

Geography and the Incidence of Financial Misreporting

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Abstract

Though the benefits from misreporting of financial statements are well documented, the ex ante cost of misreporting has largely been ignored in the literature. Ex ante costs of misreporting are likely to vary with the information sets available to firms. We measure misreporting as the concentration of income-decreasing restatements announced between 1997-2002 in counties across the U.S. We characterize the managers' ex ante information set in terms of the distance between the firms' headquarters and the SEC office, the extent of past SEC activity via AAERs in the county, accounting practices of neighboring firms, and the characteristics of the local auditor's office. The posited proxies for differences in ex ante costs of misreporting significantly explain cross-county variation in the concentration of restatements. In particular, counties that are farther from the SEC, have lower levels of past SEC activity and have a lax local auditor office are associated with a greater frequency of income-decreasing restatements.

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1.0 Introduction

The decision to engage in illegitimate activities is a function of the expected costs and benefits of these activities (see Becker 1968). Though the benefits from illegal activities are well explored in the academic and practitioner literature, the perceived or ex ante costs of such activities are not studied as extensively. Sah (1991) models the ex ante cost of engaging in illegal activity as a function of the information set available to agents. This information set is characterized both by the agent's past experiences, as well as, the experiences of those in his vicinity. Consistent with this hypothesis, Glaeser, Sarcedote and Scheinkman (1996) find that the incidence of individual criminal activity is related to interactions with neighboring agents.

In this paper, we draw on the crime literature in economics and focus on the role of neighboring agents and monitoring institutions to characterize the ex ante costs facing firms that adopt aggressive accounting practices. Ex ante costs, which refer to information costs considered by the manager before his decision to adopt aggressive accounting practices, are likely to differ from ex post costs. This is especially so in recent times, as the cost imposed by Sarbanes Oxley (SOX), such as imprisoning guilty executives could hardly have been anticipated before SOX was proposed. Our proxy for aggressive accounting practices is an income-decreasing restatement of financial reports.¹ We capture a firm's ex ante cost of misreporting by characterizing its information set with respect to the SEC, auditors and other firms headquartered in its vicinity.

¹ We hasten to add that we do not necessarily view restatements as criminal activity. References to criminal activity in the paper are used for expositional ease and to be faithful to the arguments made in the economics literature on crime. The path to a restatement perhaps begins with a manager choosing an aggressive accounting position when faced with a new reporting dilemma concerning transactions without explicit authoritative guidance from the FASB or SEC. On one end of the continuum, managers deliberately misreport while, on the other end, restatements arise due to mistakes and errors.

Our sample consists of 331 firms that announced income-decreasing financial restatements due to accounting irregularities from January 1997 to June 2002 and 11,393 public firms that did not restate over this period. The geographic unit of analysis is the county, and firms are assumed to be located in the county where they are headquartered. To control for the distribution of corporate headquarters, we measure the distribution of restating firms relative to the distribution of all public firms. As misreporting could be concentrated in a few industries, we also control for geographic clustering of industries in a county. We then examine whether such an industry-adjusted deviation of misreporting depends on proxies that capture differences in ex ante costs of misreporting.

The first proxy we consider is the perceived intensity of regulatory oversight. The primary regulatory body overseeing the integrity of financial disclosures by public firms is the Securities and Exchange Commission (SEC). Firms that are found to have violated Generally Accepted Accounting Principles (GAAP) are subject to accounting and auditing enforcement releases (AAERs) by the SEC. Differential information about the SEC and its oversight are likely to affect the perceived cost of misreporting. In particular, when there is a lot of information about SEC activities, the ex ante costs of misreporting are higher and the consequent misreporting intensity expected to be lower. To test for this hypothesis, referred to as the “asymmetric information hypothesis,” we develop two measures to capture differential information about the SEC.

Motivated by recent findings that geographic proximity is associated with informational advantages, we posit that the physical distance to SEC offices proxies for differences in awareness of SEC activities.² Proximity may provide managers access to information about the

² Informational advantages arising from geographic proximity have been documented in portfolio decisions (see Coval and Moskowitz 1999, Ivkovich and Weisbenner 2005), in the forecasting accuracy of analysts (see Malloy 2005), in transfer of knowledge (see Audretsch and Stephan 1996 and Audretsch and Feldman 1996), and in the investment decisions of firms (see Kedia, Panchapagesan and Uysal 2005).

