February 26, 2007

To:	Public Company Accounting Oversight Board
From:	Mike Ettredge, University of Kansas Karla Johnstone, University of Wisconsin Mary Stone, University of Alabama Qian Wang, University of Kansas

Subject: Comment related to PCAOB Rulemaking Docket Matter No. 021

This letter discusses evidence from our working paper, "Compliance with Auditor Change Disclosure Requirements: Theory and Empirical Tests," that we think is relevant to addressing the following questions raised in PCAOB Release No. 2006-007. (A copy of the paper is attached.)

Q. 29 Are there other attributes of smaller, less-complex companies that an auditor should consider when planning or performing the audit?

Q. 30 Are there other differences related to internal control at smaller, less-complex companies that the Board should include in the discussion of scaling the audit?

Q. 32 Are the market capitalization and revenue thresholds described in the proposed standard meaningful measures of the size of a company for purposes of planning and performing an audit of internal control?

Our research addresses the question: Why do managers comply or fail to comply with disclosure requirements? If compliance with disclosure requirements is one of the outcomes of adequate control over financial reporting, which we think it is, the results of our study may provide insights useful to the Board. Our study develops a conceptual model that recognizes three disclosure outcomes: compliance, intentional noncompliance, and accidental noncompliance. The model relates these outcomes to (1) a company's

long-term disclosure compliance infrastructure, which includes monitoring and corporate governance mechanisms that are determined by the company's long-term disclosure incentives and resources available to develop infrastructure, and (2) disclosure disincentives that arise when disclosure of bad news is required. We test the model using data gathered from recently released SEC staff letters identifying omissions in mandatory auditor change disclosures. These letters provide a unique opportunity to test our model because they identify omissions of required auditor change disclosures for which there are only two explanations for noncompliance: management deliberately failed to make the disclosure or management did not understand its disclosure obligations. The first constitutes intentional noncompliance and the second constitutes accidental noncompliance, which could occur if a company had not invested enough in compliance infrastructure, including personnel.

The results of tests of our model indicate that compliance is associated with compliance infrastructure and disincentives to disclose bad news. They also provide evidence relevant to understanding the role of company size in fostering compliance. Fear of accidental compliance is one of the reasons managers of small companies argue against subjecting their companies to internal control reporting and accounting standards requiring investment in compliance infrastructure. The arguments of some advocates of size-scaled regulation and accounting alternatives assert that company size is the primary factor to be considered. Our empirical results indicate that the availability of resources and corporate governance affect compliance but that, taken alone, size *does not* necessarily explain disclosure compliance. Based on our findings and understanding of the literature related to the effects of size on corporate reporting, we encourage the

PCAOB to gather additional evidence on the factors that lead to the desired outcomes of adequate control over financial reporting before acquiescing to calls for size-based regulation.

Attachment

### Compliance with Auditor Change Disclosure Requirements: Theory and Empirical Tests

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We appreciate the comments and suggestions provided by workshop participants at the University of Alabama, University of Kansas, and University of Wisconsin-Madison.

### Compliance with Auditor Change Disclosure Requirements: Theory and Empirical Tests

**Summary:** We address an important but previously ignored question: Why do managers comply or fail to comply with disclosure requirements? We develop a conceptual model that recognizes three disclosure outcomes: compliance, intentional noncompliance, and accidental noncompliance. Our model relates these disclosure outcomes to (1) a company's disclosure compliance infrastructure, which includes monitoring and corporate governance mechanisms that are determined by the company's long-term disclosure incentives and resources to develop the infrastructure, and (2) disclosure disincentives that arise when disclosure of bad news is required. Tests of the conceptual model using data gathered from recently released SEC staff letters identifying omissions in mandatory auditor change disclosures support the importance of compliance infrastructure and disincentives to disclose bad news. Some evidence also supports the roles of incentives and resources in development of investment in compliance infrastructure. Further, our empirical findings provide evidence of the need for regulatory monitoring of disclosure requirements, and provide evidence that company size is a weak indicator of the quality of a company's compliance infrastructure or the likelihood it will comply with disclosure requirements. Finally, our model provides a framework for conceptualizing and testing other management disclosure compliance decisions.

**Keywords:** Compliance, SEC staff comment letters, mandatory disclosure, auditor change.

Data Availability: Contact the lead author for a list of sample companies.

### Compliance with Auditor Change Disclosure Requirements: Theory and Empirical Tests

#### I. INTRODUCTION

This study provides a conceptual model of management's decision about whether to comply with mandatory disclosure requirements, and tests the model using data gathered from recently released Securities and Exchange Commission (SEC) staff letters identifying omissions in required auditor change disclosures. Our inquiry is motivated by Sarbanes-Oxley's mandate to increase efforts to ensure compliance with accounting and reporting requirements (KPMG International 2004, 2005), by highly publicized assertions that small businesses lack the accounting skill and resources needed to comply with complex disclosure requirements (SEC Advisory Committee on Smaller Public Companies 2006), and by the paucity of research on factors affecting disclosure compliance.

Disclosure compliance connotes timely filing of periodic reports (Forms 10-Q or 10-QSB; 10-K or 10-KSB) and current reports (Forms 8-K) and, within those reports, providing the various information items that the SEC or other regulators specify must be disclosed. Thus defined, disclosure compliance differs from constructs such as earnings quality (Dechow and Schrand 2004) and balance sheet conservatism (Penman and Zhang 2002). Those constructs refer to characteristics of information that has been disclosed, whereas disclosure compliance deals with the decision to disclose or refrain from disclosing specific items of required information in a timely matter. The constructs can be further distinguished because earnings quality and balance sheet conservatism deal with amounts that have been recognized in the financial statements, while disclosure

compliance covers a broader and expanding set of information, including disclosure of non-financial information.<sup>1</sup>

Our compliance model reflects three disclosure outcomes: compliance, intentional noncompliance, and accidental noncompliance. Compliance can be motivated by management's desire to provide value-relevant information that may reduce the cost of financial capital, or to develop a reputation for transparency that can enhance the value of managers' human capital. Intentional noncompliance is a manifestation of managerial opportunism and might have the purpose of withholding or delaying the release of bad news. The possibility of accidental noncompliance resulting from lack of awareness or understanding of disclosure requirements has been acknowledged only recently as an unintended consequence of the number and complexity of accounting and disclosure requirements (e.g., Herz 2005). Unlike intentional noncompliance, accidental noncompliance cannot be explained solely by managers' incentives to reveal or conceal information. Our model posits that the incidence of accidental noncompliance is affected by a company's compliance infrastructure, which includes corporate governance, and is determined by the company's incentives and resources to create compliance infrastructure.

Managers' incentives to avoid both intentional and accidental noncompliance reflect the probability of detection, and regulatory or private penalties when detected. The probability of detection by a private party, and the capital market penalty (loss of firm value and managerial reputation), are positively associated with incentives for private information search, with the chance of detection being greater for companies with large analyst followings and those traded on major exchanges. Possible penalties include the

costs of litigation, loss of managerial reputation, and increases in cost of capital. The magnitude of penalties depends on what nondisclosure signals to investors and lenders. The revelation of nondisclosures, whether detected by regulators or employees, analysts or other private parties, can trigger both regulatory and capital market penalties.

The SEC comment letters we study, which were publicly disclosed beginning in May 2005, provide a unique opportunity to test our model because they identify omissions of required auditor change disclosures for which there are only two explanations for noncompliance: management deliberately failed to make the disclosure or management did not understand its disclosure obligations. The first constitutes intentional noncompliance, and the second constitutes accidental noncompliance. The auditor change disclosure requirements call for statements of fact; no estimation of amount or judgment of materiality is required. The compliance decision does, however, involve disclosure of information that investors would view as bad news that potentially could decrease firm value (e.g., auditor resignation)<sup>2</sup>, or that management may not be aware it is responsible for disclosing in a timely manner. The possibility that management is unaware of its responsibility is substantial because auditor changes occur infrequently rather than routinely. Further, noncompliance with Form 8-K filing deadlines might occur because the time for filing was shortened from five business days to four business days effective August 23, 2004 (SEC 2004a).

We use regression models to estimate associations proposed in the conceptual model, discussed in the next section. We investigate whether proxies for incentives to develop disclosure compliance infrastructure, and resources available to develop infrastructure, are associated with proxies for extent of infrastructure. We also investigate

whether disclosure compliance infrastructure and disincentives for compliance are associated with compliance status. We provide additional insights and assess the robustness of our model by employing alternative specifications of the dependent variable that capture timeliness of filings rather than completeness of content.

Our study contributes to the literature in at least four ways. First, it is the only paper of which we are aware that develops and tests a theory of compliance with mandatory disclosure requirements. A number of studies develop and test explanations for *discretionary* disclosures (e.g., Healy and Palepu 2001; Graham et al. 2005), and a few deal with compliance with SEC filing deadlines (e.g., Schwartz and Soo 1996; Ettredge et al. 2007). Studies of why managers fail to comply with seemingly straightforward content disclosure requirements are missing. This is surprising given that the SEC arguably mandates timely and complete disclosure of the information deemed *most relevant* to investors, while the SEC leaves decisions on certain company-specific information to the discretion of managers. Identifying the factors that affect compliance is the first step to determining ways to increase compliance. Our conceptual model provides a framework for mapping disclosure incentives and infrastructure into disclosure outcomes: compliance, intentional noncompliance, and accidental noncompliance. We believe that the model provides an initial framework that can be modified for conceptualizing and testing other management disclosure compliance decisions.

