

## **The Press as a Watchdog for Accounting Fraud**

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First Version: July 2003  
This Version: August 2005

All comments welcomed.

I thank Jeff Abarbanell, Mary Barth, Sudipta Basu, Brian Bushee, Bob Kaplan, Stu Gilson, Cristi Gleason, Paul Healy, Pat Hopkins, Jack Hughes, Amy Hutton, Bruce Johnson, Michael Maher, Maureen McNichols, Doug Skinner, Greg Waymire and Joe Weber as well as workshop participants at Boston College, Emory University, Harvard Business School, The Ohio State University, University of Iowa, the 2004 Duke/UNC Fall Accounting Camp, the 2003 Stanford Summer Camp and several anonymous members of the press for comments on earlier versions of this paper. I thank Sarah Eriksen and Anne Karshis for research assistance. I am grateful for the funding of this research by the Harvard Business School.

## **The Press as Watchdogs for Accounting Fraud**

### **ABSTRACT**

This paper investigates the press' role as a monitor or "watchdog" for accounting fraud. I first examine whether there are systematic patterns in the firms for which the press publishes an article regarding accounting fraud. My findings are consistent with the press trading off costs and benefits in determining the investigation and publication criteria. Specifically, the press is more likely to write articles regarding large firms, that are heavily followed by analysts and that receive extensive prior press coverage. These factors indicate there is a high level of interest in the firm, thus increasing benefits of an article, and that information should be available about the firm, reducing costs. I also find the press is more likely to write an article if there are many individuals involved in the fraud, consistent with an increased chance of receiving an inside tip (and thus lower costs to investigate). Further, articles are more likely if the frauds that are larger, involve theft by managers and/or include a prior publicly misleading statement. All of these factors allow the press to frame the article in a more sensational and entertaining manner, thus increasing the benefits of publication.

An examination of the sources of information used indicates that the press relies on a mix of private and public information. Most commonly, the press makes the case for accounting issues independent of other public information intermediaries. However, the press also frequently cites analysts, auditor changes and lawsuits as a source for allegations of accounting malfeasances. These analyses suggest that reporters who specialize in business analyses are more likely to write articles that independently make the case for a business issue, while non-specialist are more likely to repeat information garnered from other information intermediaries.

Market tests indicate that these articles have information content to market participants. Articles relying on press based analyses have a significantly greater reaction than do those relying on other information intermediaries, suggesting that in those cases the press has presented information that is not known by the market. In either case, the press has provided a watchdog role by more broadly disseminating an accounting concern.

## *1. Introduction*

This paper studies the press' role as a monitor or "watchdog" for publicly identifying accounting fraud. First, I examine when the press is most effective as a watchdog by studying the impact of firm and fraud characteristics in determining whether the press alleges accounting malfeasances prior to an admission by the firm or SEC. Second, I study the process of watchdog reporting by investigating the information sources used to develop accounting malfeasances stories, the type of press most likely to publish these stories and the relation between information sources and specialization in business reporting by the author/publication. Finally, I determine whether these articles provide new information to the stock markets by examining the market response to articles alleging malfeasances. The evidence provided by this study contributes to our understanding of the press' role as an information intermediary in the capital markets and society by indicating when the press acts as a monitor for accounting malfeasances, how they go about this monitoring, and whether their monitoring provides useful information to the market.

The watchdog role is often cited as one of the most important functions of the press in contributing to society (Serrin and Serrin 2002; Islam 2002; Djankov, Mcleish, Nenova and Shleifer 2002; Dyck and Zingales 2002). Accounting frauds are a significant event in the business world, suggesting they present a good opportunity for the business press to undertake a monitoring function and fulfill a societal role. However, the press faces conflicting incentives to publish articles alleging fraud. On the positive side, frauds are often filled with conflict, drama and deviant behavior, all of which are considered components of a compelling story (Jamieson and Campbell, 2001). Compelling and entertaining stories lead to a larger reader base and a related increase in revenues from subscriptions and advertising, creating an incentive to

aggressively fulfill the watchdog role. On the negative side, uncovering accounting fraud is likely to be time consuming, costly and lead to many dead ends. Further, the press is also part of the market it is meant to cover. As such, there may be incentives not to harm those markets due to relations with affiliated companies, advertisers, or simply upsetting the reader-base (Herman, 2002; Jamieson and Campbell, 2001). Members of the press (both publishers and reporters) must trade-off these costs and benefits when deciding whether and how to identify accounting fraud.

I use Accounting, Auditing and Enforcement Releases (AAER) to identify a sample of firms that were sanctioned by the SEC for accounting malfeasances. Use of the AAER allows me to examine a sample of firms widely believed to have engaged in accounting fraud and provides objective measures of the characteristics of the fraud undertaken, such as the magnitude and types of infractions. My final sample consists of 263 firms that have committed a wide range of accounting violations. I find that the press publishes articles regarding accounting fraud prior to a public acknowledgment by the firm or SEC for 75 (29%) of the firms.

I first examine how characteristics of the firm and fraud impact the likelihood of an article alleging fraud. The goal of this analysis is to provide evidence regarding how the press trades off the cost and benefits of acting as a watchdog. This evidence enhances our understanding of when the press assists in monitoring firms' activities. I predict that firms with a strong information environment are more likely to have articles written regarding their accounting fraud due to the obvious high interest in these firms, which suggests there will be interest in a story, and to the lower cost of investigating firms with a rich information environment. Consistent with these predictions, I find that firms with a high analyst following, a large number of general press

articles or greater market value of equity are statistically more likely to have their accounting violations first identified in the press.

The press industry generates much of its income from advertising revenue and so may be less likely to be critical of firms that are currently large advertisers or have the potential to be in the future. However, I find no evidence that the press is less likely to write articles regarding firms in high advertising industries.

I also expect aspects of the fraud will impact whether the press publishes a fraud identifying article. Reporters often indicate that inside leaks are crucial in the reporting process as they both provide a strong indication that a problem exists and often can point the reporter towards other sources of information. Thus, these inside leaks greatly reduce the expected costs of investigative reporting. As a test of this reduced costs, I examine whether the number of people involved in the fraud impacts the likelihood of an article. I find that that this variable is highly correlated with an article being published.

Frauds that are more egregious are likely to make for a more interesting story. Accordingly, I examine whether frauds that involve a greater dollar magnitude are more likely to be identified in an article. Again, the evidence finds strong support for this prediction.

The press prefers stories that can be personalized and involve controversy, conflict and deviant behavior. Frauds that involve public misleading statements (such as a press release claiming a large new contract and related accounting malfeasances to support the press release) are likely to both attract the press' attention, thus reducing search costs, and be of interest to readers of the original disclosure, increasing the benefit. Consistent with this, I find articles are much more likely if the AAER alleges the company provided a material publicly misleading statement or filing.

Frauds that involve management profiting due to insider trading, hidden compensation or plain theft more easily lend themselves to a personalized and controversial spin, suggesting the press may find frauds involving such actions as being more newsworthy. Consistent with this, I find that frauds that are accompanied by such actions are more likely to result in an article.

Next, I use the 75 articles that identify an accounting fraud to understand what information the press uses to investigate fraud. Most frequently, the articles indicate the press undertook “investigative” reporting by analyzing a mix of information, often including publicly available documents, to create its own allegation of accounting misdeeds. However, articles also often refer to other information intermediaries, such as analysts, litigation/court actions and auditor changes. While it is difficult to determine whether the reporter had already identified the company and then found these sources, the fact that so many articles occur directly following law suits and auditor changes suggests that reporters use these sources to identify firms that are potentially committing accounting fraud. Regardless of the initial source, most articles indicate reporters collect additional information to complete the story. This suggests an interesting informational interplay between several of the intermediaries and institutions that govern society.

Given the technical nature of accounting fraud, I expect publications that specialize in business are more likely to identify malfeasances prior to a public admission by the firm or SEC. Consistent with this, national business publications and business based wire services publish the greatest number of the articles, but some also appear in local media, and trade publications.

Examination of the relation between information sources and the publication/author type also provide evidence of the importance of specialization in creating a better understanding of financial information and a more developed network within the business community. I find that national business publications are likely to use reporter generated information (such as

interviews with customers or analysis of financials statements) and analysts as sources, while local papers are more likely to respond to legal cases and auditor changes. Similarly, authors with a recurring column (and thus more likely to be business “specialist”) are more likely to use reporter generated information and analysts as a source while non-recurring authors write in response to litigation and auditor changes.

Finally, I examine whether watchdog articles provide incremental information to market participants. I find a -6.9(-9.6)% one-day (three-day) response to these articles, indicating that in aggregate they provide information to the markets. An analysis by information source shows that the response is greater for articles based on reporter generated information and than for those based on other information intermediaries. In fact, after controlling for the publication type, the response to articles based on analyst (legal suits) is only -1(+1)% and is no longer significantly different from zero. This analysis shows that in many cases the press develops and presents new information to the markets, suggesting an important role as a monitor or information intermediary in society.

The main purpose of this study is to provide evidence on the role of the press in the capital markets and society. The evidence indicates when the press is most likely to identify accounting fraud, how the press uses information in fulfilling this role, and which types of articles provide original information to the markets. As Jensen (1979) points out, the press is an integral component of our information and oversight environment and any complete theory of that environment will require a thorough understanding of the role of the press. While the press likely serves as important of a function as auditors and analysts, there have been hundreds (perhaps thousands) of published studies on those information intermediaries and relatively little on the press. This paper provides a beginning towards developing that understanding.