SEC's policing function, that is, potential issues the SEC is concentrating on and the SEC's opinion regarding when a transaction crosses the line from aggressive reporting to potential fraud. Transmission of sensitive and deliberately ambiguous information about the SEC's policing function is likely to be facilitated by social, civic, or business interactions between managers and geographically proximate SEC enforcement officials. As firms are likely to learn about the SEC's activities by observing SEC investigations of other firms in the neighborhood, we also use past SEC activity in the county, measured as the fraction of firms in the county that were subject to an AAER in the past, to capture knowledge of SEC activities.

Aside from the "asymmetric information" hypothesis, it is also possible that the SEC displays some preferences or constraints in its investigations which are observed by all firms. In particular, if the SEC is constrained in terms of time, effort and enforcement budgets it is more likely to initiate investigations that are cheaper to implement. This hypothesis, referred to as "constrained cop" hypothesis, suggests that a resource-constrained SEC may have a higher likelihood of investigating firms that are geographically closer. Firms located closer to the SEC may rationally respond by reducing their misreporting intensity.

We find strong and robust evidence that counties that are geographically proximate to SEC offices have a lower misreporting intensity. This is consistent with both hypotheses, i.e., firms located closer to SEC are better informed with higher ex ante costs of aggressive reporting and therefore less likely to adopt them, as well as, firms rationally respond to the SEC's preference for investigating firms that are proximate. We also find significant evidence that counties with higher prior SEC activity, and therefore with greater knowledge of the regulator's policing function, have lower misreporting intensity, supporting the "asymmetric information" hypothesis. Lastly, we find that the SEC does have a higher likelihood of investigating firms that are located closer supporting the "constrained cop" hypothesis. In summary, we find evidence

that differential information about SEC policing, as well as, awareness of SEC preferences for local investigations significantly explain observed misreporting intensity.

The second proxy for ex ante costs relates to the role of auditors. Auditors are likely to influence firms' awareness of aggressive accounting practices and the associated costs of adopting such practices. An auditor's endorsement increases the ability of firms to justify their accounting choices (perhaps as "best practices" in a gray area of financial reporting) and reduces the probability of a regulatory probe. If a particular auditor office condones aggressive accounting practices, then we expect to observe a concentration of restatements in the region it services. Pointing to the lax local auditor hypothesis, Chaney and Phillipich (2002) document that on the three days following Andersen's admission that a significant number of documents had been shredded, firms whose audits were performed by Andersen's Houston office suffered a more severe decline in stock prices relative to Andersen's other clients. Consistent with our lax local auditor hypothesis, we find that the concentration of misreporting in a county is positively associated with the concentration of misreporting among a few auditors in the region.

Finally, we examine the practices of firms in neighboring counties and their potential influence on the firms' beliefs about the cost of misreporting. The more widespread the use of aggressive accounting practices in the neighboring region, the smaller a firm's sense of wrongdoing from adopting these practices. The presence of many misreporting firms reduces the probability of any one firm being investigated by regulators, given steady regulatory activity. Further, in the event that a firm is questioned by the SEC, the firm may perceive the use of similar practices by other firms as a valid justification for its actions ("best practices in the region"). Though we find some evidence in univariate analysis for a neighboring effect, this finding is not robust to the inclusion of control variables.

In sum, the evidence suggests that the concentration of misreporting in counties is negatively associated with proxies for the *ex ante* costs of adopting these practices in such counties. In particular, counties that are farther from the SEC or have lower past AAER activity or have a lax local auditor office are more likely to be associated with higher misreporting. These results are robust to controlling for the role of other monitors like analysts, institutional owners, creditor oversight, and takeover markets.

A county, not the firm, is a natural unit of analysis in our context because our proxies for *ex ante* costs such as distance from the SEC office, past AAER activity in the county, restating firms in the neighborhood, and auditor concentration do not exhibit cross-sectional variation for firms located in a given county. Therefore, firm-level tests that correlate the probability of a restatement with proxies for *ex ante* costs are likely to suffer from lower statistical power. Nonetheless, supplementary analyses conducted at the firm-level, as opposed to the county-level, confirm most of the key results of the paper.