A second contribution relates to the role of company size in fostering compliance. Fear of accidental noncompliance is purported to be one of the reasons managers of small companies argue stridently against making their companies subject to internal control reporting and accounting standards requiring investment in compliance infrastructure that

they are unable or unwilling to make.<sup>3</sup> The arguments of advocates of size-scaled regulation and accounting alternatives assert that company size is the primary factor to be considered. Our empirical results indicate that the availability of resources and corporate governance affect compliance but that, taken alone, size *does not* necessarily explain disclosure compliance. This implies that the SEC and other standard setters should gather additional evidence before acquiescing to demands for size-based regulations.

The third contribution involves our use of SEC staff comment letters to test the model of disclosure compliance. To our knowledge, this is the first academic paper to draw on this data source. Because of our research objective, we use only letters relating to auditor changes. Other, more recently posted, letters address a variety of accounting and disclosure compliance issues that also deserve investigation.<sup>4</sup> The availability of such information may make it easier for academic researchers to address policy-related issues while there still is time for the evidence to be considered in policy debates.

The paper's fourth contribution is the distinction it makes between intentional and accidental noncompliance. We provide evidence that managers *intentionally* omit auditor change disclosure items that previous research indicates are viewed as negative news by investors. Our findings suggest that managers behave opportunistically in determining how to comply with mandated disclosure requirements. Our evidence complements evidence provided by studies reviewed in Healy and Palepu (2001) that managers behave opportunistically in making *discretionary* accounting choices. It also provides a justification for regulatory monitoring of mandatory disclosures.

The next section of the paper presents our conceptual model. The remaining sections describe the SEC staff comment letter database, state hypotheses, describe the sample and research methods, report results, summarize, and conclude.

#### **II. CONCEPTUAL MODEL OF DISCLOSURE COMPLIANCE**

In this section we provide a conceptual model of disclosure compliance (see Figure 1). The general construct to be explained is a company's compliance status. The primary proxy for noncompliant status is company receipt of an SEC staff letter. Receipt of a letter depends upon, first, the existence of noncompliance and, second, upon the extent of SEC staff scrutiny of filings (i.e., the probability of detection). Figure 1 indicates that noncompliance with disclosure requirements can be either accidental or intentional. Accidental noncompliance could arise from resource constraints and associated ignorance or misunderstanding of regulatory requirements. Alternatively, noncompliance could arise from disclosure disincentives, and could be intended to conceal specific unfavorable information from the public (i.e., intentional noncompliance). Below, we describe the explanatory constructs in the model: disclosure compliance infrastructure, incentives and disincentives associated with compliance, and resources available for investing in compliance infrastructure. Proxies for constructs are discussed subsequently.

#### [Insert Figure 1 about Here]

The model indicates that resources available for investing in disclosure compliance are positively associated with the level of disclosure compliance infrastructure. For example, companies that are large, or that are financially healthy, are likely in a good position to invest in infrastructure. In addition, the model indicates that

incentives for investing in disclosure compliance infrastructure are positively associated with the level of infrastructure. We envision incentives for compliance as arising from scrutiny by market participants or other observers and regulators. For example, if a company faces scrutiny by analysts or is traded on a heavily regulated stock exchange, company management will likely be motivated to set up compliance infrastructure that associated observers would deem acceptable. In this way, managers can avoid marketbased and regulatory penalties.

Disclosure compliance infrastructure is the set of policies, procedures, and personnel that the company establishes and/or hires to ensure disclosure compliance. As such, it is made up of components of the company's enterprise risk management process. The enterprise risk management process, as defined by The Committee of Sponsoring Organizations of the Treadway Commission (COSO), is designed to achieve (among other objectives) a *reporting* objective. COSO says this objective consists of "the reliability of the entity's reporting including both internal and external reporting of financial and non-financial information" (2004, 124). Thus, the disclosure compliance infrastructure is a *subset* of the company's investment in those components of the risk management process supporting this reporting objective. As such, greater investment in compliance infrastructure should be positively associated with compliance, and negatively associated with both accidental and intentional noncompliance.

In contrast to disclosure compliance infrastructure, the model proposes that disincentives for compliance have a positive association with intentional disclosure noncompliance, and should logically have no relationship with accidental noncompliance. We envision *disincentives* for compliance as arising from *particular* 

*items* of information that a company is required to disclose. Managers prefer not to disclose proprietary information that could benefit competitors (Verrecchia 2001). Managers might also prefer, if possible, to avoid disclosing specific items of negative information about auditor changes. We argue that managers will maintain a compliance infrastructure consistent with long-term incentives and resources, while trying to circumvent compliance in specific instances. These instances will often involve information having only short term implications and little chance of subsequent discovery (e.g., auditor resignation).<sup>5</sup>

In the next section we introduce the novel disclosure compliance data we employ to test our conceptual model. The data first became available in 2005, and consist of SEC staff comment letters sent to corporations that switched auditors. The letters assert that submitted Forms 8-K (item 4) do not contain all required disclosure items.

#### **III. THE SEC COMMENT LETTER DATABASE AND FORM 8-K**

SEC staff comment letters are important because they form one foundation for the SEC's enforcement process. SEC comment letters provide incentives for corporate managers and independent auditors to avoid unacceptable practices, and to prevent the violation of accounting principles or disclosure regulations. Each year the SEC staff (Divisions of Corporation Finance and Investment Management) reviews filed documents (such as registration statements relating to initial public offerings, 8-Ks, 10-Qs and 10-Ks), evaluates them for compliance with disclosure regulations, and sends comment letters to selected companies. SEC comment letters typically address areas in which the SEC staff believes that disclosure should be improved. A company can respond to a comment letter by making the SEC's recommended changes, by suggesting alternative

approaches, or by presenting an argument that the current disclosure is appropriate. If the registrant's action or argument does not satisfy the SEC staff, the matter may be forwarded to the enforcement division, and might result in an enforcement action, such as the issuance of an Accounting and Auditing Enforcement Release (AAER).

In response to increased requests for disclosure of staff comment letters under the Freedom of Information Act, the SEC announced on June 24, 2004 (SEC 2004b) that it planned to begin publicly releasing its staff comment letters regarding company filings, as well as company responses to these letters. The SEC's objective is "to expand the transparency of the comment process so that [the] information is available to a broader audience" (SEC 2004b). The SEC began posting the comment letters at its EDGAR web site on May 12, 2005, and a large majority of the letters initially posted relate to Form 8-K Item 4 (reporting termination of association with an external auditor) matters, with particular focus on companies' failure to explain auditor changes or to address omissions in information relating to auditor changes (Martinek 2005).<sup>6</sup> We take advantage of this concentration of comment letters to test our conceptual model.

Regulation S-K, Item 304(a), requires that Form 8-K-4's report the termination of association with an external auditor, including information on (1) whether the former auditor was dismissed, resigned, or declined to stand for re-election, (2) whether the board of directors recommended or approved the decision to change auditors, (3) whether there were any disagreements with the former auditor, (4) whether there were any "reportable events", (5) whether the client consulted with a new auditor regarding application of accounting principles to a specified transaction, or regarding the type of audit opinion the client might receive, or about any disagreement or reportable event,

and/or (6) whether the client provided the former auditor with a copy of the disclosures it intended to make in Form 8-K-4. Prior research documents the importance of 8-K-4 filings as a whole, and of some of the types of disclosure items listed above (DeFond et al. 1997; Krishnan and Krishnan 1997; Wells and Loudder 1997; Hackenbrack and Hogan 2002; Whisenant et al. 2003; Sankaraguruswamy and Whisenant 2004).

Importantly, information about the circumstances of an auditor change omitted from a Form 8-K will not necessarily come to light via some other means in the future. Suppose for example that a company submits an 8-K-4 stating that it "no longer is associated with" a former auditor when, in fact, the auditor resigned. There are two primary means by which the resignation might become public knowledge. First, SEC staff might notice that the 8-K-4 did not state, as required by Regulation S-K Item 304, whether the former accountant resigned, declined to stand for re-election or was dismissed. Second, the former auditor might notice the omission, and communicate it to the client in its letter commenting on the contents of the client's 8-K-4. That letter, required by Regulation S-K Item 304(a)(3), should be included by the client in its 8-K-4 submission to the SEC. However, smaller firms auditing few public companies might not detect such an error and, if they did, the client might fail to include the auditor's letter with the 8-K-4. If the omitted information does not come to the SEC staff's attention when the initial 8-K-4 is filed, there is no subsequent event that will reveal the information to the public. Thus, the comment letters we study provide a unique opportunity to test our conceptual model, and the topics discussed in the comment letters are interesting and important themselves.

#### **IV. HYPOTHESES**

In this section we draw upon the conceptual model in Figure 1 to develop hypotheses about companies' compliance (or, conversely, noncompliance) with 8-K-4 disclosure requirements and filing deadlines, and we introduce proxies for explanatory constructs.