In addition to the value of understanding the press as an entity, evidence on the press contributes to our understanding of other phenomenon already studied in the literature. For example, in the Watts and Zimmerman (1986) discussion of political costs, they point out that the mechanisms for attracting the attention of government bodies is not clear (page 230). The findings that high profile firms are more likely to be identified by the press when they undertake accounting fraud demonstrates one mechanism by which government entities, or other groups with the ability to impose costs, could be attracted to investigating the firm.

The evidence provided in this paper is also of interest due to the increasing use of the press as a control variable in accounting and economic studies (Frost, Gordon and Hayes, 2001; Bushman, Piotroski and Smith, 2003; Haw, Hu, Hwang and Wu 2003). With a greater understanding of the press, we can more clearly determine whether these variables effectively capture the constructs they are meant to measure.

This paper proceeds as follows: section 2 discusses related literature and motivates the research question, section 3 discusses the sample selection and collection of press coverage, section 4 provides results and section 5 concludes.

## *2. Related Literature, Motivation and Research Question*

### *2.1 The Press in the Information Process*

The press is a vital information intermediary in the economy (Owen, 2002). Its choice of items published impacts the information set, actions and opinions of a large portion of the population (Islam, 2002). Given this impact, understanding the press' analysis and determination of the newsworthiness of a story is critical in developing a comprehensive theory regarding how economies and societies function (Jensen, 1979).

Existing research on the relation between the press and commerce is limited (Zingales, 2000). There are many studies that use the press to identify information that is hypothesized to be of interest to the markets (for example, Niederhoffer, 1971 and Cutler, Poterba and Summers, 1989). The stated goal of these studies is to provide evidence regarding the role of information in market movements, but they indirectly provide a joint test of whether the press identifies news that is relevant to market participants.<sup>1</sup> Similarly, studies of the market response to fundamental analysis of companies by Abraham Briloff were undertaken to examine the relation of fundamental analysis and market efficiency (Foster, 1979 and 1987; Desai and Jain, 2000). However, the articles were published in *Barron's*; a leading business magazine. Thus, the studies also provide evidence regarding the press's ability to impact equity valuations.

A few studies provide more direct evidence on the relation of the press and business by suggesting the press' influences how other institutional entities fulfill their role. Negative press coverage increases the likelihood that auditors will issue a going concern opinion (Joe, 2003). Similarly, press coverage following the collapse of Drexel appears to have exacerbated a political backlash against insurance companies heavily invested in junk bonds (DeAngelo, DeAngelo and Gilson 1994, 1996). That backlash cumulated in California state regulators seizing the companies despite liquidity ratios that were equivalent to those of similar firms that were not invested in junk bonds.

Finally, there is a growing literature that uses cross-sectional variation in the national characteristics of the press to investigate the role of the press in corporate governance, governmental actions and development (Dyck and Zingales, 2002; Stromberg, 2002 and

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<sup>1</sup> Both studies cited use coverage in the *New York Times* to identify news events, thus they jointly test the market's response to news and the *New York Times*' ability to assess news.

Djankov, McLiesh, Nenova and Shleifer, 2002). This literature generally concludes that the press can impact the political and economic make-up of a country.

The above studies show that the press impacts economic perceptions and actions. However, they do not examine the press' decision of which stories to cover or how it obtains information for analysis. The press' demonstrated ability to impact economic outcomes suggest an understanding of the factors that impact reporting is important. Further, despite the limited understanding of the reporting process, press based measures are becoming increasingly common in accounting research (Frost, Gordon and Hayes, 2001; Bushman, Piotroski and Smith, 2003; Haw, Hu, Hwang and Wu 2003, Barton 2003)). These measures could be formed and used more effectively with a greater understanding of how the press functions.<sup>2</sup>

## *2.2 The Press as a Watchdog for Accounting Fraud*

In this paper, I focus on one aspect of press reporting – acting as a monitor or “watchdog” for the public interest by assisting in the early identification of accounting impropriety.<sup>3</sup> The watchdog role is frequently referred to as one of the most important functions of the press (Serrin and Serrin 2002; Islam 2002; Djankov, McLiesh, Nenova and Shleifer 2002; Dyck and Zingales 2002). Watchdog journalism occurs as “journalist ask penetrating questions at every level of the public and private sectors” (Neiman Foundation project on Watchdog Journalism web page) with the goal of “...holding to account society’s power brokers and rule makers...” (Lewin 2002 pg. 19). This activity is viewed as quasi-governmental in nature and has led to the press being referred to as the “fourth branch” or “fourth estate” of the government (Groseclose and Milyo

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<sup>2</sup> As an analogy, the large amount of work performed in the analyst literature has increased our understanding of the role of analysts in the business world while enhancing our ability to use analyst data in researching other issues.

<sup>3</sup> The term “watchdog” refers to journalist alerting the public to an issue through press coverage just as a canine watchdog alerts others of a danger by barking. As with many jargon terms, “watchdog reporting” has a broad and somewhat loose definition. *All* of the working definitions include the need for critical thought and question asking and many also restrict the definition to cases in which the reporter is one of the first entities to address an issue to the

2003). The watchdog process often includes combining public and non-public information with an analysis that highlights potential problems. Watchdog journalism in business reporting is unique in that SEC filings and other publicly available information provide a rich starting point for the process. However, the reporter still must identify the issue, improvise to collect supporting information, synthesize the information, frame the issues and disseminate to the general public (Keller, 1998).

My study investigates the press's role as a watchdog in the early identification and communication of accounting malfeasance by examining whether the press publishes an article alleging accounting irregularities prior to a public admission by the company or announcement of an SEC investigation into the matter. In some situation the press provides the first public indication that an accounting issues exists. In others it may pick up indications from other information intermediary. Being the first entity to identify an accounting issue is a clear example of a monitoring role, and likely contains more informational value than the subsequent coverage. However, even if the potential issue was identified by another public information intermediary, the press can still provide an important function by publishing an article that synthesizes this concern with other information regarding the firm. This validates the original concern and makes the entire story more accessible to the general public. Both types of publications are an example of the watchdog process of combining information sources to highlight an abuse of a company's duties and making that information broadly available.

Accounting fraud is an important event in evaluating companies, and thus also an important news event. Further, it has been argued that the press chooses stories based on entertainment value (Jensen, 1979). The often extreme actions, tensions and personalities

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broader public. Others expand watchdog reporting to the follow-up that occurs after an issue is initially identified.

involved in accounting fraud combine to create a compelling story. For example, one popular journalism text, Jamieson and Campbell (2001 pages 41-52) defines a newsworthy event as having five characteristics: 1) can be personalized, 2) dramatic, violent and conflict filled, 3) actual and concrete, 4) novel and deviant, and 5) an issue of ongoing concern. Accounting fraud is one of the few business stories that can be framed to meet all five criteria. For example, frauds often are undertaken by a few high profile individuals at the cost of others, making them personal and conflict filled. Similarly, they can often be explained in clear terms (e.g. manipulation to push up stock price), occur frequently enough to be considered an ongoing issue for investors, but are infrequent enough that they still represent a novel/deviant action by the managers. Combining the ability to frame the story as “news” with the press’ history of muckraking, it is reasonable to expect the press devotes substantial efforts to identify and analyze accounting fraud.

However, countervailing pressures may reduce the press’ activities as watchdogs over firms. The non-government owned press are market participants themselves. Many of their interests are aligned with the market, making it less likely that they desire to cause concern regarding the market or face scrutiny themselves (Herman, 2002).<sup>4</sup> These apprehensions can be intensified by affiliations with parent companies or advertisers who may be harmed by investigative reporting (Herman, 2002; Jamieson and Campbell, 2001). The press also may censor stories in an attempt to keep ongoing sources available for future information (Jensen, 1979; Herman, 2002). Individual reporters may be concerned about retaining their job and/or

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While examination of that follow-up role would be interesting, it is beyond the scope of this paper.

<sup>4</sup> Jamieson and Campbell (2002 – pg 62-63) quote Peter Silverman, the business and financial editor of the *Washington Post*: “Newspapers themselves are among the most secretive and the most protective about the facts and figures of their own business. They are not likely to ask others to do what they are unwilling to do themselves.”

future employability if representatives of companies complain to their editors (McNair, 2002).<sup>5</sup> Finally, the press has to be concerned about offending its readers, which are participants in the market themselves (Jamieson and Campbell, 2001).<sup>6</sup> These forces suggest that the press is likely to face strong pressure opposed to reporting accounting improprieties.<sup>7</sup> Accordingly, the press may choose not to provide initial or early information regarding the problems, but rather to wait until a fraud has been publicly acknowledged by the company and then use ex-post articles to fulfill the need for interesting business stories.

### 2.3 Research Questions

#### 2.3.1 Characteristics of firms and frauds that influence the likelihood of an article

I first examine the degree to which the press fulfills the early identification watchdog role. As I discuss more fully in the data section, I include firms in my sample based on SEC AAER that allege accounting violations.<sup>8</sup> Examining the proportion of these firms identified by the press prior to the official announcement of an accounting issue provides evidence regarding the press' ability to identify and its willingness to publish stories regarding suspected fraud.

Next, I examine the characteristics that lead the press to identify and publish an incident of accounting fraud in some instances while missing or staying silent in others. As with all economic agents, I expect reporters will choose articles based on maximizing benefits and

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<sup>5</sup> McNair presents several examples of attempts by businesses to silence reporters. While many were not successful, in at least one case a reporter was fired shortly after company complaints about coverage (McNair, 2002 pg. 14).

