.0300	0.0522	0.0300	0.0003	**0.0000**
After_Hours	0.3281	0.0000	0.3221	0.0000	0.0060	N/A
Other_Press_Cover	0.6905	0.4100	0.6827	0.4000	0.0078	0.0100

This table presents a comparison of the means and medians of the variables in equation (1) for the stand-alone guidance sample after propensity-score matching (4,998 observations).
See Appendix B for variable definitions.
Differences in bold are significant at the $\alpha = 0.05$ level, using two-tailed t-tests of means and Wilcoxon rank-sum tests of medians for continuous variables, and χ^2 tests of equal proportions for indicator variables.

TABLE 4
DESCRIPTIVE STATISTICS BEFORE AND AFTER MATCHING

	Before Matching				After Propensity-Score Matching			After Within-Firm Matching		
Variable	All Obs. Mean	Covered Mean	Non-Covered Mean	Diff.	Covered Mean	Non-Covered Mean	Diff.	Covered Mean	Non-Covered Mean	Diff.
Abn_Return(0,1)	-0.0107	-0.0128	-0.0096	-0.0032	-0.0134	-0.0122	-0.0012	-0.0042	-0.0058	0.0017
Fraction	0.2871	0.4324	0.2121	**0.2203**	0.4207	0.2613	**0.1593**	0.4044	0.2136	**0.1908**
Abs_Abn_Return(0,1)	0.0542	0.0614	0.0504	**0.0109**	0.0615	0.0513	**0.0102**	0.0597	0.0439	**0.0158**
Guide_News	-0.0023	-0.0026	-0.0021	**-0.0004**	-0.0024	-0.0027	0.0002	-0.0022	-0.0014	**-0.0008**
Abs_Guide_News	0.0043	0.0049	0.0040	**0.0009**	0.0046	0.0046	0.0000	0.0044	0.0032	**0.0012**
Guide_Reputation	0.2167	0.2387	0.2053	**0.0334**	0.2348	0.2388	-0.0040	0.2112	0.2283	-0.0171
Horizon	0.3960	0.3736	0.4076	**-0.0340**	0.3851	0.3741	0.0110	0.4037	0.3835	0.0201
Range	0.8374	0.8895	0.8105	**0.0790**	0.8671	0.8663	0.0008	0.8757	0.8403	**0.0354**
P_Month_Press_Cover	0.2035	0.2021	0.2042	-0.0021	0.1967	0.2023	-0.0056	0.2228	0.2375	-0.0148
Instit_Own	0.6628	0.6692	0.6595	0.0097	0.6578	0.6544	0.0034	0.6699	0.6804	-0.0106
Ln_MVE	7.7009	7.5648	7.7710	**-0.2062**	7.5953	7.6387	-0.0434	7.8994	7.9080	-0.0086
BTM	0.4617	0.4594	0.4628	-0.0034	0.4588	0.4592	-0.0004	0.4291	0.4351	-0.0060
Ln_Follow	2.1550	2.1180	2.1741	**-0.0561**	2.1132	2.1271	-0.0139	2.2498	2.2367	0.0131
Dispersion	0.0543	0.0536	0.0546	-0.0011	0.0525	0.0522	0.0003	0.0548	0.0530	0.0019

This table presents descriptive statistics for the variables used in the regressions examining the market reaction to press coverage of management earnings guidance. The descriptive statistics are provided for the full sample (9,286 observations), the propensity-score matched sample (4,998 observations), and the within-firm matched sample (2,092 observations) of stand-alone guidance. Propensity-scores are calculated using equation (1).

See Appendix B for variable definitions.

Differences in bold are significant at the $\alpha = 0.05$ level, using a two-tailed *t*-test of means for continuous variables and a χ^2 test of equal proportions for indicator variables.