#### **Availability of Resources**

Our first hypothesis, stated in alternate form, is:

**H1:** Companies having greater available resources invest more in compliance infrastructure.

The SEC believes that smaller registrants lack personnel with expertise and experience in dealing with disclosure requirements. Evidence of this belief was provided by the SEC's formation, in March 2005, of an SEC Advisory Committee on Smaller Public Companies. The Advisory Committee recommended that smaller companies not be subject to further acceleration of Form 10-Q and 10-K filing dates, "because of the lack of capacity... of internal compliance personnel and external professional advisors to smaller public companies" (SEC Advisory Committee on Smaller Public Companies 2005). The SEC essentially argues that smaller companies are likely to have less disclosure compliance infrastructure than larger companies. Research indicates that internal control weakness, a likely manifestation of underinvestment in compliance infrastructure, is negatively associated with company size (Ge and McVay 2005). Smaller companies also are more likely to delay disclosure of auditor changes, leading to noncompliance with filing deadlines (Schwartz and Soo 1996).<sup>7</sup> Our proxy for company

size is the natural log of market capitalization. We expect larger companies to invest more in compliance infrastructure.

The opportunity cost of investing in infrastructure varies systematically with company characteristics other than size. For example, the characteristics of high tech companies identified by Demers and Joo (2006) – heavy reliance on equity-financing, intense competition, and significant accounting losses resulting from high levels of research and development – are also characteristics that could increase the opportunity cost of investing in compliance infrastructure. Prior research on restatements and auditor litigation provides evidence that such companies are risky<sup>8</sup>, may have under-invested in financial reporting controls, and have been targets of SEC scrutiny (e.g. Palmrose and Scholz 2004; Palmrose et al. 2004).<sup>9</sup> Therefore, we expect high tech companies to invest less in compliance infrastructure.

While healthy companies can afford to invest in disclosure compliance, financially stressed companies likely have to focus more on returning to profitability. Stressed companies also have fewer personnel resources to devote to compliance since managers, board members, and others arguably focus their efforts on survival rather than investing in compliance infrastructure. Our proxy for financial stress consists of the external auditor's decision to modify the audit report for 'going concern' reasons, and we expect that companies receiving such a report will invest less in compliance infrastructure.

#### **Incentives for Compliance**

Our second hypothesis, stated in alternate form, is:

**H2:** Companies having greater incentives for compliance invest more in compliance infrastructure.

Companies that rely more on external financing tend to disclose more voluntary information (Frankel et al. 1995). In some cases (segment reporting) they also disclose more or better required information (Ettredge et al. 2006). When companies are detected violating GAAP (as indicated by news reports, issuance of AAERs, or restatements of earnings) the cost of capital increases (Hribar and Jenkins 2004).<sup>10</sup> Arguably, these types of negative revelations are more detrimental to companies that are unable to finance growth internally. Therefore, we expect that companies relying more on external financing also have higher incentives for regulatory compliance, and therefore will invest more in compliance infrastructure.

Companies subject to greater scrutiny by sophisticated investors also should have higher incentives for compliance, since noncompliance is more likely to be detected and publicized in such cases (Piotroski and Roulstone 2004). Our proxies for private sector scrutiny include a dichotomous variable capturing whether a company is followed by analysts (IBES or Value Line coverage), and another capturing exchange membership. Companies followed by analysts clearly are subject to greater external scrutiny. Companies traded on major (national) exchanges tend to be subject to the full range of SEC filing requirements, and have stocks that are highly liquid and trade frequently. Companies listed on the major national exchanges therefore are subject to more scrutiny by sophisticated institutional investors. In addition, the major national exchanges have

more stringent listing and maintenance requirements. We expect that companies followed by analysts, and listed on major exchanges, have higher incentives for regulatory compliance, and therefore will invest more in compliance infrastructure.

#### **Compliance Infrastructure**

Our third hypothesis, stated in alternate form, is:

**H3:** Investment in disclosure compliance infrastructure is negatively associated with noncompliance (receipt of an SEC staff letter).

A company's compliance infrastructure consists of long-term investments in personnel and procedures that ensure compliance. It also consists of the corporate governance mechanisms in place to monitor the design and use of the infrastructure. A company's investment in corporate governance provides an important subset of its disclosure compliance infrastructure. COSO (2004) notes that the board of directors is responsible for monitoring a company's risk control efforts, which include compliance efforts. The audit committee of the board has a direct role in ensuring the reliability of external reporting. Karamanou and Vafaes (2005, 453) state that "empirical evidence is broadly consistent with the notion that effective corporate governance is associated with higher financial disclosure policy." Research has established a direct positive relation between the independence of board members and practices consistent with high quality corporate governance (Weisenbach 1988, Brickely et al. 1994), and between audit committee characteristics and the effectiveness of monitoring financial reporting (Menon and Williams 1994; Abbott et al. 2004; Carcello and Neal 2003). Therefore, we employ measures of board independence and existence of an audit committee as proxies for

compliance infrastructure. We expect greater levels of board independence, and existence of audit committees, to be negatively associated with receipt of an SEC staff letter.<sup>11</sup>

The external auditor is another important component of corporate governance and of compliance infrastructure. There is substantial evidence that audits by larger (Big 4) firms are of higher quality (see Francis 2004 for a review of this literature). The largest accounting firms should have greater knowledge regarding disclosure and filing requirements attending auditor changes, and we expect these audit firms to share such knowledge with their clients (Ettredge et al. 2001). Thus, we expect a negative relationship between a company having a departing Big 4 auditor and the likelihood that the company will receive an SEC staff letter.

#### **Disincentives for Compliance**

Before discussing the final explanatory construct (managers' disincentives to comply with disclosure requirements), we first explain why such disincentives exist in our particular research context. As mentioned previously, Regulation S-K, Item 304, requires that Form 8-K-4's report the termination of association with an external auditor, including information on (1) whether the former auditor was dismissed, resigned, or declined to stand for re-election, (2) whether or not the board of directors approved the decision to change auditors, (3) whether or not there were any disagreements with the former auditor, (4) whether or not there were any "reportable events", (5) whether or not the client consulted with a new auditor regarding application of accounting principles to a specified transaction, or regarding the type of audit opinion the client might receive, or about any disagreement or reportable event, and/or (6) whether or not the client provided the former auditor with a copy of the disclosures it intended to make in Form 8-K-4.

Research documents the types of companies making the foregoing disclosures and the market's reaction to those disclosures. For example, Schwartz and Soo's (1995) analysis of auditor changes by companies approaching bankruptcy shows that such companies experience more reporting problems, auditor resignations, and delayed disclosures of auditor changes. Additional analysis suggests that the reporting delays may reflect management's attempt to suppress the negative information being revealed by auditor change rather than by time constraints. Evidence of negative market reaction to SEC-mandated disclosures about the circumstances of auditor changes is provided in a number of studies. Wells and Loudder (1997), for example, document a negative price reaction to disclosures of auditor resignation. A negative price reaction may reflect the market's perception that auditor resignation is highly associated with litigation risk and is viewed as a warning signal about the quality of the company's financial reporting (Krishnan and Krishnan 1997). Disclosures of reportable events indicating problems with financial statement reliability are associated with negative stock price reactions, while those related only to internal control events are not (Whisenant et al. 2003). Smith (1988) provides additional evidence of negative market reaction to auditor change "bad news". Thus, there appear to be strong disincentives to providing required disclosures in the auditor change setting that we study.

Our fourth hypothesis investigates whether companies receiving an SEC staff letter (test companies) appear to omit information intentionally because managers view it as unfavorable to their companies. The hypothesis is: **H4:** Auditor change circumstances that convey bad news to investors (i.e., disincentives for compliance) are positively associated with noncompliance (receipt of an SEC staff letter).

This hypothesis can be tested *within* the sample of test companies, which eliminates the need to control for systematic differences between test and control companies. Each of the 97 test companies omits one or more items of information from its initial 8-K-4. However, none of them omit all of the items. For any given item of information that should be disclosed in the 8-K-4, some test companies will have bad news to report, while others will not. Consider the following simple (and intentionally extreme) example. Clients are required to disclose whether they had a disagreement with their prior auditor. Suppose that 20 test companies had such a disagreement, while 77 did not. Suppose also that 30 companies omitted to disclose whether they had a disagreement. If these omissions were distributed randomly with respect to auditor disagreement status, we should observe about 6 of the  $30 (= 30 \times (20/97))$  occurring among the 20 companies with a disagreement, and about 24 of the  $30 (= 30 \times (77/97))$ occurring among the other 77 clients. However, a disagreement is likely worse news than no disagreement. Suppose instead that we observe that 20 out of 20 disagreement companies omitted to disclose, while 10 out of 77 other companies omitted to disclose. We would conclude that *omission* of information about the existence or nonexistence of auditor disagreement is not independent of the *content* of the information, and that the content being omitted is disproportionately bad news.

In addition to the within-test-sample procedure described above, we also create a bad news variable for inclusion in multivariate models. The variable, described in detail

below, is equal to one if any circumstance of the auditor change is likely to be viewed as negative news by investors, and is equal to zero otherwise. We expect this variable to be positively associated with receipt of an SEC staff comment letter.