<sup>6</sup> As an example of a member of the press noting this constraint, Bill Wasik, an editor of Harpers, wrote an article condemning business reporting as having devolved into nothing more than personal-finance journalism. He argues the following :“That investigative reporting of Enron was carried out in inverse proportion to the company’s stock price cannot be blamed merely on trend-focused journalists, or on bought-off editors or publishers. Rather, it is intrinsic to the culture of personal-finance journalism. When a company’s fortunes seem poised to enlarge indefinitely, the interests of all potential sources- the company, the analysts, large investors-are aligned not only with one another but *with the interests of the reader*, who is assumed to be a shareholder or potential shareholder.” (Wasik, 2003) (Italics in Original).

<sup>7</sup> It is interesting to note the similarity between these forces and those studied in the analyst and auditing literatures.

<sup>8</sup> Firms settle AAER “without admitting or denying guilt” and thus still may technically argue that they were not guilty of accounting fraud or misstatement. However, the existence of an AAER suggests the SEC believes there were sufficient problems to make a public case.

reducing costs. First, the press prefers articles that are interesting to a large group of readers, resulting in higher subscription revenues and a larger reader base to offer potential advertisers (Stromberg, 2002). Further, the press will attempt to increase future readership by publishing stories readers find memorable (Mullainathan and Shleifer, 2002). The press must also consider the cost of undertaking such investigations. Firms with a richer information environment can be analyzed more easily and certain aspects of frauds may make them easier to detect, both of which reduce the cost of investigation. As is often the case, it is difficult to separate the impact of cost and benefits in much of my empirical analyses. Accordingly, I discuss the empirical implementation of the predictions provided by costs and benefits together.

I expect that firms with a high number of stakeholders interested in the firm's activities present an opportunity to attract a large reader base. Further, stakeholder demand for information should lead to greater demand for information directly from the firm and an increased number of other information intermediaries following the firm, resulting in a richer information environment for these firms. Thus, relative to other firms, the benefits of coverage are high and the cost of analyzing these firms is low. I proxy for broad stakeholder interest and rich information environment by using market value, analyst following and overall press coverage (details of these items are discussed more fully in the sample and results sections).

A firm's advertising spending also may impact the likelihood of a critical article. Advertising is an important source of revenue for the press and publishers may be hesitant to print articles that will offend large current or prospective advertisers (Reuter and Zitzwitz, 2003). Articles alleging inappropriate accounting have a high potential for upsetting any affected advertisers. I predict firms that have the potential to be large advertisers are less likely to be the subject of unfavorable articles. I proxy for advertising status using an indicator variable that is

coded as 1 if the firm is in an industry that was in the top 15 advertising industries (according to Advertising Age) in each of 1985, 1990, 1995 and 2000.

Next, I expect that characteristics of the fraud may impact the presses ability to frame the story in a way that will appeal to a broad set of readers and/or the ease with which the press can detect the fraud. Thus, these characteristics will influence both the costs and benefits that determine whether an article is written regarding a particular fraud.

By nature, frauds are designed to be concealed from outsiders. Thus, identification of a fraud can be costly and the outcome highly uncertain at the beginning of an investigation. An internal leak, or at least indication of the potential for an issue, can have a strong influence on reassuring the reporter that there is a story to be pursued and may even point the reporter towards the sources needed to confirm the fraud. A greater number of people involved in the fraud would result in a larger number of people who may eventually leak the activities to outsiders (or to others who become the direct contact with the press). Accordingly, I predict that the likelihood of an article is increasing in the number of people involved in the fraud. This information is identified from the AAER.

Frauds that involve a large dollar magnitude may be deemed as being more news worthy and also allow the reporter to frame the story in a more controversial (and thus attention grabbing) manner. Both of these items would increase the benefit of publishing an article. I investigate whether the dollar magnitude of the fraud is related to the likelihood of an article by including the total magnitude of the fraud as detailed in the AAER.

I expect the press to be more likely to identify a fraud that involved a materially misleading public statement. Such statements are likely to attract scrutiny and communicate items the company expects will catch the public's attention, suggesting broad appeal to

consumers of the press. Further, they allow the reporter to frame the story as having caught management attempting to fool the public, creating a personal element as well as showing conflict and deviant behavior. For example, in many of the frauds in this sample, management announced a new contract or customers and attributed a large increase in revenue from the new relationship. If a member of the press is able to challenge this claim, it allows them to frame the story as a challenge to management integrity. Most frequently, frauds that involved these statements also include other manipulation, however, a public statement creates a compelling hook for, and also attracts the interest of, the press. Thus, this item impacts both increases the benefits and decreases the costs of investigating and publishing a story on the firm. I identify frauds with publicly misleading statements via the AAER.

Many accounting frauds occur concurrent with management misappropriation of funds, either through illegal insider trading, manipulation of bonus plans or just pure theft. While the cost of identifying these actions is unclear, they will make the story more compelling by increasing the degree to which the article can be personalized, is dramatic, has conflict, and covers deviant behavior. This data is also collected from the AAER.

### *2.3.2 Information sources and characteristics of the press that covers accounting fraud*

Next, I examine the content of the articles alleging accounting concerns with the goal of providing an understanding of the information sources the press uses, which type of press identifies fraud and whether those two items are related. Of course, isolation of sources based on the ex-post article is difficult as the press may initially receive information from one entity but in the process of writing the article rely on a subsequent source. Assuming no systematic biases in

such switches, this portion of the study still should provide insight into the process by which the press collects information.<sup>9</sup>

After identifying sources, I also examine the type of press that provides coverage (i.e. detected business outlets and other forms) and the relation between sources of information and type of press. I expect that the business press will be the primary provider of articles alleging accounting improprieties, due both to the greater interest for their reader base (greater benefit) and their expertise in analyzing business situations (lower costs). I also expect the business press will be more likely to develop stories using their own analysis, while other forms of the press will be more likely to write stories that magnify pronouncements from other information intermediaries, such as lawsuits and auditors.

### *2.3.3 Information content of articles alleging accounting malfeasances*

Finally, I examine the information content of the articles. If the press is playing an informative role there will be a negative reaction to the articles. Conversely, if the press is simply repeating widely known information and/or is not considered a reliable source of analysis, then there will be no reaction to the articles. Based on this, in the cross-section I expect a larger reaction to articles that rely primarily on reporter-generated information, such as original analysis of financial statements or information from individuals that do not generally provide public analysis of companies activities (e.g. customers or employees). I also expect a larger reaction to stories published on the wire services, due to their heavy usage by capital market participants, and to those in the business press based on its ex-ante status as a more informed/credible analyzer of accounting information.

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<sup>9</sup> Further, the returns tests performed later in the paper will provide validation of the categorization created by using sources in the press.

### *3. Research Design and Sample*

#### *3.1 Sample Creation and Accounting and Auditing Enforcement Releases*

To investigate what type of firm and fraud lead to the press publishing an article alleging accounting fraud, I must identify firms that have committed accounting fraud. Consistent with prior work, I use the SEC Accounting and Auditing Enforcement Releases (henceforth AAER) to build a sample (Dechow, Sloan and Sweeney, 1996; Bonner, Palmrose and Young, 1998; Beneish, 1999 A, 1999 B). There are differing opinions regarding why AAER are issued. While some believe they are meant to address current trends observed by the SEC (Feroz, Park and Pastena, 1991), others believe they are issued for high profile issues that will enhance the stature of the SEC (DeFond and Smith, 1991). In any case, there is wide agreement in the literature that AAER generally represent egregious violations of the GAAP standards of reporting and disclosure. As such, they provide the basic criteria needed to begin developing my sample: an observable sample of firms that have committed accounting fraud. AAER have the added advantage of providing other detailed information, such as a discussion of the violations, summary of findings and a time line of the violation. This in-depth characterization is helpful in developing variables to investigate how the type of fraud impacts press coverage.

Use of the AAER also has disadvantages. First, AAER likely represent extreme violations. If these firms have characteristics that vary systematically from firms that commit fraud but do not receive an AAER, then the result may not generalize into the population in general. Second, Feroz, Park and Pastena (1991) report that an SEC official indicated that approximately 1/3 of its leads are a result of scanning the financial press. It is not clear whether that entails only articles that allege fraud, or simply that the press is one source for collecting information. However, it is possible that a portion of these firms would not have been identified

without the press article. Assuming that all such articles are read by the SEC, the findings in this paper would likely overstate the proportion of frauds in the general population that are identified by the press.<sup>10</sup>

AAER are identified using the SEC web site.<sup>11</sup> AAER are issued for a wide range of violations. While accounting fraud is a primary reason for an AAER, they also frequently include illegal insider trading, violations of SEC requirements by auditing firms and other illegal acts. For the purposes of this study, only AAER that include a substantial accounting fraud are retained.<sup>12</sup> Subsequent analyses rely heavily on data from the Factiva news service, such as identifying the date a firm issues a press release that it is under investigation or restating earnings. The two primary services for firm press releases are PR Newswire, with coverage beginning January 2, 1985 and Business Wire, with coverage beginning July 28, 1998. Accordingly, AAER with violation periods that began prior to January 2, 1985 are excluded.<sup>13</sup> As shown in Table 1, this results in a sample of 263 AAER with violation periods ending between 1987 and 2002.<sup>14</sup>

Information from each AAER is coded for use in subsequent tests. Untabulated analyses show that the AAER in this sample are consistent with those in prior studies. For example, revenue manipulation is the most common form of violation (49% of the sample) (Feroz, Park and Pastena, 1991). Asset overstatement is the second most common violation (35% of the

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<sup>10</sup> That is, there may be many frauds missed by the press and by the SEC.