TABLE 5
MARKET REACTION TO PRESS COVERAGE OF MANAGEMENT EARNINGS GUIDANCE

Panel A: Investor Reaction

Dependent variable: Abn_Return(0,1)	Propensity-Score Matched Sample		Within-Firm Matched Sample	
	Stand-Alone Guidance	All Guidance	Stand-Alone Guidance	All Guidance
Guide_News	2.381***	2.741***	2.328***	2.523***
	(0.001)	(0.001)	(0.001)	(0.001)
Press_Cover	0.009***	0.001	0.014***	0.005***
	(0.001)	(0.161)	(0.001)	(0.001)
Guide_News*Press_Cover	2.144***	1.442***	2.006**	1.424***
	(0.001)	(0.001)	(0.015)	(0.001)
Fraction	-0.039***	-0.009***	-0.034***	-0.005**
	(0.001)	(0.001)	(0.001)	(0.028)
Guide_Reputation	0.000	-0.002	0.000	-0.001
	(0.984)	(0.199)	(0.940)	(0.507)
Horizon	0.010***	0.005***	0.011**	0.001
	(0.005)	(0.001)	(0.038)	(0.496)
Range	-0.005	-0.001	-0.005	0.003
	(0.123)	(0.650)	(0.260)	(0.123)
P_Month_Press_Cover	0.001	0.006	-0.013	0.010*
	(0.889)	(0.149)	(0.307)	(0.091)
Instit_Own	-0.001	-0.002	-0.000	0.004
	(0.775)	(0.443)	(0.989)	(0.184)
Ln_MVE	0.001	-0.000	-0.001	-0.002*
	(0.605)	(0.966)	(0.460)	(0.054)
BTM	0.010**	0.010***	0.003	0.012***
	(0.046)	(0.001)	(0.709)	(0.001)
Ln_Follow	0.000	-0.001	-0.000	0.002
	(0.960)	(0.395)	(0.975)	(0.229)
Dispersion	0.021	0.022**	0.010	0.004
	(0.199)	(0.047)	(0.695)	(0.779)
Industry FE	Included	Included	Included	Included
Year, Month, Day of Week FE	Included	Included	Included	Included
Adj. R^2	16.0%	8.2%	15.3%	7.3%
No. Obs.	4,998	41,258	2,092	16,634

TABLE 5 (CONTINUED)

Panel B: Analyst Reaction

Dependent variable: Fraction	Propensity-Score Matched Sample		Within-Firm Matched Sample	
	Stand-Alone Guidance	All Guidance	Stand-Alone Guidance	All Guidance
Abs_Guide_News	6.080***	2.943***	3.242*	2.642*
	(0.001)	(0.002)	(0.075)	(0.088)
Press_Cover	0.128***	0.040***	0.127***	0.043***
	(0.001)	(0.001)	(0.001)	(0.001)
Abs_Guide_News*Press_Cover	5.412***	4.364***	9.138***	4.731***
	(0.001)	(0.001)	(0.001)	(0.001)
Abs_Abn_Return(0,1)	1.107***	0.907***	0.909***	0.844***
	(0.001)	(0.001)	(0.001)	(0.001)
Guide_Reputation	0.037***	0.028***	0.047***	0.023**
	(0.003)	(0.001)	(0.006)	(0.031)
Horizon	-0.145***	-0.110***	-0.133***	-0.133***
	(0.001)	(0.001)	(0.001)	(0.001)
Range	0.047***	0.012*	0.022	0.026**
	(0.001)	(0.085)	(0.283)	(0.012)
P_Month_Press_Cover	-0.232***	-0.200***	-0.160***	-0.158***
	(0.001)	(0.001)	(0.002)	(0.001)
Instit_Own	0.017	0.039***	-0.008	0.044***
	(0.392)	(0.001)	(0.787)	(0.005)
Ln_MVE	0.004	0.024***	-0.011	0.019***
	(0.471)	(0.001)	(0.179)	(0.001)
BTM	-0.039**	-0.021**	-0.022	-0.041***
	(0.039)	(0.041)	(0.452)	(0.005)
Ln_Follow	0.014	-0.027***	0.031*	-0.023***
	(0.221)	(0.001)	(0.081)	(0.002)
Dispersion	-0.024	0.020	0.109	0.066
	(0.766)	(0.662)	(0.238)	(0.246)
Industry FE	Included	Included	Included	Included
Year, Month, Day of Week FE	Included	Included	Included	Included
Adj. R^2	27.4%	16.5%	31.5%	15.6%
No. Obs.	4,998	41,258	2,092	16,634

This table contains the results of regressions examining the market reaction to press coverage of management earnings guidance.