#### **Compliance with 8-K Filing Deadlines**

In addition to investigating whether our conceptual model explains company compliance with 8-K-4 content disclosure requirements, we also investigate whether the model explains compliance with Form 8-K filing deadlines. Our related hypotheses are parallel to H3 and H4 above, except for the nature of the compliance dependent variable:

**H5:** Investment in disclosure compliance infrastructure is negatively associated with late filing, or delay in filing, of 8-K-4s.

**H6:** Auditor change circumstances that convey bad news to investors (i.e., disincentives for compliance) are positively associated with late filing, or delay in filing, of 8-K-4s.

We employ two dependent variables to test H5 and H6. The first is a dichotomous variable equal to one if the 8-K-4 is filed late, and equal to zero otherwise.<sup>12</sup> Note that this variable does not relate to test versus control firm status. Some test firms might file on time, whereas some control firms might file late. We also investigate an alternative dependent variable consisting of the natural log of the 8-K-4 filing lag. The explanatory variables are the same as those used to test H3 and H4 above, plus a dichotomous variable capturing negative news in the 8-K-4. Schwartz and Soo (1996) previously studied determinants of filing deadline compliance for 8-Ks. Their strongest results are for company size, which is negatively associated both with noncompliance and with filing lag. Their weakest results are for negative news. In contrast, Smith (1988)

concludes that "bad news" events likely *cause* delay of Form 8-K filings by a sample of companies that are not selected for financial distress. Neither study employs our variables representing board independence, audit committee existence, exchange membership, infrastructure, analyst following, or high tech industry membership. We expect all explanatory variables to have the same signs of association with filing date noncompliance (or lag) as with required content noncompliance (SEC staff letter status).

#### V. METHODS

#### Sample

The data for this study include the complete sample of companies receiving SEC staff comment letters on 8-K-4s posted at the EDGAR web site in May and June, 2005.<sup>13</sup> During this period, SEC staff issued letters to 105 non-financial companies on 8-K-4 issues. Complete financial and other data were available for 97 of those companies. We matched the companies receiving comment letters (test companies) with a group of control companies that also reported auditor changes via Form 8-K, but that did not receive comment letters. A matched control sample was used to reduce the cost of handgathering data on board independence, audit committee existence, and 8-K related information. Each test company was matched with the control company whose auditor change occurred closest (in time) to its own. This matching process controls for factors in the business and regulatory environment that might affect auditor change decisions, and that vary over time. The matching criterion is objective and does not require or allow any judgment in choice of control companies. In addition, the matching criterion does not eliminate any differences in test versus control firm characteristics, such as differences in company size or industry. Differences in these fundamental characteristics are the

subjects of our hypotheses. Our final sample includes 194 companies. See Table 1 for a description of the sample attrition and for industry distribution of sample companies.

[Insert Table 1 about Here]

#### Variables

#### **Proxies for Noncompliance and Filing Timeliness**

The dependent variable used to test hypotheses related to noncompliance is *LETTER*, which equals one if the SEC issued a comment letter on a company's auditorchange Form 8-K, and equals zero otherwise. To conduct tests related to timeliness of filings, we use the variable *LATE*, which is equal to one if the 8-K-4 is filed late, and equals zero otherwise. We also use the variable *LnLAG*, which is the natural log of the company's Form 8-K-4 filing lag in days. See Table 2 for a listing of variable definitions and data sources.

#### [Insert Table 2 about Here]

#### **Proxies for Availability of Resources for Disclosure Compliance**

The SEC believes that smaller companies have weaker compliance infrastructures, so we expect that company size will be positively associated with compliance infrastructure. Our proxy for company size is *LnSIZE*, which equals the natural logarithm of the market value of equity.

Our next proxy for resource availability is high technology industry membership (*HITECH*). Consistent with Francis and Schipper (1999), we define a company as high tech if its 3-digit SIC code is 283, 357, 360, 361, 362, 363, 364, 365, 366, 367, 368, 481, 737 or 873. High tech companies exist in an intensely competitive environment that requires significant investment in creative people and research and development, so the

opportunity cost of investing in compliance infrastructure is very high for these companies. Further, high tech companies are more likely to "encourage product innovation over compliance" Fleischer (2006, 18), and they have been the subject of a variety of restatements and litigation associated with noncompliance (e.g., Baldwin and Yoo 2005; Palmrose and Scholz 2004; Palmrose et al. 2004). Therefore, we predict that high technology companies will invest less in compliance infrastructure.

Our third proxy for resource availability is financial distress, which equals one if the company received a current year audit report modified for going concern reasons, and equals zero otherwise (*DISTRESS*). Financially distressed companies likely place a lower priority on investment in disclosure compliance because both monetary resources and managerial attention must be devoted to restoring profitability. As such, we expect that this variable will be negatively associated with compliance infrastructure.

#### **Proxies for Incentives for Investment in Disclosure Compliance**

Our first proxy for incentives to invest in disclosure compliance measures whether a company has sought, or will shortly seek, external financing (*EXTFIN*). We code the variable *EXTFIN* as equal to one if a company issued common stock, preferred stock, or long-term debt in the current year or the next year, and equal to zero otherwise. Companies subject to greater scrutiny by investors and regulators have more incentives to invest in compliance infrastructure, and greater incentives to comply. Companies that rely on external financing are more heavily monitored by investors, lenders, and other market participants (Jensen and Meckling 1976). These firms have market-based incentives to invest in infrastructure, so we expect *EXTFIN* to be positively associated with compliance infrastructure.

The second proxy for incentives to invest in disclosure compliance relates to the nature of the exchange on which the company's shares are traded. The disclosure and corporate governance requirements for companies trading on the major stock exchanges differ from those with prices quoted on the OTC Bulletin Board (OTCBB) or the Pink Sheets published by the National Quotation Bureau. The quotation services facilitate trading of the securities of very young companies as well as those of companies that have been de-listed from the other exchanges because of financial distress or other performance-related reasons. Because they are not subject to listing requirements, companies with prices quoted on the OTCBB or Pink Sheets are not required to have independent audit committees or meet other corporate governance requirements.<sup>14</sup> In general, the fiduciary responsibilities of large institutional investors result in investment policies that prohibit them from holding stocks of companies trading on the OTCBB or Pink Sheets. The listing requirements of the national exchanges provide a regulatory incentive to invest in compliance infrastructure. We define the variable EXCHANGE as equal to one for companies listed on the larger exchanges, and equal to zero for companies on the OTCBB or Pink Sheets. We expect EXCHANGE to be positively associated with compliance infrastructure.

The third proxy captures the extent of analyst coverage for the company's shares. We define the variable *ANALYSTS* as equal to one if a company is covered by the Value Line or IBES, and equal to zero otherwise. This variable captures market-based incentives to disclose, so we expect it to be positively associated with compliance infrastructure.

## Proxies for Investment in Disclosure Compliance Infrastructure and Related Hypothesis-Testing Model

The first two proxies for investment in disclosure compliance infrastructure measure investment in, and quality of, corporate governance, including: (1) *BODINDPCT*, which equals the percentage of independent board of director members (number of independent board of directors divided by the total number of board members), and (2) *AUDCOM*, which equals one if the company has an audit committee<sup>15</sup>, and equals zero otherwise. The third infrastructure proxy (*BIG4*) measures high-quality monitoring by external auditors, and equals one if the company is audited by a Big 4 audit firm prior to the auditor change, and equals zero otherwise. In addition, we include a summary measure of compliance infrastructure (*INFRASTR*), which is the sum of the codes for *BIG4*, *AUDCOM* and *BODINDPC* (with the latter coded equal to one if *BODINDPC* is greater than the sample mean of 0.57, and coded equal to zero otherwise).

We use model (1) below to test H1 and H2. Based on H1, we expect the coefficient on  $a_1$  to be positive, and the coefficients on  $a_2$  and  $a_3$  to be negative. Based on H2, we expect the coefficients on  $a_4$ ,  $a_5$ , and  $a_6$  to be positive.

 $INFRASTR = a_0 + a_1 LnSIZE + a_2 HITECH + a_3 DISTRESS + a_4 EXTFIN$  $+ a_5 EXCHANGE + a_6 ANALYSTS + u.$ (1)

#### Proxies for Disincentives for Compliance and Related Hypothesis-Testing Models

"Bad news" provides a disincentive for compliance. For each item of sensitive auditor change information discussed below, we determine the client's *actual* information state, and code an associated dichotomous variable to measure bad news. For test companies (i.e., those receiving an SEC staff comment letter), the actual states are determined by reading corrected 8-K-4s, not the initial (faulty) 8-K-4s.

The variable *RESIGN* equals one if the former auditor resigned the engagement or declined to continue providing service to the client, and equals zero otherwise. The variable *NOAPPROV* equals one if the decision to change auditors was *not* approved by the board of directors and equals zero otherwise. The variable *DISAGREE* equals one if there were any disagreements with the former auditor, and equals zero otherwise. The variable *EVENT* equals one if there were any "reportable events," and equals zero otherwise.<sup>16</sup> The variable *PRIORGC* equals one if the last audit report before the auditor change included a going concern audit opinion, and equals zero otherwise. Finally, we construct a summary variable, *NEGNEWS*, which equals one if any of the above variables is coded one, and equals zero otherwise.