<sup>11</sup> As a robustness check, the AAER identified were compared to those in the October of 2002 GAO document "Financial Statement Restatements, Trends, Market Impacts, Regulatory Responses , and Remaining Challenges." There were no discrepancies noted.

<sup>12</sup> For example, there were several AAER that involved payments that violated the foreign corrupt practices act. These AAER also noted minor accounting violations related to how the payments were recorded.

<sup>13</sup> Robustness tests indicate the results are similar if AAER with violation periods prior to July 28, 1998 are excluded.

<sup>14</sup> The number of frauds in beginning years of my study is low due to the requirement that the fraud occur no earlier than 1985 and the generally long lag time between a fraud and AAER. Similarly, the number of frauds in the last two years of my study are low due to the same lag and the data collection period in early 2003.

sample). Other common violations include providing materially misleading public statements/filings (26%) and manipulation of reserves (18%). These sum to greater than 100% because the SEC frequently identifies more than one violation per firm. In fact, the number of violations noted in the AAER vary from one (16% of the sample) to seven or greater (1% of the sample).<sup>15</sup>

### *3.2 Press Coverage*

Coverage is collected over several time periods with searches designed to create different variables. Figure 1 provides a timeline of the various searches. All press searches are performed on Factiva, which is Dow Jones' replacement for the Dow Jones News Retrieval service. Factiva covers nearly 8,000 sources of information including all of the major wire services (for example, PR Newswire, Business Wire, Dow Jones, Reuters, AP), major US business publications (Wall Street Journal, Barron's, Forbes, Fortune, Business Week), national and regional newspapers (New York Times, Washington Post, Los Angeles Times, St. Petersburg Times) and trade publications (Computergram, Boating Industry).<sup>16</sup>

The first searches examine press coverage over the period that the accounting fraud occurred (i.e., the infraction period). This information is used to assess the intensity with which the press examined the firm. The searches are performed using multiple variations of the firm name within one search (full and corporate diminutives). Because the goal is to identify press coverage, the wire services that directly reprint managerial news releases (PR Newswire and Business Wire) are excluded from this search. Similarly, the summaries that pick-up a list of

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<sup>15</sup> As a robustness check, all variables were interacted with the year of the violation to assure there are no trends over time that may impact the use of these variables in later analyses. No such trends were noted.

<sup>16</sup> As a robustness check, several firms were randomly selected and press searches were run on Factiva, Dow Jones and LexisNexis. The results found Factiva to be a superset of Dow Jones. While a few items appeared on

firm names and an item such as a large traded volume during the day are excluded.<sup>17</sup> Searches cover the entire text of all documents. The resulting number of press articles was then deflated by the length of the infraction period (in months) to standardize press coverage across firms.<sup>18</sup> The untabulated distribution of the number of articles per month varies with 42 of the firms averaging one or fewer articles a month, and 18 being included in more than 100 articles per month during the infraction period. However, most firms have between 2 and 20 articles per month.

I search for articles that identify the accounting fraud from the beginning of the infraction period until the date was AAER issued. However, articles are excluded if written after a public announcement by the firm of either an SEC investigation or accounting restatement. There are often several years elapsed between the infraction period and issuance of the AAER so a search string was designed to comprehensively identify articles that question the firm or its accounting while reducing the number of spurious articles to be read.<sup>19</sup> If an article is identified, only the first article is retained. Data on that article is collected including the publication, author, type of article and cited source of information. The decision of whether an article “caught” an

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LexisNexis that were not on Factiva, they were not from major publications and did not include information excluded by sources on Factiva. Further, Factiva generally had a broader set of articles than did LexisNexis.

<sup>17</sup> These summaries include the DJ Highlights, News Highlights, V-alert, P-Alert, California Summary, Southeast Summary, Southwest Summary, Dow Jones Corporate Economic News Summary, Recap of Dow Jones Special Reports, Wall Street Journal Earnings Summary and the International Calendar of Corporate Events.

<sup>18</sup> All reported results are similar if the undeflated variable is used.

<sup>19</sup> The search included both the formal and shortened versions of the company name appearing in the same paragraph as any variation of: accounting, audit, fraud, illegal, illicit, insider trading, investigate, overstate, understate, probe, quit, quits, quitting, resign, restate, revenue, revenue recognition, rumor, law and suit within two words of each other, opinion and withdraw within three words, short and sell or stock within three words. It also included the company name and any words from the following group: adjustment, compensation, doubt, dubious, financial, number, officer, recognition, record, reserve, Securities and Exchange Commission and SEC combined with any words from this group: corrupt, conceal, credible, debacle, deteriorate, difficult, discrepancy, dishonest, failure, false, falsify, fear, improper, inconsistent, ill, irregular, misappropriate, mislead, misrepresent, negative, offense, question, sell-off, shortfalls, skeptic, suspicious, trouble, unexpected, unsupported, violated, weak, woe, worried, write-off. Several companies with no caught article identified by the primary search were searched without the limiting string. No additional caught articles were found.

accounting failure is obviously judgmental.<sup>20</sup> Coding bias was avoided by employing a research assistant who was not aware of any of the hypothesized relations. In the case of uncertainty, a second research associate reviewed the article.

#### *4. Results*

##### *4.1 Characteristics of Firms for which an Article was Written*

The first analysis examines the proportion of firms the press identified as having questionable accounting. Table 2 shows that 75 of the 263 firms (approximately 29%) were identified by the press prior to the SEC or firm's public announcement. Table 2 interacts the percentage of firms caught with the last year of the violation. The percentage varies over the years with the highest percentages in 1993-95 and 2001-2002. Both of these periods occur during recessions that happened after periods of strong market performances and thus may suggest the economy has an impact on the likelihood of an article. However, given the relatively small number of years examined this observation should be viewed with caution. Overall, the increases and decreases in caught articles during the sample period suggests that, with the possible exception of responding to macroeconomic cycles, the press' actions as a watchdog of accounting fraud have not changed over the time of my study.

It is possible that the press frequently write negative articles regarding firms' accounting and thus the 29% finding is consistent with the level of press questioning even of firms that do not have their accounting challenged by an AAER. In that case, the press' inability to sort out malfeasances from legitimate accounting would reduce their value as monitors. To address this

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<sup>20</sup> In fact, even the press cannot agree on whether a specific article effectively identified misdeeds at a firm. For example, in the summer 2002 *Neiman Reports* there are three articles regarding press coverage of Enron. Madrik contends that reporters did not look skeptically at Enron, and in fact helped to perpetuate many of its practices. On the other hand, Behr argues that negative coverage was minimal, but points to a March 2001 *Fortune* article as raising questions regarding Enron. Steiger (a managing editor at *The Wall Street Journal*) argues that Enron's misdeeds were uncovered in October of 2001 by "relentless, careful, intelligent work of two *Wall Street Journal* reporters."

issue, 75 firms were randomly identified from the CRSP data base. The only criteria imposed were that the year matched the time frame of the AAER sample and that the firm continue to exist for at least two years after the initial year of inclusion. The same research associate employed the identical search string used for the AAER firms over a two year period finding only one article alleging accounting fraud.<sup>21</sup> A Chi-square test indicates this rate of 1.3% is significantly lower than the 29% found in the AAER sample (.001 level).

I next turn to investigating cross-sectional factors associated with whether a given firm is identified. As discussed in section 2.3, I expect that the press will consider costs and benefits to providing coverage resulting in identification that varies with characteristics of both the firm's information environment and the type of fraud committed.

I expect that reporters/publisher will maximize the benefits and minimize the cost of articles by focusing on firms that have a rich information environment. I measure the information characteristics with three variables. First, press intensity (PRESSINT) captures the amount of attention received in general by the press. Recall that PRESSINT is calculated by identifying all articles written over the period of the violation and then deflating by the length of the violation in months. Second, I examine analyst following (ANALYST) measured in the last month of the violation period. Consistent with prior research, I address the skewness of analyst following by using a dichotomous coding of 1 if the firm has analyst following in the top quartile of the distribution of my sample (Bradshaw, Bushee and Miller, 2003).<sup>22</sup> The third variable is

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<sup>21</sup> A second article was identified which the Research Associate did not believe alleged fraud, but did challenge the explanation of legitimate accounting provided by the company. If it is included as an article the rate increases to 2.7% and the difference with the AAER sample is still statistically significant at the .001 level.

<sup>22</sup> This variable is calculated using IBES data. If a firm could not be identified on IBES, analyst following is assumed to be zero. Results are similar if such firms are discarded. Results are also generally similar if the variable is left in its continuous form or in logs. Results are also similar if analyst following is measured at the beginning of the violation period or an average over the violation period is used.

the log of market value (MV) of the firm measured at the end of the period of fraud.<sup>23</sup>

Consistent with prior research (Feroz, Park and Pastena, 1991), I find that many firms cannot be identified on CRSP (82 or 31% of the sample, almost evenly distributed between the caught and not caught subsamples). Obviously, missing firms are excluded in the MV analyses. However, they are included in all other analyses. Untabulated analyses finds that the three variables meant to capture information environment are highly correlated. Even the lowest correlation, ANALYST and PRESSINT, has a Pearson (Spearman) correlation of .64 (.72). The Cronbach's alpha for the three variables is .83, which exceeds Nunnally's (1978) suggested value of 0.70 for a reliable index. Finally, factor analysis of the three variables finds only one factor. When multiple factors are forced, the first factor loads with an eigenvalue of 1.72; all forced factors have negative eigenvalues, implying that they reduce the ability to explain variation in comovement. Given this high correlation, I do not combine these variables in my logit regressions. Rather, I run the logit three times, once with each information environment variable.<sup>24</sup>

I examine whether the press is less likely to publish articles for firms in a high advertising industry by including an indicator variable if the press is in a high advertising industry. I use industry, rather than firm specific, advertising spending as publishers must consider future, not just current, advertising spending. Further, firm specific ad spending is not available for many of the firms due to missing advertising information on Compustat or complete lack of coverage by Compustat.<sup>25</sup> My independent variable is coded based on whether any member of the press

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<sup>23</sup> As robustness checks, all tests were also run using market value at the beginning of fraud period and average market value over the fraud period. All results were similar.