See Appendix B for variable definitions. All continuous variables, except stock returns, are winsorized at the first and 99th percentiles to alleviate the effects of outliers on the analysis.

P-values are reported in parentheses based on t-statistics calculated using White's (1980) heteroscedasticity robust standard errors clustered by firm to control for dependency in the error terms (Petersen 2009; Gow et al. 2010).

Industry, year, month, and day of the week fixed effects are also included in the models (coefficients not reported).

*, **, *** indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, using a two-tailed test.

TABLE 6
PRICE DRIFT AND PRESS COVERAGE OF MANAGEMENT EARNINGS GUIDANCE

Dependent variable: Abn_Return(2,t)	Propensity-Score Matched Sample of Stand-Alone Guidance		Within-Firm Matched Sample of Stand-Alone Guidance	
	t=10	t=30	t=10	t=30
Top_Q_Guide_News	0.015***	0.011	0.023***	0.027*
	(0.007)	(0.207)	(0.008)	(0.052)
Press_Cover	0.010**	0.008	0.018*	0.022
	(0.046)	(0.301)	(0.056)	(0.123)
Top_Q_Guide_News*Press_Cover	-0.015**	-0.014	-0.027**	-0.039**
	(0.025)	(0.168)	(0.018)	(0.030)
Abn_Return(0,1)	0.050*	0.097**	0.030	0.134*
	(0.080)	(0.026)	(0.514)	(0.053)
Guide_Reputation	-0.006*	-0.000	0.001	-0.003
	(0.081)	(0.961)	(0.831)	(0.720)
Horizon	-0.003	-0.019**	-0.008	-0.022*
	(0.545)	(0.024)	(0.176)	(0.061)
Range	0.002	-0.005	-0.004	-0.015
	(0.618)	(0.523)	(0.562)	(0.297)
P_Month_Press_Cover	-0.010	-0.021	0.013	-0.020
	(0.423)	(0.282)	(0.416)	(0.505)
Instit_Own	-0.001	-0.009	-0.012	0.001
	(0.917)	(0.436)	(0.179)	(0.959)
Ln_MVE	0.001	-0.002	-0.001	-0.000
	(0.687)	(0.535)	(0.605)	(0.942)
BTM	0.000	0.002	-0.008	-0.003
	(0.945)	(0.894)	(0.429)	(0.860)
Ln_Follow	-0.001	0.002	-0.003	-0.003
	(0.705)	(0.768)	(0.450)	(0.749)
Dispersion	0.002	0.018	0.025	0.043
	(0.906)	(0.608)	(0.349)	(0.434)
Industry FE	Included	Included	Included	Included
Year, Month, Day of Week FE	Included	Included	Included	Included
Adj. R^2	4.3%	4.2%	10.0%	8.0%
No. Obs.	1,856	1,864	768	771
F-test p-value: Press_Cover + Top_Q_Guide_News*Press_Cover = 0	(0.294)	(0.363)	(0.137)	(0.142)

This table contains the results of regressions examining price drift following press coverage of management earnings guidance.
See Appendix B for variable definitions. All continuous variables, except stock returns, are winsorized at the first and 99th percentiles to alleviate the effects of outliers on the analysis.
P-values are reported in parentheses based on t-statistics calculated using White's (1980) heteroscedasticity robust standard errors clustered by firm to control for dependency in the error terms (Petersen 2009; Gow et al. 2010).
Industry, year, month, and day of the week fixed effects are also included in the models (coefficients not reported).
*, **, *** indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, using a two-tailed test.