Our conceptual model asserts that compliance status is directly affected by compliance infrastructure (H3), and by disincentives for compliance (H4). The model for testing H3 and H4 is:

$$LETTER = a_0 + a_1 INFRASTR + a_2 NEGNEWS + u.$$
 (2)

The first explanatory variable proxies for the quality of compliance infrastructure, and the second represents incentives not to comply. We expect coefficient  $a_1$  to be negative because the likelihood of noncompliance should be higher with lower quality infrastructure. Coefficient  $a_2$  should be positive because *NEGNEWS* provides incentives for intentional noncompliance.

In order to investigate whether our conceptual model explains timely compliance with the 8-K-4 filing deadline (H5), we alter model (2) by replacing the dependent variable *LETTER* with dependent variables *LATE* and *LnLAG*. In addition, we test H6 by retaining *NEGNEWS* in the model:

$$LATE/LnLAG = a_0 + a_1 INFRASTR + a_2 NEGNEWS + u.$$
 (3)

We expect the same coefficient signs for all explanatory variables in model (3) as in model (2). We expect that coefficient  $a_1$  will be negative for H5 because of the anticipated negative association between investment in disclosure compliance infrastructure and late filing or filing lag. We anticipate that coefficient  $a_2$  will be positive under H6 because we expect that auditor change circumstances conveying bad news will be positively associated with late filing or delay in filing. A positive coefficient will not imply that 8-K-4s are filed late intentionally since occurrence of the related events, especially auditor resignation, could lead to inadvertent filing delays.

#### **Alternative Test for H4**

In addition to testing H4 using the variable *NEGNEWS* in model (2) above, we test H4 using a within-test-sample procedure described previously. We expect that the proportion of test companies omitting specific disclosures will be greater for companies ultimately reporting (via the 8-K filing subsequent to the SEC letter) that the specific information omitted was negative. We use Chi-square and Fisher's Exact tests to investigate whether omission of required disclosures is independent of the content of the omitted information. These tests do not involve a multivariate model.

#### VI. RESULTS

#### **Descriptive Statistics: Differences in Means**

Table 3 provides comparisons between test and control companies. The sample is optimized for detecting differences in *LETTER* status rather than differences in timeliness (LATE or LnLAG) status. Fifty percent of sample firms are coded one for LETTER, but only 28.9 percent are coded one for LATE, resulting in greater variability in the former. Table 3 indicates some significant differences between test and control companies, using two-tailed tests. Companies receiving comment letters have a higher proportion of high technology industry membership (42 percent versus 22 percent;  $X^2 = 9.482$ , p = 0.003). Test companies are more likely than control companies to have disagreements with departing auditors (4.1 percent versus 0.0 percent;  $X^2 = 4.084$ , p = 0.043). They also have a higher proportion of prior year (not current year) going-concern audit reports (42 percent versus 27 percent;  $X^2 = 3.218$ , p = 0.024). The summary "bad news" variable, NEGNEWS, is more likely to be coded as one for test companies (75 percent versus 58 percent;  $X^2 = 6.686$ , p = 0.010). There are few differences between test and control companies in terms of variables representing size and investment in quality corporate governance. Both groups have similar levels of board independence and audit committee existence. However, there is a significant difference between groups in terms of the use of Big 4 auditors, with just 34 percent of test companies using this class of auditors prior to their switches, compared to 51 percent of control companies ( $X^2 = 5.408$ , p = 0.020).

#### [Insert Table 3 about Here]

#### **Descriptive Statistics: Correlations**

Table 4 reports Pearson correlations among variables. The results show that companies are less likely to receive an SEC staff comment letter if they had a Big 4 auditor (r = -0.17, p = 0.020), and that they are more likely to receive a letter if they have bad news to report (r = 0.19, p = 0.010) or they are in a high technology industry (r =0.22, p = 0.002). Companies are less likely to file their 8-K-4 late if they have stronger compliance infrastructure (*INFRASTR*: r = -0.25, p = 0.000), with similar results for the components of the INFRASTR variable (BIG4, BODINDPC, and AUDCOM). They are also less likely to file late if they are larger (r = -0.17, p = 0.017), and they are more likely to file late if they have bad news to report (r = 0.17, p = 0.016) or they are in financial *DISTRESS* (r = 0.25, p = 0.000). Similarly, companies have a shorter filing lag if they have stronger compliance infrastructure (*INFRASTR*: r = -0.23, p = 0.001), with similar results for the components of the INFRASTR variable (BODINDPC and AUDCOM). They also have a shorter filing lag if they are larger (r = -0.29, p = 0.000), and they are more likely to file late if they have bad news to report (r = 0.17, p = 0.021), or are in financial *DISTRESS* (r = 0.22, p = 0.002).

#### [Insert Table 4 about Here]

Regarding correlations among independent variables, the highest correlations appear between the summary *INFRASTR* variable and its components (*BIG4*, *BODINDPC*, and *AUDCOM*), but these variables never appear together in hypothesistesting models, allaying concerns regarding collinearity. The only relatively high correlations among independent variables occur between *INFRASTR* and *EXCHANGE* (r = 0.60, p = 0.000), between *BODINDPC* and *AUDCOM* (r = 0.70, p = 0.000), and

between *EXCHANGE* and *ANALYSTS* (r = 0.69, p = 0.000). Collinearity diagnostics completed in conjunction with subsequent hypothesis tests using linear regression models reveal little cause for concern, with the highest VIF equal to 2.397.

#### **Test Results for Hypotheses H1 and H2**

Table 5 reports results for model (1), and shows multivariate tests of H1 and H2. Recall from the conceptual model that compliance infrastructure is determined by resources available to invest (H1) and incentives to invest (H2). We first report our results using the summary dependent variable, *INFRASTR*, which is the sum of the codes for *BIG4*, *AUDCOM*, and *BODINDPC*, with the later coded one if the percentage of independent directors is greater than the sample mean of 0.57. The results for H1 show that, as expected, companies experiencing financial *DISTRESS* have lower investment in compliance infrastructure (t = -3.444, p = 0.001). *HITECH* is also a significant predictor of compliance infrastructure (t = 2.551, p = 0.012); contrary to prediction, however, the results show that *HITECH* is positively associated with investment in compliance infrastructure. In addition, the result for *LnSIZE* is not significant.<sup>17</sup>

#### [Insert Table 5 about Here]

Next, we report results using the component variables of *INFRASTR*: *BODINDPC*, *AUDCOM*, and *BIG4*. The results show that companies with higher market capitalization (*LnSIZE*) have more independent boards (t = 2.211, p = 0.014) and are less likely to have had a *BIG4* auditor ( $X^2 = 6.494$ , p = 0.005, see last column). *HITECH* companies have more independent boards (t = 3.841, p = 0.000) and are more likely to have an audit committee ( $X^2 = 3.874$ , p = 0.049). Finally, companies experiencing financial *DISTRESS* are less likely to have independent boards (t = -2.322, p = 0.011), are less likely to have an audit committee ( $X^2 = 10.403$ , p = 0.005), and are less likely to have had a *BIG4* auditor ( $X^2 = 6.728$ , p = 0.004). Taken together, the results for the summary measure of investment in compliance infrastructure, and the component measures, provide some support for the notion that resources available for investing in disclosure compliance are associated with the extent of disclosure compliance infrastructure.

Considering H2, the results for the summary dependent variable, *INFRASTR*, show that companies listed on the NYSE/AMEX or NASDAQ exchange are more likely to have higher investment in disclosure compliance infrastructure (t = 5.735, p = 0.000) than companies listed on less heavily regulated exchanges. In contrast to expectations, obtaining external financing (*EXTFIN*) and analyst coverage (*ANALYSTS*) are not associated with *INFRASTR*. Both *EXTFIN* and *ANALYSTS*, our proxies for market-based incentives, motivate companies to reduce their cost of capital by developing reputations for reliable disclosure, but do not require all companies to make a uniform set of disclosures. This is in contrast to the listing requirements of the major stock exchanges, which require all traded companies to adopt prescribed corporate governance practices and satisfy other requirements. Thus, regulatory incentives appear to have a greater effect on a company's compliance infrastructure than market-based incentives.<sup>18</sup>

#### Tests of H3 and H4

The conceptual model proposes that investment in disclosure compliance infrastructure will be negatively associated with noncompliance, i.e., receipt of an SEC staff comment letter (H3), and that auditor change circumstances that convey bad news to investors will be positively associated with noncompliance (H4). To test H3, we use the dependent variable *LETTER* (see Table 6). The results show that *INFRASTR* is not

significantly associated with noncompliance, so H3 is not supported using this test. In contrast, companies conveying bad news (*NEGNEWS*) are more likely to be non-compliant (t = 6.328, p = 0.005), which supports H4.

#### [Insert Table 6 about Here]

To better understand the results for H3, we conduct supplemental tests using several alternative model specifications. First, we consider a model in which we include the variables predicting investment in compliance infrastructure (LnSIZE, HITECH, DISTRESS, EXTFIN, EXCHANGE, and ANALYSTS). Using this specification, we find the expected negative association between *INFRASTR* and noncompliance ( $X^2 = 3.762$ , p = (0.026), supporting H3. Thus, it appears that controlling for resources and incentives for investment in compliance infrastructure is important in understanding the relationship between infrastructure and compliance status. In another supplemental test, we analyze a model that includes the components of *INFRASTR* as alternative independent variables: BIG4, BODINDPC, and AUDCOM. The results show that having a BIG4 auditor  $(X^2 =$ 4.987, p = 0.013) is negatively associated with noncompliance, which provides some understanding of the main factor driving support for H3. Finally, we test a model that includes both the infrastructure component variables (BIG4, BODINDPC, and AUDCOM), and the variables predicting investment in compliance infrastructure (LnSIZE, HITECH, DISTRESS, EXTFIN, EXCHANGE, and ANALYSTS). In this model, *BIG4* ( $X^2 = 3.273$ , p = 0.035) and *BODINDPC* ( $X^2 = 4.136$ , p = 0.021) are both negatively associated with noncompliance.