<sup>24</sup> A logit using the factor score in place of the information variables finds a positive and significant coefficient. The findings on all other variables remain the same as those presented in the tables. I do not use the factor score in the primary analysis due to the large number of lost observations caused by missing market values.

<sup>25</sup> Consistent with the CRSP coverage, many of these firms are not covered on Compustat. A review of several of these firms indicates they tend to file abbreviated financial statements (small business 10-Q's) and thus would not

identifies accounting fraud, so I do not attempt to isolate spending with a given publisher. This variable is created from the annual advertising rankings provided by Advertising Age.

Aspects of the accounting fraud may influence whether the press detects the fraud and writes an article. First, I expect frauds with more people involved are more likely to result in a leak, thus decreasing the cost of following the fraud. I measure number of people involved from the AAER (NUMINV). Second, more severe frauds to be more likely to be of interest to the public, and thus to offer a higher benefit to members of the press. I measure severity by the magnitude of the total dollars included in the AAER (AMOUNT).<sup>26</sup> Third, I expect frauds that involve material public misrepresentations and misleading statements (through a press release or financial statements) (MISLEAD) to be more likely to attract press and public attention since they are highly visible public statements. This both decreases costs and increases the benefit of publishing an article. Fourth, I expect that fraud that involves some form of management misappropriation of funds will be viewed as more intriguing stories by the press. Accordingly, I expect that reporters and publishers will more likely look for and follow-up on stories regarding such items. A company is coded as having such misappropriation (STEAL) if the AAER included censure for insider trading, illicit payments, undisclosed compensation or pure theft.

Table 3 Panel A provides univariate and Panel B provides logit analyses of the difference in these variables between firms caught vs. not caught by the press. The results indicate that information environment variables are related to the likelihood the press will publish an article

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provide the financial statements used by Compustat to create their data. Several firms that are covered by CRSP are not covered on Compustat, and vice versa, suggesting that the lack of coverage is data base specific, rather than an inability to identify cusips and permnos. As a robustness test, I reperform these tests using firms specific spending as available on Compustat. Due to the frequency that this variable was missing, I perform test using only advertising during the period of the fraud and using advertising for the closest period included on CRSP. The variable is insignificant in all variations.

regarding accounting fraud. Caught firms have a significantly higher mean and median level of PRESSINT, ANALYST and MV. Findings are similar in the logit analysis, although the ANALYST variables significance level drops to .1002. Overall, results are consistent with the press publishing articles based on the benefits of attracting a large reader base and finding it easier to investigate firms that have a readily available body of information.

The univariate and logit results provide no evidence that the press coverage is correlated to current or future advertising revenue. This may be due to noise in my industry level data and /or the fact that many high-advertising industries may not advertise in the business press (for example, consumer products companies may not view the readers of the business press as their target market). However, findings from concurrent research suggest the cause may be more complex. Reuter and Zitzwitz (2003) study whether advertising spending by mutual fund companies impacts the likelihood that the fund will be recommended in a financial publication. They find no evidence of bias for *The Wall Street Journal* or *New York Times*, but evidence consistent with bias for *Kiplinger's*, *Money* and *Smartmoney*. Interestingly, many of the caught articles in my sample are found in *The Wall Street Journal* and its related Dow Jones Newswire (14 articles each), and *The New York Times* also provides one article. There are no articles in the three magazines with evidence consistent with bias in the Reuter and Zitzwitz study. Advertising spending may impact some publications, with the remaining outlets continuing to serve a monitoring function.<sup>27</sup>

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<sup>26</sup> Unfortunately, the AAER are not always clear on magnitude. Further, the types of fraud vary – making aggregation somewhat problematic. I expect these aggregation issues will add noise, but have no reason to anticipate bias.

<sup>27</sup> This conjecture is also consistent with a Neiman Foundation survey of members of the press. The journalist surveyed voted the *New York Times* and *Washington Post* as doing the best job of Watchdog journalism, followed by *The Wall Street Journal*. The votes for other outlets were not given. See the Neiman web page for details of this survey.

Table 3 provides strong evidence that the characteristics of the fraud are associated with the likelihood of an article. Frauds that involve a large number of individuals are statistically more likely to result in an article in all specifications. Similarly, the dollar magnitude of the fraud is a significant predictor in all tests other than the logit that includes market value of equity. Given the high correlation between these variables, its lower significance in that regression is not surprising.<sup>28</sup> Frauds that involve public misleading statements are more likely to result in an article being written. Frauds that involve misappropriation of funds are also more likely to result in an article, consistent with the press finding deviant stories more newsworthy.

As a robustness test, each statistical analysis is reperformed randomly excluding approximately 5% of the sample. Results regarding the ANALYST variable were somewhat unstable. The variable was significant at the 10% level or better in 73 of the 100 regressions. All other results were consistent with those presented in the paper.

Overall, the evidence in this section indicates the press publish articles regarding accounting fraud consistent with a cost/benefit maximization. This suggests the press may be a more effect watchdog for some types of firms and frauds than for others.

#### *4.2 Analyses of Sources Used and Type of Publications and Authors*

Next, I use the information in articles alleging fraud to gain a better understanding of the process of reporting followed by the press. I start by examining the information sources used to develop and frame an article alleging fraud. In Table 4, Panel A I classify articles into source categories meant to aggregate articles that suggest a similar underlying investigative process: reporter-generated information, analyst, legal cases, and auditor resignations. Articles in the first

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<sup>28</sup> I use the total magnitude of the fraud, rather than a deflated number, since the press is most likely to focus on the undeflated number. If I deflate by assets (or market value of equity when assets is not available), the variable is generally not significant. Other variables are not impacted, with the exception of ANALYST, which becomes more highly significant.

category suggest the press is the first information intermediary to publicly identify the accounting issues.<sup>29</sup> Articles in the last three categories make it more likely that the press' was not the first to provide some form of public identification. Rather, the press played the more limited role of highlighting the issue to a broader audience. Still, this highlighting of an issue is also an important function in the overall watchdog process.

Articles based on reporter-generated information are most common, with 27 articles (36% of the sample). This includes articles using reporter based analysis of public information, such as financial statements, and articles relying on information from sources that not normally available to the general public, such as customers or industry insiders.<sup>30</sup> In each of these articles it is the *reporter* making the case for accounting impropriety based on analysis of public and private information. No other information intermediaries (i.e. analysts, auditors or the legal system) are cited.<sup>31</sup> Many of these articles provide a clear description of press-initiated investigative reporting, but others question the accounting without discussing the reason for investigating the firm.<sup>32</sup>

Analysts are referenced in 22 articles (29%), making them the second most common source. In most cases it is difficult to determine whether such articles are the result of press-

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<sup>29</sup> This classification system and the assumptions regarding who first provided information are tested and supported in the subsequently reported market tests. Those tests find reporter generated articles have a significant impact on the markets' assessment of the firm, while the other categories generally do not.

<sup>30</sup> Many of these articles simply refer to the financial statements without providing exact sources (i.e. they just say the latest quarter or annual report). However, others provide a detailed explanation of the information used. As a few examples, 7 of the articles refer to customers or industry insiders, 2 to anonymous tips, 1 to web based information, 4 to specific SEC filings (by filing number and page), etc.

<sup>31</sup> If an analyst, lawsuit or auditor resignation was mentioned, the article was classified in that related category regardless of the extent of additional analysis provided.

<sup>32</sup> As an example of articles that indicate press-initiated investigative reporting occurred, a reporter noticed an ad to sell specialized used computer equipment as part of liquidating a line of business. No company was identified, but there was a local (Silicon valley) number. The reporter called the number and asked what company he had reached. He investigated the company and found they had made several recent public statements regarding the strong performance of that sector of their business with no mention of liquidation.

initiated discussion of the firm or if the analyst identified the issue and took it to the press.<sup>33</sup>

Limited information in the articles suggests both occur.<sup>34</sup>

A further understanding of the relation between these two information intermediaries is complicated by the fact that many of their activities are so highly related (both collect information from a wide range of sources to provide information regarding the firm to stakeholders outside the firm). However, untabulated analysis of the type of analysts cited suggests that most of these analysts did not provide reports that were broadly available to the public. Thus, at minimum the press is serving as the first body to make this information known to the general public. Only seven analysts cited are sell side (three with outstanding reports on the company being featured) and therefore likely to provide information regarding accounting fraud directly to the public. Conversely, 10 of the articles cite analysts as being affiliated with either buy-side or short-sellers (in some cases no name is given, just a reference to “shorts”).<sup>35</sup> These analysts do not provide public reports or recommendations as a standard portion of their job. The five remaining articles cite private newsletters (three are Howard Schilit) normally available to wealthy individuals or institutions. Thus, while their analysis is public, it is not broadly disseminated without press coverage.

The third most frequently cited source is legal cases, which occur in 15 (20%) of the articles. They range from lawsuits on behalf of shareholders alleging malfeasance, to civil cases

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<sup>33</sup> I attempted to search for analysts reports that alleged accounting malfeasances prior to the publication of a press article. However, it is difficult to obtain analysts reports over much of the period of the study.