TABLE 7
LONG-WINDOW RETURNS PORTFOLIOS

	Abn_Return(0,1)				Abn_Return(2,t)				Guide_News Difference P-value
	Covered	Non-Covered	Diff.	P-value	Covered	Non-Covered	Diff.	P-value	
Propensity-Score Matched Sample of Stand-Alone Guidance									
t=10									
Low (0,t) Quintile	-0.121	-0.105	**-0.015**	(0.026)	-0.034	-0.050	**0.016**	(0.001)	(0.474)
High (0,t) Quintile	0.069	0.053	**0.016**	(0.001)	0.041	0.056	**-0.015**	(0.001)	(0.462)
t=30									
Low (0,t) Quintile	-0.102	-0.087	**-0.015**	(0.042)	-0.083	-0.096	**0.013**	(0.047)	(0.729)
High (0,t) Quintile	0.057	0.036	**0.021**	(0.001)	0.096	0.121	**-0.025**	(0.001)	(0.112)
Within-Firm Matched Sample of Stand-Alone Guidance									
t=10									
Low (0,t) Quintile	-0.106	-0.074	**-0.031**	(0.001)	-0.027	-0.048	**0.020**	(0.003)	(0.013)
High (0,t) Quintile	0.080	0.055	**0.025**	(0.002)	0.035	0.054	**-0.019**	(0.004)	(0.167)
t=30									
Low (0,t) Quintile	-0.084	-0.057	**-0.027**	(0.007)	-0.085	-0.103	0.017	(0.088)	(0.061)
High (0,t) Quintile	0.066	0.040	**0.025**	(0.002)	0.099	0.115	-0.016	(0.088)	(0.720)

This table presents mean values of stock returns over different time windows beginning the day guidance was announced. Firms are sorted into quintiles based on total returns over the period, and mean returns are presented for the lowest and highest return quintiles. Results are shown for both the propensity-score matched sample (4,998 observations) and the within-firm matched sample (2,092 observations) of stand-alone guidance.

Differences in bold are significant at the $\alpha = 0.05$ level, using two-tailed *t*-tests of means.

TABLE 8
MARKET REACTION TO PRESS COVERAGE OF MANAGEMENT EARNINGS GUIDANCE
COMPARISON OF STAND-ALONE AND BUNDLED GUIDANCE

Dependent variable: Abn_Return(0,1)	Full Sample of Stand-Alone Guidance	Full Sample of Bundled Guidance	Difference
Guide_News	2.290***	3.137***	
	(0.001)	(0.001)	
Press_Cover	0.013***	0.002**	
	(0.001)	(0.016)	
Guide_News*Press_Cover	2.212***	0.542***	1.670***
	(0.001)	(0.001)	(0.001)
Fraction	-0.044***	-0.002	
	(0.001)	(0.168)	
Guide_Reputation	0.003*	-0.003***	
	(0.088)	(0.001)	
Horizon	0.006**	0.000	
	(0.035)	(0.745)	
Range	-0.004	-0.001	
	(0.124)	(0.366)	
P_Month_Press_Cover	0.002	0.005*	
	(0.798)	(0.086)	
Instit_Own	-0.001	0.001	
	(0.874)	(0.536)	
Ln_MVE	0.002*	-0.001*	
	(0.058)	(0.052)	
BTM	0.014***	0.008***	
	(0.001)	(0.001)	
Ln_Follow	-0.001	-0.001	
	(0.777)	(0.234)	
Dispersion	0.010	0.021***	
	(0.451)	(0.002)	
Industry FE	Included	Included	
Year, Month, Day of Week FE	Included	Included	
Adj. R^2	14.6%	6.2%	
No. Obs.	9,286	49,774	

This table contains the results of regressions examining the market reaction to press coverage of management earnings guidance across samples of stand-alone and bundled guidance.
See Appendix B for variable definitions. All continuous variables, except stock returns, are winsorized at the first and 99th percentiles to alleviate the effects of outliers on the analysis.
P-values are reported in parentheses based on t-statistics calculated using White's (1980) heteroscedasticity robust standard errors clustered by firm to control for dependency in the error terms (Petersen 2009; Gow et al. 2010). Industry, year, month, and day of the week fixed effects are also included in the models (coefficients not reported).
*, **, *** indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, using a two-tailed test.