As a group, these models provide support for H3, with results revealing that having a Big 4 auditor and a more independent board are important in avoiding noncompliance with 8-K disclosure requirements. Other interesting results from these analyses include the positive association between *HITECH* and *LETTER* across two of the supplemental models, and the uniform lack of significance of *LnSIZE*. This latter finding has implications for regulators.

#### Alternative Test Results for H4

Across all four of the models that we use to test H3, we find robust results on the *NEGNEWS* variable, providing strong support for H4. We also provide an additional test of H4 by investigating whether companies that received comment letters might have intentionally omitted sensitive information from their disclosures. We report results of this analysis in Table 7, with Panel A reporting the main results (using test companies only), and Panel B reporting a sensitivity test that adds control companies to the main analysis. Considering the results in Panel A, we do not find (in contrast to expectation) that companies whose auditor resigned or declined to stand for re-election, *RESIGN*, were more likely to initially omit this information from their initial SEC filing.

#### [Insert Table 7 about Here]

The remaining Panel A results more strongly support our expectations, showing that other disclosure items are omitted when those items consist of bad news. Companies whose boards of directors did *not* approve their auditor changes, *NOAPPROV*, disproportionately do not disclose whether their boards approved changes. Companies *having* accounting disagreements with their auditors, *DISAGREE*, disproportionately do not disclose whether or not such disagreements exist. Companies *having* reportable events, *EVENT*, disproportionately do not disclose whether or not such events exist.

Companies previously *receiving* going concern opinions from their auditors, *PRIORGC*, disproportionately do not disclose whether or not such opinions were received.

To provide a summary test of H4, we employ *NEGNEWS* in Table 7 tests. Test companies disproportionately omit to disclose auditor change information that can be viewed as bad news ( $X^2 = 11.328$ , p = 0.001). The sensitivity results in Panel B are consistent with the Panel A results, but are statistically somewhat stronger. Overall, the results provide evidence consistent with the notion that managers *intentionally* omit sensitive information from their mandatory 8-K-4 disclosures, which supports H4.

#### Tests of H5 and H6

Our next set of hypotheses investigates whether investment in disclosure compliance infrastructure is negatively associated with late filing, or delay in filing, of 8-K-4's (H5) and whether auditor change circumstances that convey bad news to investors are positively associated with late filing, or delay in filing (H6). We report results in Table 8. The results show that companies with weaker compliance infrastructure are more likely to file *LATE* ( $X^2 = 11.480$ , p = 0.000), and that they have a longer filing lag (*LnLAG*) (t = -3.231, p = 0.000), supporting H5. Further, the results show that companies with bad news to report are more likely to file *LATE* ( $X^2 = 5.183$ , p = 0.016), and that they have a longer filing lag (*LnLAG*) (t = 2.232, p = 0.018), supporting H6.

#### [Insert Table 8 about Here]

We conduct supplemental tests of H5 and H6 to further explore these results. Specifically, we test models that include both the infrastructure component variables (*BIG4*, *BODINDPC*, and *AUDCOM*), and the variables predicting investment in compliance infrastructure (*LnSIZE*, *HITECH*, *DISTRESS*, *EXTFIN*, *EXCHANGE*, and *ANALYSTS*). These results reveal that companies with an audit committee are less likely to file *LATE* ( $X^2 = 4.063$ , p = 0.022), and that they have a shorter filing lag (*LnLAG*) (t = -1.901, p = 0.030), while the other infrastructure component variables are insignificant. These results support the importance of audit committees as an integral component of corporate governance, an insight that our unique sample of companies enables us to provide. The results also reveal that *NEGNEWS* is consistently positive and significant in the supplemental models, illustrating that this result is not sensitive to alternative model specifications. *LnSize* is not associated with compliance with filing deadline (*LATE*) ( $X^2$ = 1.437). It is, however, negatively associated with days delay in filing (*LnLAG*) ( $X^2$  = -3.077). Finally, we note that *EXCHANGE* has an unexpected positive sign in both the *LATE* model ( $X^2$  = 1.460, p = 0.023) and the *LnLAG* model ( $X^2$  = 1.935, p = 0.054), suggesting that being listed on a national exchange results in less timely reporting, possibly due to the more-stringent filing requirements.

#### **VII. LIMITATIONS, SUMMARY, AND CONCLUSIONS**

#### Limitations

We acknowledge that there exist limitations to our analysis. First, we test our conceptual model in the specific context of auditor resignation reporting. The SEC is now making comment letters available in other reporting contexts, so an important extension of our paper could include testing the conceptual model in these contexts.<sup>19</sup> Second, the cost of hand-collecting some of the data necessary for our study is high. As such, our sample covers only May and June 2005. We could improve the power of our statistical tests by increasing our sample period, although we do note that our results are fairly strong even with this limited sample size.

#### **Summary and Conclusions**

Why do companies fail to comply with straight-forward disclosure requirements? Is it because management wants to avoid disclosing bad news or because the company's disclosure compliance infrastructure is weak? We address these questions by developing and testing a theory of disclosure compliance that distinguishes between intentional and accidental noncompliance. Our theory (Figure 1) posits that disclosure incentives and resource availability determine a company's disclosure compliance infrastructure, which is a mix of monitoring and corporate governance mechanisms. Lower quality infrastructure decreases the likelihood managers will be aware of and comply with requirements to disclose information they have no apparent reason to conceal (accidental noncompliance). It also decreases the likelihood management will disclose information it has incentives to conceal (intentional noncompliance). The strength of regulatory scrutiny determines the likelihood noncompliance will be detected.

We test the theory on a sample of companies complying or failing to comply with SEC requirements to disclose information about auditor changes and to make a timely filing of such disclosures. Compliance with auditor change disclosure requirements and filing deadlines are appropriate subjects for our inquiry because they require disclosures of facts, some of which may be viewed as bad news.

Our theory provides a framework researchers can develop further to study other compliance decisions. Our test results provide evidence relevant to answering the following policy-relevant questions.

Why do companies fail to comply with straight-forward disclosure requirements?

Most (75 percent) of the noncompliant companies concealed information about the circumstances of auditor change that if disclosed could decrease market value (intentional noncompliance). The remaining noncompliant companies did not conceal bad news but had lower quality disclosure compliance infrastructures than compliant companies. These companies were accidentally noncompliant. The potential for accidental noncompliance has been cited as a justification for simplifying accounting standards (Herz 2005). Our paper is the first to provide evidence that accidental noncompliance is negatively associated with lower quality infrastructure; and, in turn, to provide empirical support for the claim that higher quality infrastructure is positively associated with compliance. To the extent that improvements in internal control prompted by Sarbanes-Oxley improve the quality of companies' disclosure infrastructures they also should improve compliance, especially when management does not have bad news to conceal.

#### What determines the quality of a company's disclosure compliance infrastructure?

Companies with Big 4 auditors, a higher than average proportion of independent members of the board of directors, and an audit committee are deemed to have higher quality monitoring and corporate governance (e.g., Menon and Williams 1994; Carcello and Neal 2003), and, in turn, better infrastructure for ensuring compliance with accounting and disclosure requirements. The quality of a company's compliance infrastructure is determined by management's incentives to disclose and the resources available to invest in infrastructure. We find the regulatory incentives provided by exchange listing requirements have a greater positive effect on infrastructure than either

market-based incentives or resources. This is consistent with the argument that regulation increases the overall level of disclosure.

Finally, our finding that size (the natural logarithm of market value of equity) explains neither quality of infrastructure nor likelihood of noncompliance raises questions about the merits of implementing proposals for size-based disclosure regulation.

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Figure 1 Conceptual Model of Disclosure Compliance



# # SEC *LETTER* status is the dependent variable used to proxy for noncompliance with required *content* of filings. *LETTER* is replaced by variables *LATE* and *LnLAG* to investigate *timeliness* of filings.