<sup>34</sup> Anecdotal discussion with analysts and reporters also suggests both happen. Several analysts have indicated the press as an important ongoing source of information. Further, analysts indicated they are frequently contacted by the press regarding companies they do not follow or follow “passively”.

<sup>35</sup> This suggests the interesting question of whether buy side analysts/shorts use the media in an attempt to move markets in their favor. The question is complex as it sometimes is even difficult to identify the line between the media and these investors. For example, business-focused programs such as Squawk Box have a rotating position filled by different active analysts or investors at all times (Kurtz, 2003). The SEC seems to have responded to this potential conflict by including in Sarbanes-Oxley sec 501 a requirement that analysts disclose their current and recent past holdings in any company discussed in a public forum.

involving wrongful discharge and criminal cases investigating theft. It is easier to determine causality in this situation. The case is filed, leading the reporter to investigate the company. Some articles appear to rely entirely on information in the case, but most articles include additional investigative reporting such as speaking to officers or customers of the company. Thus, while the legal system may identify the situation, the reporter usually adds further investigation and broad dissemination of the information. Given the large number of cases filed in America each day, reporters may also be fulfilling an important information screening function for the public.

The final category is auditor resignations, cited in 12 (16%) of the articles. Similar to the legal cases, the reporters use the resignation as a cue to look more carefully at the company and then develop information for articles that goes beyond that found in the 8-K filings with the SEC.

Next, I examine the type of publications that publish articles alleging inappropriate accounting. Given the technical nature of accounting fraud, I expect publications that specialize in business reporting are more likely to have the tools to identify fraud and a subscriber base that will find such articles newsworthy. Untabulated analyses find that the articles published in 40 different outlets from 54 authors. The *Wall Street Journal* and *Dow Jones News Service* have the greatest number of publications with 14 each, followed by the *San Francisco Chronicle* with 6 articles.<sup>36</sup> The remaining publications with more than one article are *Business Week* and *Barron's* (each with 4), *Forbes* (3), and *Tulsa World*, *The Orange County Register*, *Computergram International* and the *Miami Review* (each with 2). Only one author has more than one article (Herb Greenberg – who accounts for 5 of the *San Francisco Chronicle* articles); 18 of the articles do not have an author in the byline.

Classifying publication type is inherently subjective (Jamieson and Campbell (2001)). With this caveat in mind, Table 4, Panel B provides aggregated information regarding the types of publications that cover accounting fraud. Twenty-nine of the articles were published in national business publications such as *The Wall Street Journal*, *Business Week*, etc. Twenty-three are from “local market” publications (for example, *Chicago Sun-Times*, *Miami Herald* etc.) Fourteen of the articles are from electronic media (*Dow Jones News Service* and *Bloomberg*). Seven are from trade publications (for example, *Boating Industry*, *Business Insurance*). Finally, two are from nonbusiness national publications (*USA Today* and the *New York Times*).<sup>37</sup> Consistent with my expectations, this descriptive data shows the importance of business publications in serving as watchdogs for accounting fraud, but it also shows that many other sources uncover and publish articles regarding accounting fraud.

Next, I examine relations between the sources and types of publications. The goal in this interaction is to examine whether the specialization of business reporters leads to more articles based on the active (or “investigative”) reporting and analysis via reporter generated information or interaction with analysts. To reduce dimensionality, I combine national non-business publications with local market publications, as both are general interest news outlets.

Table 5 Panel A shows that reporters from all publication types use a wide-variety of sources to identify accounting fraud. However, there are patterns in the relative usage of sources consistent with specialization leading to more active reporting. First, the national and electronic business publications have a high reliance on analysts, while local market and trade publications

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<sup>36</sup> These two sources are related. *Dow Jones News Service* has over 20 regional offices that prepare articles that go out on the Dow Jones Wire Service. The articles are also submitted to the editors of the *Wall Street Journal* who determine whether some a version of the article should appear in WSJ (Thompson, Olsen and Dietrich, 1987).

<sup>37</sup> Factiva provides limited coverage of the *The New York Times* during some portions of my sample period. Thus, the number of *New York Times* articles may be understated. As a robustness check, a research assistant used

rarely use that source. Second, national business publications rely equally on reporter analysis and analysts (12 articles from each), but do not appear to write articles in response to lawsuits and auditor resignations, suggesting they focus on analysis rather than disseminating legal and regulatory filings. The Chi-square of .09 indicates these differences are statistically significant, but the low number of expected observations for each cell reduces the validity of this test.

Panel B examines how attributes of the reporter filing the story relate to the information sources used by comparing authors with a recurring column with articles that appear as one time coverage. Recurring authors may be more focused on providing individual analysis, and thus developing the brand of their column. Additionally, they are more likely to be business specialist. Accordingly, I expect recurring authors to be more likely to rely on active reporter investigation. The findings in Panel B support this hypothesis: 56% of the recurring articles are based on reporter-generated information and only 6% (0%) of the articles use the more passive legal cases (auditor resignations). Conversely, 30% of the one-time articles are based on reporter-generated information while 25% (14%) use the more passive legal cases (auditor resignations). Chi-square finds these levels to be significant at the .007 level. Combined, the significant results for the relations of sources across publication and recurring author type support the contention that publications and authors that specialize in business reporting are more likely to undertake their own analysis and to have a relationship with other members of the financial community (i.e. analyst). This indicates specialization allows these reporters to develop a skill set and group of contacts that assist in providing original information in their articles.

#### *4.3 Information Content of Articles Alleging Accounting Impropriety*

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LEXIS/NEXIS to search 10 companies for which no article was found and 10 companies with an article from a

I examine the market reaction to the articles to determine if they provide new and credible information to market participants. The market should respond negatively to new information alleging accounting malfeasances. On the other hand, if reporters simply repeat information that is already known by the market, then there would be no response to the article. This event-study faces several threats to its validity. First, the day on which the article became available is difficult to determine. This threat is relatively limited for wire services (which report real time) and newspapers (which generally are published in the morning, or at least available before trading ends). Magazines, however, are frequently published in advance of the “issue date”. Difficulties in identifying the exact date the article became public introduce noise and reduce the power of the tests. Second, some articles cite relatively recent events, such as lawsuits and auditor changes, that likely impact returns. If these events occur within the return window used for the event study, then results may be biased in favor of finding a market reaction. To reduce this bias, tabulated analyses rely on 1-day returns, rather than the standard 3-day window.

I am able to identify CRSP returns data for 55 of the articles. Untabulated univariate results find an average (median) 1-day market adjusted reaction of  $-6.9\%$  ( $-2.9\%$ ). The same measure for the three day return centered on article publication date is  $-9.6\%$  ( $-5.8\%$ ).<sup>38</sup> All of these amounts are statistically significant. This evidence indicates that these articles provide new information to the market.<sup>39</sup>

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publication other than *The New York Times*. No articles were found.

<sup>38</sup> The greater magnitude for the three-day response is consistent throughout the market tests. The relative magnitudes across categories remain consistent with the 1-day measure. However, many of the statistical significance levels are weaker, suggesting the inclusion of the 3-day period introduces noise.

<sup>39</sup> As an alternative explanation for unconditional market response, it may be that press coverage imposes costs on a firm even if the underlying information was already known (such as potential litigation issues, stakeholder communication issues). In that case, there would be a negative response to all articles and no differential response across categories as all categories involved press coverage. My subsequent findings of a statistically greater

Table 6 reports regressions of day zero abnormal returns on the source, publication and recurrence of author, consistent with the categories in Tables 5 and 6. This analysis examines whether differences in the information used to write the article, venue of publication or type of author impact the informativeness of the article. All regressions are run by suppressing the intercept and including indicator variables for each category. In the first three regressions each category is mutually exclusive, thus the coefficient is equivalent to a test of the mean.<sup>40</sup> As shown in the final regression, the regression specification has the advantage of including controls for venue and recurrence.

The first regression shows the response to articles based on source of information. The response is negative for all sources categories, and significantly so for all accept legal. I expect reporter-generated articles, which are based on analysis by the reporter and/or sources not commonly available to the public, to have the greatest incremental information content for the market. Consistent with this, the -10.4% reaction to these stories is statistically greater than the response to analyst and legal case based stories, indicating the market is more aware of information from those sources prior to press coverage. Inconsistent with my expectations, the response to articles based on auditor changes has a larger, though statistically equivalent, coefficient. This large response is inconsistent with prior research on auditor changes, which has generally found little or no response to the announcement of an auditor resignation (Smith and Nichols, 1982; Johnson and Lys, 1990). The large market reaction in my study may be attributable to the additional analysis provided by the press. It is also possible that the press performs a screening function of investigating auditor changes and indicating which are more

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response to articles based on reporter generated information and no statistical response for analyst and litigation based articles suggest that press coverage per se is not the first-order

likely to be of concern to the market. Given the generally brief description of the reason for auditor changes in the 8-K filings such investigation and analysis by the press could provide incrementally useful information to market participants.

Table 6 also shows the response to articles in different press outlets. I expect that business related press outlets are more likely to provide informative articles due to both their more active reporting sources and their more sophisticated audience. Consistent with this expectation, it is interesting to note that articles in the two business focused outlets (wire services and national business publications) generate a statistically negative response, while those in the other publications are indistinguishable from zero. The other finding of note in this regression is the much greater magnitude of the response to stories from the wire services (-13.9%) than from those in the other publication outlets. This is consistent with the timeliness of wire coverage providing useful information to sophisticated market participants.