TABLE 9
HECKMAN SELECTION MODEL RESULTS

Dependent Variable:	Independent Variables of Interest:	Full Sample of Stand-Alone Guidance (9,286 obs)	Full Sample of All Guidance (66,598 obs)
	Guide_News*Press_Cover	2.262***	1.513***
		(0.001)	(0.001)
Abn_Return(0,1)	Inv_Mills	-0.011**	-0.007***
(Table 5, Panel A)		(0.014)	(0.001)
	Guide_News*Inv_Mills	0.430	2.003***
		(0.501)	(0.001)
	Abs_Guide_News*Press_Cover	5.889***	4.311***
		(0.001)	(0.001)
Fraction	Inv_Mills	-0.145***	-0.120***
(Table 5, Panel B)		(0.001)	(0.001)
	Abs_Guide_News*Inv_Mills	8.760***	7.315***
		(0.001)	(0.001)

This table contains the results of regressions examining the market reaction to press coverage of management earnings guidance using a Heckman two-stage selection model.
For the sake of parsimony, only the coefficients and p-values of the independent variables of interest in each test are presented.
Inv_Mills is the inverse mills ratio from the Heckman two-stage selection model. See Appendix B for all other variable definitions. All continuous variables, except stock returns, are winsorized at the first and 99th percentiles to alleviate the effects of outliers on the analysis.
P-values are reported in parentheses based on t-statistics calculated using White's (1980) heteroscedasticity robust standard errors clustered by firm to control for dependency in the error terms (Petersen 2009; Gow et al. 2010).
Industry, year, month, and day of the week fixed effects are also included in the models (coefficients not reported).
*, **, *** indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, using a two-tailed test.

APPENDIX B

VARIABLE DEFINITIONS

Press Coverage Variables

Press_Cover	= an indicator variable equal to one if the guidance received press coverage in the *DJ Newswires* on the day the guidance is announced, and zero otherwise.
Press_Cover_%	= the percentage of the firm's guidance that received press coverage in the *DJ Newswires* during the sample period.
Other_Press_Cover	= the number of other firms with an earnings or guidance-related press article in the *DJ Newswires* or *WSJ* on the day the guidance is announced, in hundreds.
Other_Ind_Press_Cover	= the number of other firms in the same industry that received press coverage in the *DJ Newswires* or *WSJ* on the day the guidance is announced, in hundreds.
P_Guide_Press_Cover	= an indicator variable equal to one if the firm's most recent prior guidance received press coverage in the *DJ Newswires*, and zero otherwise.
P_Month_Press_Cover	= the number of days during the 30 day period ending on the day prior to the guidance announcement that the firm received press coverage in the *DJ Newswires* or *WSJ*, divided by 30.