Our paper makes several contributions to the extant literature. First, we are among the first to highlight the *ex ante* costs to firms of misreporting. Consistent with Becker (1968), *ex ante* costs are likely to be a key consideration in the firm's decision to misreport. However, extant literature on financial misreporting has focused thus far (i) on the benefits from misreporting for the manager (e.g., Agrawal and Cooper 2006, Burns and Kedia 2006, Bergstresser and Phillipon 2006, Cheng and Warfield 2005, Graham, Harvey and Rajgopal 2005) or for the firm (e.g., Dechow, Sloan, and Sweeney 1996, Richardson, Tuna and Wu 2003); or (ii) on the governance mechanisms that deter misreporting (e.g., Agrawal and Chadha 2005, Burns, Kedia & Lipson (2007); or (iii) on the *ex post* costs of misreporting to the manager or the auditor (e.g., Desai, Hogan and Wilkins 2006; Karpoff, Lee, Maharajan, and Martin 2004; Srinivasan 2005; Agrawal and Cooper 2007).

Second, we are among the first to extend the notion of crime associated with a spatial unit such a county or a state from the economics literature (e.g., Audretsch and Stephan 1996, Glaeser et al. 1996) to the accounting domain of financial misreporting. Most of the extant evidence on misreporting tends to rely on the firm or the firm-year as the unit of analysis. Third, our paper underscores the importance of geographically proximate regulators and better dissemination of information regarding costs of undertaking potentially illegal activities. This finding runs counter to the trend of centralized regulation seen across the world. Finally, our evidence has implications for the role of inter-firm information flows in the adoption of corporate policy — a mechanism that has received little attention in the literature.

The remainder of the paper is organized as follows. Section 2 discusses our data and methodology. Sections 3, 4 and 5 examines the impact of information differences with respect to regulatory oversight from the SEC, the role of the local auditor, and the impact of the neighboring region, respectively. Section 6 reports additional analyses, and Section 7 concludes.

2.0 Data, Methodology and Geographical Clustering

2.1 Sample

Our sample consists of firms that announce their financial restatements due to accounting irregularities. This list of restating firms was compiled by the General Accounting Office (GAO) and discussed in the report titled “Financial Statement Restatements: Trends, Market Impacts, Regulatory Response, and Remaining Challenges.” The GAO report was commissioned by the Chairman of the Committee on Banking, Housing and Urban Affairs of the U.S. Senate. The GAO identified 919 announcements of accounting restatements by 845 firms over January 1007 to June 2002 through a Lexis-Nexis search with variations of the word ‘restate.’ These announced restatements were due to alleged accounting irregularities resulting in material

misstatements of financial reports. We use this list as the basis of this study.³ The GAO (2002) reports an average stock market reaction of -9.5% over day -1 to $+1$ surrounding the restatement announcement. The distribution of restatements sorted on initiating parties is as follows: company (40%), source unknown (34%), auditor (7%), the SEC (13%) and other external parties (6%). Several academic studies have relied on this restatement dataset. Examples include Agrawal and Chadha (2005), Agrawal and Cooper (2006, 2007), Burns and Kedia (2006), Desai, Hogan and Wilkins (2006), Hribar and Jenkins (2004), and Srinivasan (2005).

We considered using two versions of the GAO sample for our analyses: (i) a full sample of all restatements in the GAO report that survive filters for missing data related to other independent variables in the paper; and (ii) a conservative sample that attempts to retain only serious and non-trivial restatements. There are sound arguments to pick the full sample. Managers in a firm and in a neighborhood learn about the reporting latitude that regulators and local auditors are willing to give them by observing their response to even trivial restatements. Stated differently, the “zero tolerance” or the “broken window” policy of policing crime, as advocated by NY City Mayor Rudy Guiliani in the early 1990s, relies on cracking down hard on petty crime (“the broken window”) in an effort to deter further petty crime, low-level anti-social behavior and thus prevent major crime in the future. In our context, managers might infer the *ex ante* costs of deliberate misreporting from regulators and auditors’ response to petty restatements. Hence, unlike other papers that can posit a clear link between non-trivial restatements and some managerial incentive such as option exercises (Burns and Kedia 2006),