The third regression compares the response to articles from a recurring column with those from non-recurring authors. Again, I expect that recurring authors will be more likely to provide original analysis with strong information content. While the findings in Table 5 suggested the authors of recurring articles were more likely to provide original analysis, the market response is statistically equivalent across these two categories.

The final column reexamines the response to the information source categories with controls for wire service and recurring articles.<sup>41</sup> The response to articles relying on analyst is reduced in magnitude and no longer statistically different from zero, all other results are consistent with those previously discussed. This provides further support for the contention that

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<sup>40</sup> Untabulated tests of medians show similar patterns of returns and levels of significance to those in the mean/regression tests.

press' reporting is the most useful when based on analysis not available through other information intermediaries.

As an additional examination of information content, I collect daily trading data from the Trade and Quote (TAQ) database. TAQ data does not begin until 1993 and is also more restricted in coverage than CRSP, resulting in data for only 37 firms. For each of these 37 firms I aggregated the data over the day of the article to calculate number of trades, volume, average trade size and volatility. I calculate abnormal values by using the same data for the period 7 days prior to the article. Many of the variables (such as number of trades) are highly correlated with size, thus I use percentage change in those variables. In untabulated analysis, I find article days have statistically higher mean and median standard deviation in volatility. Further, trade volume increased by 375% while average number of trades increased by 429%. Although there was an increase in trades of all sizes, there was a statistically significant shift upwards in the proportion of small trades (less than 1,000 shares). Combined, this data suggests that the articles include information to which the market responds, and appears to be most informative to small traders (who are more likely individuals). While cross-sectional tests generally confirm the findings regarding sources in Table 6 (i.e. reporter-generated information and auditors resignations are most informative) they were not robust to specification checks and thus are not presented.<sup>42</sup>

Overall, the evidence in this section indicates press articles are informative to market participants. In particular, press articles that involve analysis and citing of non-information intermediary sources seem to create significant changes in the markets assessment of a firm. The

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<sup>41</sup> Ideally I would interact all categories with both control variables. However, the small number of observations in my sample precludes this option.

<sup>42</sup> For the returns and TAQ data I randomly omitted 10% of the sample and reperformed the regressions 100 times each. Results for the returns data were generally consistent with those in Table 6, with the exception that the

differences across types of sources used also validates the early classification of sources based on the press article.

### *5. Conclusion*

This paper begins to answer Jensen's (1979) call for a greater understanding of the press in the markets by examining the role of the press as watchdogs for accounting fraud. It increases our understanding of how often the press fulfills this role, types of firms and frauds most likely to be effectively monitored, the process the press uses to investigate accounting fraud and when such articles provide significant new information to the market.

Using a sample of firms sanctioned by the SEC for accounting malfeasances, I find that the press is more likely to act as an accounting watchdog for firms with a high information environment (overall press coverage, large market value and marginally analysts following). This evidence is consistent with the press focusing on companies that have a large public following and rich information set to draw on, consistent with the press maximizing the benefits of reporting by appealing to a large reader base while minimizing the cost of investigating firms.

Consistent with this cost/benefit model, I also find the press is more likely to write an article when the fraud involves a large number of people who may provide information to the press. Further, the press is more likely to cover large frauds as the egregious nature of these frauds lend themselves to a more controversial (and thus interesting to readers) framing in the literature. The press is also more likely to cover firms when there is a misleading public statement. Such statements may attract the press' attention initially, thus reducing search costs. They also have been viewed by many members of the public and are obviously considered important by management. Thus, any subsequent article likely will have a large prospective

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response to articles citing auditors frequently became statistically insignificant. The aggregate TAQ data results

reader base. As further evidence of the press' desire to write articles the public finds compelling, the press is more likely to write an article if managerial misappropriation of funds has occurred. Such instances allow for a personalized and conflict filled article, which are frequently cited as goals of a good article (Jamieson and Campbell, 2001).

I also examine the sources used by reporters and the type of press that undertakes the watchdog role with the goal of increasing our understanding of the process of reporting. Articles based on original analysis by the reporter or sources that are not generally available to the broad public are most common. However, I also find that the press relies heavily on information from analysts, auditors and lawsuits. This suggests an ongoing interplay between capital market information intermediaries and institutional players in society. I find that the national business press and wire services take the lead in performing this watchdog role, but a significant portion of the articles appear in regional and trade publications. Further, I find that publications and reporters that specialize in the business coverage are more likely to write articles based on information generated by the reporter and a relationship with analysts. Finally, articles based on reporter information generally provide more information to the markets than those that use other information intermediaries as the source. In fact, articles relying on analyst and legal suits do not generate a statistically significant result after controlling for publication outlet.

This paper provides evidence regarding the role of the press as a watchdog for accounting fraud. It is a beginning towards establishing a greater understanding of the press in general. However, the work should be viewed with several caveats. First, the role as an accounting watchdog is only one of many roles the press plays in the capital markets. Future work should address issues such as how the press disseminates already public information, the role of the

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reported in the text were robust, but the cross-sectional examinations by categories were unstable.

press in analyzing a fraud after the initial public announcement as well as the many potential economic impacts of press coverage. Second, my sample relies on firms being identified as having inappropriate accounting by the SEC and having an AAER written regarding the fraud. These are likely extreme cases of fraud, and thus readers should be careful in attempting to generalize my results to the population as a whole. Third, the SEC likely investigates firms that have been identified in the press as engaging in some form of accounting malfeasances. In that case, the proportion of firms “caught” by the press may be overstated. That is, many other frauds may have occurred and remain undetected by either the press or the SEC. Again, this suggests readers should use caution when trying to generalize to the markets as a whole.

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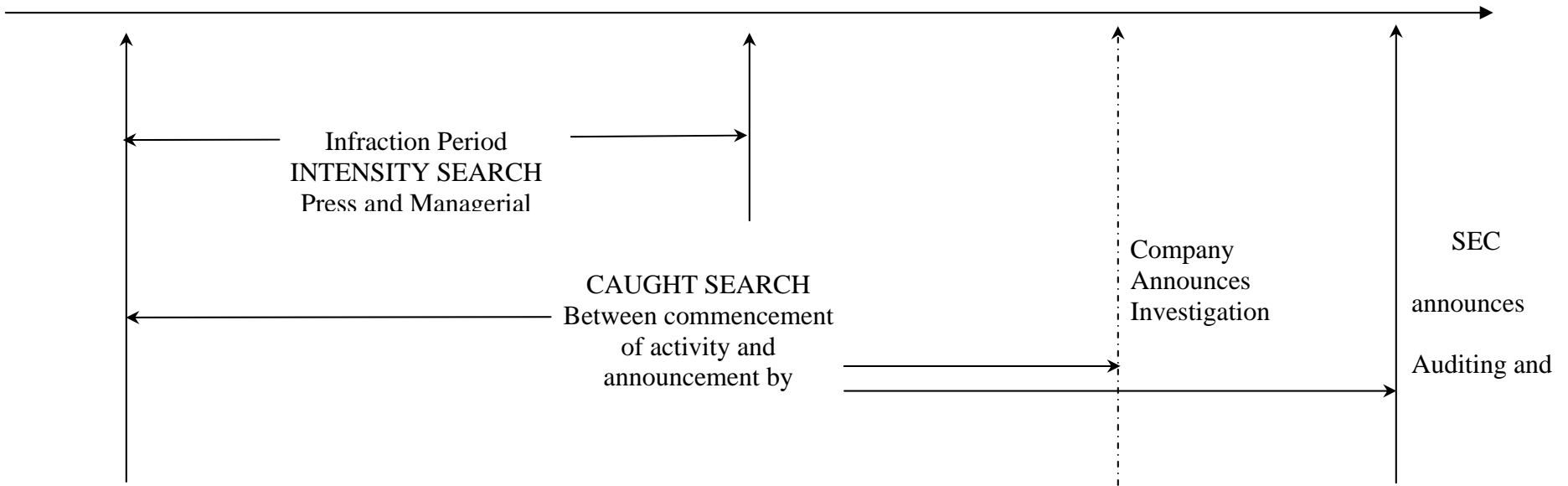
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Figure 1

TIME LINE



NOTE: Dotted line event “Company Announces Investigation” might not occur.

**Table 1**  
Accounting and Auditing Enforcement Release Firms by End of Year of Fraud

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Year	Number of Firms	Percentage of Sample	Cumulative Percentage
1987	1	.4	.4
1988	1	.4	.8
1989	2	.8	1.6
1990	6	2.3	3.9
1991	7	2.7	6.6
1992	21	8.0	14.6
1993	29	11.0	25.6
1994	28	10.6	36.2
1995	22	8.4	44.6
1996	30	11.4	56.0
1997	32	12.2	68.2
1998	27	10.3	78.5
1999	22	8.4	86.9
2000	24	9.0	95.9
2001	9	3.3	99.2
2002	2	.8	100
Total	263	100	100

A firm is included in the sample if an Accounting and Auditing Enforcement Release was identified on the SEC website and that release is related to an accounting fraud perpetrated by the firm.

**Table 2**  
**Firms “Caught” by Press Article presented by Last Year of Accounting Fraud**

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Year	Number of Firms	Number of Firms with “Caught” Article	Percentage of Current Year with “Caught” Article
1987	1	1	100
1988	1	0	0
1989	2	0	0
1990	6	1	16.7
1991	7	1	14.3
1992	21	4	19.1
1993	29	9	31.0
1994	28	12	42.9
1995	22	10	45.5
1996	30	9	30.0
1997	32	7	22.0
1998	27	6	22.2
1999	22	5	22.8
2000	24	6	25.0
2001	9	3	33.3
2002	2	1	50.0
Total	263	75	na
Percent of Total	100%	28.5%	

A firm is included in the sample if an Accounting and Auditing Enforcement Release was identified on the SEC website and that release is related to an accounting fraud perpetrated by the firm. A firm is considered “caught” by the press if an article appears questioning the firm’s accounting prior to public disclosure by the firm (or SEC) that an accounting problem exists.