Other Variables

Abn_Return(0,1)	= the raw buy-and-hold stock return over the two day period beginning the day the guidance is announced, minus the return to a benchmark portfolio formed based on size, book-to-market, and momentum over the same two day period.
Abn_Return(0,t)	= the raw buy-and-hold stock return over the time period beginning the day the guidance is announced and ending on day t (where t = 10 or 30), minus the return to a benchmark portfolio formed based on size, book-to-market, and momentum over the same time period.
Abn_Return(2,t)	= the raw buy-and-hold stock return over the time period beginning two days after the guidance is announced and ending on day t (where t = 10 or 30), minus the return to a benchmark portfolio formed based on size, book-to-market, and momentum over the same time period.
Abs_Abn_Return(0,1)	= the absolute value of *Abn_Return(0,1)*.
Abs_Guide_News	= the absolute value of *Guide_News*.
After_Hours	= an indicator variable equal to one if the guidance is issued after the closing of stock market trading hours, and zero otherwise.
Annual	= an indicator variable equal to one if the guidance is for annual earnings, and zero if the guidance is for quarterly earnings.
Bad_Guide_News	= an indicator variable equal to one if *Guide_News* < 0, and zero otherwise.
BTM	= the book-to-market ratio as of the end of the most recent quarter.
Bundled	= an indicator variable equal to one if the guidance is issued within 2 days of an earnings announcement date, and zero otherwise.
Dispersion	= the standard deviation of the most recent consensus analyst forecast.
Follow	= the number of analysts following the firm.
Fraction	= the number of analysts who revise their forecasts during the two day period beginning the day the guidance is announced, scaled by *Follow*.
Guide_News	= the guidance minus the consensus analyst forecast, scaled by stock price as of two days prior to the day the guidance is announced, where the consensus analyst forecast is calculated as the mean of the most recent forecast issued by each individual analyst during the 90 day period ending three days prior to the guidance announcement. For guidance that is bundled with an earnings announcement, *Guide_News* is calculated using the conditional expectations model developed in Rogers and Van Buskirk (2012).
Guide_Reputation	= the average relative accuracy of the firm's guidance issued during the prior 3 years, where relative accuracy is equal to 1, 0, and -1, respectively, if the absolute value of the consensus analyst forecast error prior to the guidance is greater than, equal to, or less than the absolute value of the guidance error.
Horizon	= the number of days between the day the guidance is announced and the end of the fiscal period, divided by 365.
Instit_Own	= the number of shares held by institutional investors, scaled by total shares outstanding.
Inv_Mills	= the inverse mills ratio obtained from the Heckman two-stage selection model.
Ln_Follow	= the natural logarithm of *Follow*.
Ln_MVE	= the natural logarithm of market value of equity.

Loss	= an indicator variable equal to one if net income before extraordinary items was < 0 in the most recent quarter, and zero otherwise.
Meet_Beat_Hist	= the proportion of the prior four quarters that the firm met or exceeded analysts' earnings expectations.
Multiple	= an indicator variable equal to one if the firm issued guidance for more than one period on the same day, and zero otherwise.
P_Month_Abn_Ret	= the raw buy-and-hold stock return over the 30 day period ending on the day prior to the guidance announcement, minus the return to a benchmark portfolio formed based on size, book-to-market, and momentum over the same 30 day period.
P_Month_Turn	= prior stock turnover, calculated as the average of daily trading volume scaled by total number of shares outstanding over the 30 day period ending on the day prior to the guidance announcement.
P_Month_Ret_Vol	= prior stock return volatility, calculated as the standard deviation of the firm's raw stock returns over the 30 day period ending on the day prior to the guidance announcement.
Q_ERC	= the absolute value of abnormal stock returns over the two day period beginning on the day of the firm's most recent quarterly earnings announcement, divided by the absolute value of the earnings surprise, ranked into quintiles by year.
Q_Guide_News	= the quintile ranking of *Guide_News* by year.
Range	= an indicator variable equal to one if the guidance is in the form of a range, and zero if the guidance is a point forecast.
Revision	= the difference between the post-guidance consensus analyst forecast and the consensus analyst forecast prior to the guidance, scaled by stock price as of two days prior to the guidance announcement, where the post-guidance consensus analyst forecast is calculated as the mean of the first forecast issued by each individual analyst during the 30 day period beginning the day the guidance is announced.
ROA	= return on assets, calculated as net income before extraordinary items divided by total assets.
SP1500	= an indicator variable equal to one if the firm is in the S&P 1500 stock index as of the guidance announcement date, and zero otherwise.
Top_Q_Guide_News	= an indicator variable equal to one for the highest quintile of *Q_Guide_News*, and zero otherwise.