# TABLE 1 Sample Size and Industry Breakdown

### **Panel A: Sample Attrition**

	Test	Control
	<b>Companies</b>	<b>Companies</b>
Initial sample of companies receiving comment		
letters from the SEC	105	0
Control companies	0	105
Missing data	8	0
Eliminated control company because		
associated test company had missing data		8
Total Final Sample Size	97	97

## Panel B: Industry Distribution by SIC Codes

SIC			
Codes		<u>N</u>	<u>%</u>
01-09	Agric., Forestry, Fishing	0	0.0%
10-14	Mining	11	5.7%
15-17	Construction	4	2.1%
20-39	Manufacturing	82	42.3%
40-49	Transport., Communications	14	7.2%
50-51	Wholesale Trade	4	2.1%
52-59	Retail Trade	6	3.1%
60-69	Finance, Insurance, Real Est.	13	6.7%
70-89	Service	<u>60</u>	<u>    30.9</u> %
	Total	<u>194</u>	<u>100.0</u> %

Variable	Definition	Data Source
	Compliance Variables	
LETTER	= 1 if company received an SEC letter; 0 otherwise.	SEC, Edgar
LATE	= 1 if company filed its 8-K late; 0 otherwise.	8-K
LnLAG	= natural log of company's Form 8-K filing lag, in days.	8-K
	Resources for Investment in Compliance	
LnSIZE	= natural log of market value of equity	Compustat,
		10-K
HITECH	= 1 if company is a member of a high tech industry; 0	Compustat,
	otherwise. The high tech industries are defined as SIC	10-K
	codes 283, 357, 360, 361, 362, 363, 364, 365, 366, 367,	
	368, 481, 737 and 873.	
DISTRESS	= 1 if current year auditor's opinion is 'going concern';	Audit
	0 otherwise.	Analytics
	Incentives for Investment in Compliance	
EXTFIN	=1 if company issued common stock, preferred stock, or	Compustat,
	long-term debt in the current or next subsequent year.	10-K
EXCHANGE	= 1 if the company is listed on NYSE/AMEX or	Compustat,
	NASDAQ exchange; 0 for Bulletin Board or Pink	10-K
	Sheets.	
ANALYSTS	= 1 if company is covered by ValueLine or IBES; 0	ValueLine,
	otherwise.	IBES
	<u>Compliance Infrastructure</u>	
BIG4	= 1 if company's departing auditor is Big 4; 0 otherwise.	8-K
BODINDPCT	= percent of members of company's board of directors	DEF14A
	who are described as independent in proxy statements.	
AUDCOM	= 1 if company's board of directors has an audit	DEF14A
	committee; 0 otherwise.	
INFRASTR	= sum of the codes for <i>BIG4</i> , <i>AUDCOM</i> , and	
	BONINDPC, with the latter coded 1 if BODINDPC is	
	greater than the mean of 0.57.	

TABLE 2Variable Definitions and Data Sources

(continued)

## TABLE 2 (continued)

	Disincentives for Compliance (Bad News)	
RESIGN	= 1 if company's auditor resigned; 0 otherwise.	8-K or
		Corrected 8-K
NOAPPROV	= 1 if company's board did not approve the change; 0	8-K or
	otherwise.	Corrected 8-K
DISAGREE	= 1 if company had a disagreement with its auditor; 0	8-K or
	otherwise.	Corrected 8-K
EVENT	= 1 if company had a 'reportable event'; 0 otherwise.	8-K or
		Corrected 8-K
PRIORGC	= 1 if company received a 'going concern' opinion in	8-K or
	the prior year; 0 otherwise.	Corrected 8-K
NEGNEWS	= 1 if any of the preceding five variables are coded 1; 0	See above
	otherwise. This is a summary variable capturing any	
	kind of bad news.	

Data Source: 'corrected 8-K' applies only to test (SEC letter) companies. For control companies, the source is 8-Ks.

## TABLE 3Descriptive Statistics

		Chi-square/t-test	
<u> </u>			two-talled p-value
Compliance	Test Companies	Control Companies	
Variables	(LEITER = 1)	(LEITER = 0)	
LETTER	1.000	0.000	N.A.
LATE	0.289	0.196	0.132
LnLAG	1.561	1.528	0.799
Resource			
Variables			
LnSIZE	15.194	14.257	0.283
HITECH	0.423	0.216	0.003***
DISTRESS	0.402	0.320	0.232
Incentive			
Variables			
EXTFIN	0.773	0.701	0.254
EXCHANGE	0.340	0.361	0.763
ANALYSTS	0.227	0.299	0.254
Infrastructure			
Variables			
BIG4	0.340	0.505	0.020**
BODINDPC	0.544	0.595	0.648
AUDCOM	0.650	0.680	0.648
INFRASTR	1.629	1.845	0.145
Disincentive			
Variables			
RESIGN	0.371	0.361	0.882
NOAPPROV	0.093	0.072	0.602
DISAGREE	0.041	0.000	0.043**
EVENT	0.124	0.082	0.345
PRIORGC	0.423	0.268	0.024**
NEGNEWS	0.753	0.577	0.010***

\*\*\*, \*\*, \* Significant at the 0.01, 0.05, 0.10 level, respectively, two-tailed. See Table 2 for variable definitions.

## TABLE 4Pearson Correlations

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. LETTER	1.00													
2. LATE	0.11	1.00												
3. LnLAG	0.02	0.59**	1.00											
Compliance Infrastr	ucture Varia	bles:												
4. INFRASTR	-0.09	-0.25**	-0.23**	1.000										
5. BIG4	-0.17*	-0.14*	-0.11	0.77**	1.00									
6. BODINDPC	-0.09	-0.26**	-0.25**	0.80**	0.43**	1.000								
7. AUDCOM	-0.03	-0.29**	-0.27**	0.86**	0.50**	0.70**	1.00							
Disincentive Variabl	le:													
8. NEGNEWS	0.19*	0.17*	0.17*	-0.05	-0.06	-0.04	-0.09	1.00						
Resource Variables:						-	-	-	-				-	
9. LnSIZE	0.08	-0.17*	-0.29**	0.31**	0.10	0.34**	0.28**	-0.00	1.00					
10. <i>HITECH</i>	0.22**	-0.00	-0.06	0.26**	0.06	0.33**	0.23**	0.09	0.18*	1.00				
11. DISTRESS	0.09	0.25**	0.22**	-0.43**	-0.34**	-0.34**	-0.42**	0.22**	-0.21**	-0.17*	1.00			
Incentive Variables:														
12. EXTFIN	0.08	-0.07	-0.13	0.18*	0.13	0.16*	0.12	0.07	0.48**	0.13	-0.04	1.00		
13. EXCHANGE	-0.02	-0.06	-0.08	0.60**	0.51**	0.44**	0.50**	-0.10	0.39**	0.15*	-0.37**	0.24**	1.00	
14. ANALYSTS	-0.08	-0.12	-0.10	0.48**	0.41**	0.37**	0.40**	-0.07	0.41**	0.12	-0.38**	0.22**	0.69**	1.00

This table provides Pearson correlations between dependent variables and continuous explanatory variables. Spearman correlations yield similar results. N = 194. \*\* and \* indicate significance at the 0.01 and 0.05 levels, respectively, two-tailed. See Table 2 for variable definitions.

TABLE 5Models Investigating Determinants of Investment in Compliance Infrastructure

N=194					
<b>Regression Method</b>		OLS	OLS	Logit	Logit
Dependent Variables	Predicted Sign	INFRASTR	BODINDPC	AUDCOM	BIG4
Resource Variables (H1)					
LnSIZE	+	0.006	0.008	0.016	-0.087
		(0.446)	(2.211)**	(0.220)	(6.494) ***
HITECH	-	0.361	0.149	0.894	-0.111
		(2.551)**	(3.841)***	(3.874)**	(0.080)
DISTRESS	-	-0.510	-0.094	-1.233	-1.063
		(-3.444)***	(-2.322)**	(10.403)***	(6.728) ***
Incentive Variables (H2)					
EXTFIN	+	0.036	-0.023	-0.104	0.624
		(0.216)	(-0.489)	(0.051)	(1.822)*
EXCHANGE	+	1.097	0.156	3.244	1.998
		(5.735)***	(2.970)***	(9.252)***	(17.386) ***
ANALYSTS	+	0.145	0.028	1.712	0.696
		(0.697)	(0.497)	(2.158)*	(1.662)*
Model p-value		0.000	0.000	0.000	0.000
Model R-square or Pseudo R-square		0.417	0.291	0.488	0.389

Data in tables represent the unstandardized regression coefficient and the t-value, or Wald chi-square. \*\*\*, \*\*, and \* represent significance at the 0.01, 0.05, 0.10 level, respectively. All p-values are one-tailed for coefficients having the expected signs, and are two-tailed otherwise. See Table 2 for variable definitions.

 TABLE 6

 Models Investigating Determinants of Compliance

N=194	1					
		Primary Tests of H3 & H4	Supplemental Tests of H3 & H4			
Dependent Variable	Predicted Sign	LETTER	LETTER	LETTER	LETTER	
Compliance In	frastructure	Variables: H3	3			
INFRASTR	-	-0.150 (1.415)	-0.347 (3.762)**			
BIG4	-			-0.788 (4.987)**	-0.734 (3.273)**	
BODINDPC	-			-0.707 (1.040)	-1.577 (4.136)**	
AUDCOM	-			0.629 (1.970)	0.548 (1.272)	
Disincentive V	ariable: H4			· · · · · · · · · · · · · · · · · · ·	, , ,	
NEGNEWS	+	0.789 (6.328)***	0.704 (4.373)**	0.821 (6.006)***	0.717 (4.396)**	
Resource Varia	ables		· · · · · ·			
LnSIZE	-		0.033 (1.092)		0.030 (0.812)	
HITECH	+		1.123 (10.152)***		1.170 (10.250)***	
DISTRESS	+		0.155 (0.173)		0.192 (0.252)	
Incentive Varia	ables			•		
EXTFIN	-		0.137 (0.118)		0.184 (0.198)	
EXCHANGE	-		0.612 (1.487)		0.614 (1.482)	
ANALYSTS	-		-0.675 (1.805)*		-0.618 (1.466)	
Model Statistic	cs.					
Model p-value		0.017	0.002	0.008	0.001	
Model R-square or Pseudo R- square		0.055	0.155	0.091	0.187	

Data in tables represent the unstandardized regression coefficient and the t-value, or Wald chisquare. \*\*\*, \*\*, and \* indicate significance at the 0.01, 0.05, 0.10 level, respectively. All p-values are one-tailed for coefficients having the expected signs, and are two-tailed otherwise. See Table 2 for variable definitions.