³ Note that the list specifically excludes routine restatements due to mergers and acquisitions, discontinued operations, stock splits, issuance of stock dividends, currency-related issues, changes in business segment definitions, changes due to transfers of management, changes made for presentation purposes, general accounting changes under GAAP, litigation settlements and arithmetic and general bookkeeping errors. The list also excludes restatements resulting from accounting policy changes because they did not necessarily reveal previously undisclosed, economically meaningful data to market participants.

insider trading (e.g., Agrawal and Cooper 2006), or managerial job security (e.g., Agrawal and Cooper 2007), eliminating trivial restatements is not such a clear-cut design choice in our setting.

However, the need for the conservative sample arises because there is no consensus on whether certain restatements in the GAO report are attributable to honest accounting mistakes as opposed to aggressive accounting or deliberate misreporting, the key focus of this paper. To present results comparable with the prior literature, we decided to tabulate analyses using the conservative sample. To construct such a sample, we follow Agrawal and Cooper (2007, page 8) and exclude restatements with (i) positive impact on net income (as well as those for which we do not have any information on magnitude); and (ii) restatements with no effect on net income. Agrawal and Cooper (2007) argue that auditors view restatements that do not decrease net income as less severe.⁴ Nevertheless, section 6.3 and Table 7 report results with other measures of restatements.

We further impose the restriction that restating firms have at least one year of sales in the period 1997 to 2001 and with have data on company headquarters in COMPUSTAT. All non-restating firms with at least one year of sales over the period 1997 to 2001 and with data on the location of headquarters in COMPUSTAT are also included. We exclude firms whose headquarters are located outside the U.S. because census data on counties are not easily available for such firms. We hand-collected data on the impact of the restatement on net income. We

⁴ There are other potential ways to measure misreporting. For instance, we could have eliminated all restatements made to comply with SAB 101 and EITF guidelines. Whereas Palmrose and Scholz (2004) and Agrawal and Cooper (2007) argue that such restatements are likely to be less serious and technical in nature, Rountree (2003) finds that the average stock price reaction to SAB 101 restatements is negative. Our approach of retaining only income-decreasing restatements is a compromise between these two extreme positions. Including only income-decreasing restatements eliminates most of the SAB101 and EITF restatements. Only 37 SAB 101 income-decreasing restatements remain in our sample and the average overstatement of income for these cases is a non-trivial 11.21% of sales. Our proxy based on the income-effect of restatement is likely to capture misreporting better than other proxies such as the number of quarters restated and initiator of restatements that have been proposed in the literature.

were able to get data on the magnitude of restatement for 473 restatements.⁵ We do not include restatements with a positive impact on net income (about 13%) or those with a zero impact on net income (about 14.6%). Our final sample consists of 331 income-decreasing restating firms with an average annual impact on net income that is about -20.57% of sales. Approximately 11,393 non-restating firms are included in our sample. The spatial unit of analysis over which we measure the concentration of misreporting is the county. Of the total 3,141 counties reported in the U. S. Census Bureau Gazetteer, 985 or 31% of counties are home to at least one corporate headquarters and are therefore included in our sample.

2.1 Geographical concentration of restatements

To capture the degree of geographical concentration of income-decreasing restatements we estimate at the county level a measure of misreporting deviation defined as

$$\text{misreporting_deviation} = x_i - y_i \quad (1)$$

where

$$x_i = \text{County's share of restating firms} = \frac{\text{Number of sample firms in county}_i \text{ that restated}}{\text{Total restating firms}} \text{ and}$$

$$y_i = \text{County's share of public firms} = \frac{\text{Number of firms head quartered in county}_i}{\text{Total firms in Compustat}}$$

A positive (negative) misreporting deviation suggests that the county's share of misreporting firms is higher (lower) than the county's share of all public firms. Positive deviations indicate greater geographic concentration in misreporting. The assumption