**Table 3**

Cross-Sectional Examination of Characteristics of Firms and Fraud that Lead to an Article by the Press

*Panel A: Means and Medians*

Variable		Caught	Not Caught	P-value Of Difference
PRESSINT	Mean	51.72	24.15	.031
	Median	8.23	5.11	.062
ANALYST	Mean	.33	.22	.033
	Median	1	0	.033
MV	Mean	12.6	11.8	.014
	Median	12.5	11.7	.048
BIGADS	Mean	.14	.18	.281
	Median	0	0	.286
NUMINV	Mean	4.3	3.2	.004
	Median	4	3	.016
AMOUNT	Mean	3.00	2.06	.001
	Median	2.78	2.04	.002
MISLEAD	Mean	.37	.22	.008
	Median	0	0	.005
STEAL	Mean	.33	.20	.018
	Median	0	0	.012

**Table 3 (Continued)**

Cross-Sectional Examination of Characteristics of Firms and Fraud that Lead to an Article by the Press

Panel B: Logit Analyses (P-values in Parentheses below Coefficients)

$$\text{Caught} = \alpha_i + \beta_1 \text{InfoVariable} + \beta_2 \text{BIGADS} + \beta_3 \text{NUMINV} + \beta_4 \text{AMOUNT} + \beta_5 \text{MISLEAD} + \beta_6 \text{STEAL} + \varepsilon$$

	INFORMATON VARIABLE		
	PRESSINT	ANALYST	MV
INTERCEPT	-2.1495 (.0001)	-2.1370 (.0001)	-3.7538 (.0060)
Info. Variable	.0028 (.0481)	.4297 (.1002)	.1527 (.0375)
BIGAD	.0573 (.4436)	.0245 (.4760)	-.2639 (.2887)
NUMINV	.1069 (.0263)	.0888 (.0496)	.1477 (.0170)
AMOUNT	.1576 (.0194)	.1641 (.0166)	.0798 (.2198)
MISLEAD	.6422 (.0220)	.6796 (.0165)	.7320 (.0342)
STEAL	.5761 (.0402)	.6007 (.0344)	.5995 (.1357)
Likelihood Ratio (chi)	312.42 (25.98)	316.43 (24.77)	222.62 (22.33)

(two-tailed p-value for INTERCEPT, one-tailed for other variables).

This table presents analyses of differences between firms for which fraud was identified (CAUGHT=1) vs. those which were not (CAUGHT=0). Sample size for all analyses other than those including MV is 263. Seventy-five firms are coded as CAUGHT=1. Sample size for analyses with MV is 181. Fifty-four of those firms are coded as CAUGHT=1. PRESSINT is measured as the total number of articles by the press over the fraud violation period divided by the months of the violation. Articles were identified using Factiva. ANALYST is an indicator variable coded as 1 if the firm is in the top quartile of analyst following for the sample, 0 otherwise. Analyst following is measured at the last month of the violation period and is from IBES. MV is the log of market value of the firm in billions. Market value is measured on the last day of the violation period and is obtained from CRSP. BIGAD is an indicator variable coded as 1 if the firm is in an industry that was in *Advertising Age's* top 15 advertisers for 1985, 1990, 1995, and 2000. Otherwise, the coding is 0. NUMINV is the number of persons involved in the fraud as cited in the AAER. AMOUNT is the log of the sum of the dollar amount of the violations documented in the AAER. MISLEAD is an indicator variable coded as one if the violations on the AAER included a materially misleading public statement or report, 0 otherwise. STEAL is an indicator variables coded as 1 if the AAER indicates management misappropriated funds as a portion of the fraud, 0 otherwise.

**Table 4**  
Information Sources and Types of Publication for Watchdog Articles

*Panel A: Information Sources Cited by the Press*

Information Source	Number of Articles	Percentage of Caught Sample	Cumulative Percentage
Reporter Generated Information	27	36.0	36.0
Analyst	22	29.4	65.4
Legal Cases	15	20.0	85.4
Auditor Resignation	11	14.6	100
Total	75	100	100

*Panel B: Types of Publications*

Type of Publication	Number of Articles	Percentage of Sample	Cumulative Percentage
National Business	29	38.7	38.7
Local Market	23	30.7	69.4
Electronic Business	14	18.7	88.1
Trade Publications	7	9.3	97.4
National Non-Business	2	2.6	100
Total	75	100	100

Source is based on the source that is attributed as providing the primary information or to have provided the information that initiated the article. Reporter generated information includes articles that state sources as publicly available SEC documents or financial statements, analysis of public statements made by the firm, tips from customers, industry insiders or anonymous sources or article is written based on analysis from such information without stating another external source. Analyst includes attribution to an individual who is a sell-side analyst or buy side analyst, to a professional investing newsletter or to short sellers (named or anonymous). Legal cases include articles that references information either from court proceedings or from participants in court proceedings.

(civil and criminal). Auditor resignations references 8-K are of auditor changes. Industry/Customer information includes attribution to either industry insiders or customers of the firm (named or anonymous). National Business publications are publications that cover the nation (or global) areas. This category includes the *Wall Street Journal*, *Fortune*, etc. Local Market publications are generally regional papers, such as *The San Francisco Chronicle*, *Chicago-Sun Times* etc. Electronic Business publications consist almost entirely of the *Dow Jones News Service* with one article from *Bloomberg*. Trade publications are based on covering a specific industry in depth. Examples include *Boating Industry* and *Business Insurance*. The National non-business publications are *USA Today* and *The New York Times*.

**Table 5**  
Relation between Sources of Information and Characteristics of the Publications

*Panel A: Relation between Sources of Information and Type of Publication*

Information Source	National Business	Local Market	Electronic Business	Trade Publications
Reporter Generated Information	12	8	3	4
Analyst	12	4	6	0
Legal Cases	2	8	4	1
Auditor Resignation	3	5	1	2
$\chi^2$ (p-value)	15.15 (.0869)			

*Panel B: Relation between Sources of Information and Frequency of Article*

Information Source	Recurring	Percentage of Recurring Sample	One Time	Percentage of One-time Sample
Reporter Generated Information	10	55.6	17	29.8
Analyst	7	38.9	15	26.3
Legal Cases	1	5.56	14	24.6
Auditor Resignation	0	0	11	13.5
Total	18	100	57	100
$\chi^2$ (p-value)	12.20 (.0067)			

Source is based on the source that is attributed as providing the primary information for or to have initiated the article. National Business publications are publications that cover the nation (or global) areas. This category includes the *Wall Street Journal*, *Fortune*, etc. Local Market publications are generally regional papers, such as *The San Francisco Chronicle*, *Chicago-Sun Times* etc. However, for the purposes of this table they also include the two national non-business publications (*The New York Times* and *USA Today*). Electronic Business publications consist almost entirely of the *Dow Jones News Service* with one article from *Bloomberg*. Trade publications are based on covering a specific industry in depth. Examples include *Boating Industry* and *Business Insurance*. Recurring articles are from a column that is published by a single reporter/set of reporters on a regular basis. Chi-square is based on a Likelihood Ratio Chi-Square.

**Table 6**

Regression of Day Zero Abnormal Returns on Categories of Sources, Publications and Recurring Articles

Category	Coefficient (p-value)	F-Value (p-value) Compared to Reporter Generated	Coefficient (p-value)	Coefficient (p-value)	Coefficient (p-value)	F-Value (p-value) Compared to Reporter Generated
Reporter Generated Information	-10.4% (.0001)				-8.1% (.0110)	
Analyst	-4.5% (.0539)	2.04 (.0798)			-1.0% (.3796)	3.11 (.0421)
Legal Cases	-2.4% (.2775)	2.44 (.0624)			1.0% (.4035)	3.34 (.0368)
Auditor Resignation	-12.8% (.0093)	.15 (.6500)			-10.9% (.0174)	.24 (.6876)
National Business			-5.4% (.0275)			
Local Market			-3.5% (.1612)			
Electronic Business			-13.9% (.0002)		-11.0% (.0051)	
Trade Publications			-4.7% (.1678)			
Recur				-5.1% (.0079)	-1.5% (.3611)	
Non-Recur				-7.4% (.0002)		

Abnormal returns are the firm market returns per CRSP on the day the article is released less the market returns on the same day. All variables are 0/1 indicators. Source is based on the source that is attributed as providing the primary information or to have initiated for the article. National Business publications are publications that cover the nation (or global) areas. This category includes the *Wall Street Journal*, *Fortune*, etc. Local Market publications are generally regional papers, such as *The San Francisco Chronicle*, *Chicago-Sun Times* etc. However, for the purposes of this table they also include the two national non-business publications (*The New York Times* and *USA Today*). Electronic Business publications consist almost entirely of the *Dow Jones News Service* with one article from *Bloomberg*. Trade publications are based on covering a specific industry in depth. Examples include *Boating Industry* and *Business Insurance*. An article is considered regional if it is from a local publication in the same region or a national publication but provides a by-line indicating the story was written locally. Recurring articles are from a column that is published by a single reporter/set of reporters on a regular basis. As all articles are predicted to have a negative market response, P-values are one-sided.