## TABLE 7 8-K Items Omitted by Companies Receiving a Comment Letter from the SEC

Auditor Change Circumstances:	Number Omitting	Number Not Omitting	Chi-square	Fisher's Exact Test
8-K-4 Disclosure Item	Disclosure	Disclosure	(one-tailed p-value)	(one-tailed p-value)
RESIGN = 1	8	30	1.053	
RESIGN = 0	18	41	(0.153)	(0.215)
NOAPPROV = 1	6	3	26.978	
NOAPPROV = 0	6	82	(0.000)***	(0.000)***
DISAGREE = 1	3	1	3.554	
DISAGREE = 0	28	65	(0.030)**	(0.095)*
EVENT = 1	3	9	3.196	
EVENT = 0	7	78	(0.037)**	(0.106)
PRIORGC = 1	15	25	7.155	
PRIORGC = 0	8	49	(0.004)***	(0.008)***
NEGNEWS = 1	30	43	11.328	
NEGNEWS = 0	1	23	(0.001)***	(0.000)***

Panel A: Analysis using test companies only

#### Panel B: Sensitivity test adding control companies

Auditor Change Circumstances:	Number Omitting	Number Not Omitting	Chi-square	Fisher's Exact Test
8-K-4 Disclosure Item	Disclosure	Disclosure	(one-tailed p-value)	(one-tailed p-value)
RESIGN = 1	8	67	0.788	
RESIGN = 0	18	101	(0.186)	(0.253)
NOAPPROV = 1	6	10	29.467	
NOAPPROV = 0	6	172	(0.000)***	(0.000)***
DISAGREE = 1	3	1	10.597	
DISAGREE = 0	28	162	(0.005)***	(0.013)**
EVENT = 1	3	17	4.421	
EVENT = 0	7	167	(0.017)**	(0.035)**
PRIORGC = 1	15	55	9.604	
PRIORGC = 0	8	116	(0.001)***	(0.002)***
NEGNEWS = 1	30	99	11.328	
NEGNEWS = 0	1	64	(0.001)***	(0.000)***

We rely on chi-square test results for most comparisons, but for comparisons involving five or fewer sample items in any partition (e.g. *DISAGREE* with N =3 and N = 1) we rely on Fisher's Exact Test. See Table 2 for variable definitions. \*\*\*, \*\*, and \* represent significance at the 0.01, 0.05, 0.10 level, respectively, in the hypothesized direction.

N=194									
Predicted Sign Dependent Variable:		Primary T	ests of H5 & H6	Supplemental Tests of H5 & H6					
		LATE	LnLAG	LATE	LnLAG				
Compliance Ir	ıfrastructure	Variables							
INFRASTR	-	-0.511 (11.480)***	-0.172 (-3.231)***						
BIG4	-			-0.177 (0.119)	-0.041 (-0.262)				
BODINDPC	-			-0.995 (1.392)	-0.296 (-0.998)				
AUDCOM	-			-1.198 (4.063)**	-0.355 (-1.901)**				
Disincentive V	/ariable			• • •					
NEGNEWS	+	0.954 (5.183)**	0.294 (2.232)**	0.780 (3.065)**	0.267 (2.035)**				
Resource Vari	iables								
LnSIZE	-			-0.046 (1.437)	-0.039 (-3.077)				
HITECH	+			0.615 (1.921)*	0.087 (0.626)				
DISTRESS	+			0.797 (3.229)**	0.218 (1.487)*				
Incentive Vari	ables								
EXTFIN	-			-0.226 (0.214)	-0.070 (-0.444)				
EXCHANGE	-			1.460 (5.135)**	0.373 (1.935)*				
ANALYSTS -				-0.211 (0.114)	0.099 (0.505)				
Model Statisti	CS								
Model p-value		0.000	0.000	0.000	0.000				
Model R-square or Pseudo R- square		0.134	0.068	0.236	0.141				

## TABLE 8Models Investigating Timeliness of Compliance

Data in tables represent the unstandardized regression coefficient and the t-value, or Wald chi-square. \*\*\*, \*\*, and \* represent significance at the 0.01, 0.05, 0.10 level, respectively. All p-values are one-tailed for coefficients having the expected signs, and are two-tailed otherwise. See Table 2 for variable definitions.

#### **ENDNOTES**

<sup>1</sup> Examples of disclosures of non-financial information recently mandated by the SEC include disclosures of critical accounting policies and off-balance sheet arrangements.

<sup>2</sup> Studies providing evidence of negative market reaction to some auditor change disclosures include DeFond et al. (1997), Wells and Loudder (1997), Whisenant et al. (2003) and Sankaraguruswamy and Whisenant (2004). Additional motivation for concealing the circumstances of auditor change exists because omissions are unlikely to be detected subsequently. Subsequent audit reports will reveal the name of the new audit firm but will not disclose the circumstances of the auditor change (e.g., resignation versus dismissal).

<sup>3</sup> Arguments for scaled (size-based) securities regulation are provided by SEC Advisory Committee on Smaller Public Companies (2006). Issues related to private companies' ability to comply with Generally Accepted Accounting Principles are discussed in a joint FASB/AICPA proposal (2006) to improve financial reporting for private companies.

<sup>4</sup> Recently posted letters primarily discuss uncertain tax positions and segment disclosures.

<sup>5</sup> In contrast, it seems likely that specific items of *favorable* information that must be disclosed will not trigger circumvention of the disclosure compliance infrastructure.

<sup>6</sup> SEC staff members confirmed in telephone conversations that the SEC intentionally posted letters dealing with auditor change disclosures first, as a trial effort. They intend to expand the range of issues addressed by posted letters in the future.

<sup>7</sup> Conversely, the SEC believes that large filers can and should provide more disclosures, and file them more quickly. This belief underlies the SEC's designation of domestic companies that have a public float of at least \$75 million as 'accelerated' filers. Public float is the market value of the issuer's non-affiliated voting and non-voting common equity. During the period studied, the SEC created a new category (large accelerated filers) that includes companies with a public float of \$700 million (SEC 2005). <sup>8</sup> For example, Pritchard et al. (2006) note that the high tech sector has been the most common target for class actions both before and after the Private Securities Reform Litigation Act.
<sup>9</sup> For example, Palmrose et al. (2004) indicate that 26 percent of their restatements were by high

tech companies improperly accounting for in process research and development.

<sup>10</sup> Other consequences include: the reputation of managers and members of the board of directors is tarnished (Desai et al. 2006, Srinivasan 2005), the probability of litigation increases (Palmrose and Scholz 2004), and the price of corporate stock declines (Palmrose et al. 2004).

<sup>11</sup> An interesting feature of this study is that share prices for many of the companies in our sample are quoted on the OTC Bulletin Board or Pink Sheets. These companies are not subject to exchange listing requirements to have audit committees or to meet various other corporate governance requirements imposed by major exchanges. Inclusion of such companies in our sample allows us to investigate the effect of audit committee existence on disclosure compliance.
<sup>12</sup> As noted previously, SEC (2004a) requires all registrants in our sample period to file Form 8-Ks within four business days of a triggering event (i.e., there is no exemption for small entities).
<sup>13</sup> In some cases, the SEC posted companies' response letters at the web site without posting the SEC comment letters that provoked the responses. We include such companies in the sample since the contents of the original comment letters are evident from the responses.

<sup>14</sup> Quotations on the OTCBB are limited to the securities of issuers that are current in their reports filed with the SEC or other regulatory authority (NASD 1999).

<sup>15</sup>We code audit committee existence rather than percentage of independent audit committee members because our sample includes companies with shares prices quoted on the OTCBB and Pink Sheets that are not subject to exchange listing requirements and have not voluntarily created audit committees.

<sup>16</sup> Under Item 304 of Regulation S-K, reportable events include: (1) the auditor advised the client that internal controls are inadequate, (2) the auditor is unwilling to rely on management's

representations, or to be associated with the financial statements, (3) the auditor advised the client of the need to expand the scope of the audit, and/or (4) the auditor advised the client that information has come to light that materially affects the fairness or reliability of a prior audit report or of the current financial statements.

<sup>17</sup> Results are essentially the same if we calculate the *INFRASTR* using the median (rather than the mean) of *BODINDPC* as the cutoff for coding the variable equal to one. In addition, results are essentially the same if we calculate *LnSIZE* as the log of total assets.

<sup>18</sup> Considering results using the component variables of *INFRASTR*, we find that *EXCHANGE* is the only consistently significant predictor of *BODINDPC*, *AUDCOM*, or *BIG4*. The variables *EXTFIN* and *ANALYSTS* are only occasionally marginally significant.

<sup>19</sup> A study of SEC staff letters related to segment reporting is currently under way.