⁵ The data is collected from the restatement announcement when available. For others, the data is obtained from the amended 10-Ks filed with the SEC. Data on the size of the restatement could not be obtained for some firms due to several reasons. First, some firms did not report the impact of the restatement on income. Second, some firms include events (such as restructuring charges and other one-time charges) other than restatements in the amended earnings number, and this makes it difficult to isolate the impact of the restatement on income. Third, some firms did not file an amended 10-K. We also exclude outlier observations for which the size of the restatement was more than 200% of restated net income.

underlying the deviation measure is that misreporting should be randomly distributed. In other words, a county that accounts for 10% of all public firms should also account for 10% of restatements on average. Table 1 reports the distribution of misreporting at the state level (rather than county level) for brevity. California, Massachusetts and Washington are the states with the greatest positive deviations. In particular, California accounts for 17.56% of all public firms, but 19.78% of all restating firms. On the other hand, Connecticut, New York, and New Jersey have the lowest deviations among states containing at least 2% of all corporate headquarters. That is, the share of restatements in these states is less than their share of public firms. For example, New York accounts for 9.27% of all public firms, but only 7.52% of restating firms.

The above deviation measure does not correct for the geographic concentration of industries. There is significant evidence in the prior literature that industries tend to be geographically concentrated due to the natural cost advantage of regions, industry-specific spillovers (Ellison and Glaeser 1997), or knowledge spillovers in R&D intensive industries (Audretsch and Feldman 1996, and Audretsch and Stephan 1996). Hence, the geographic concentration of misreporting, as reported by the deviation measure, could merely reflect the concentration in certain counties of industries with a higher propensity to restate.

To estimate clustering at the industry level, we calculate the deviation of misreporting across two-digit SIC levels. Table 2 displays the distribution of restating firms and all public firms for the 72 unique two-digit SICs in our sample. Not surprisingly, misreporting is concentrated in certain industries. Business services (SIC 73) and the computer equipment industries (SIC code 35) report the highest positive deviations among industries where we observe at least five restatements. That is, SIC code 73 accounts for 14.04% of all COMPUSTAT firms and 18.43% of misreporting firms. On the other hand, SIC code 60 (depository institutions) and 67 (holding and other investment offices) have the lowest

deviations. For example, the two-digit SIC code 60 accounts for 9.37% of public firms, but only 4.53% of restating firms.

A higher incidence of restating firms in California may be due to the state's large share of firms in SIC 35 (computer equipment), an industry with a high incidence of misreporting. To control for concentration of misreporting in industries, we construct an industry-adjusted deviation measure. Instead of assuming that misreporting should be proportional to the fraction of firms located in the county, our proposed measure assumes that misreporting should be proportional to the industry composition of the county. The industry-adjusted misreporting deviation measure is defined as

*ind adjusted misreporting _ concentration*_{*i*} = *x*_{*i*} - *indavg*_{*i*}, where:

$$\textit{indavg}_i = \textit{weighted average industry restating share for county } i = \sum_j \frac{w_{ij} * \textit{Number of restating firms in ind } j}{\textit{Total restating firms}}$$

$$w_{ij} = \frac{\textit{Number of firms in industry } j \textit{ and county } i}{\textit{Total firms in industry } j}, \text{ and } x_i \text{ is as defined in equation 1 above.}$$

The industry adjusted deviation measure controls for differences in the incidence of misreporting across industries. Consider the case of a county in California with a positive deviation. If this county consists of predominantly computer equipment firms, then its weighted average industry-misreporting share will be high. Consequently, its industry-adjusted misreporting deviation will be lower than its geographical misreporting deviation represented in equation (1). Table 1, (last column) displays industry-adjusted misreporting deviation for states. With industry adjustment, California's misreporting deviation decreases from 0.118% to 0.079%. However, industry adjustments do not make a major difference to the misreporting deviations for the state of New York. New York's deviation changes marginally from -0.099% to -0.088% but New York continues to be the state with one of the smallest deviations (among states that report at least five restatements). We will use industry-adjusted misreporting deviations to capture the

concentration of misreporting in the remainder of the paper. In the following sections of the paper, we seek to explain cross-county variation in the industry-adjusted misreporting deviations in terms of three components of the ex ante information set facing managers: (i) regulatory oversight of the SEC in section 3; (ii) local auditor office in section 4; and (iii) neighboring firms' misreporting in section 5.

3.0 Regulatory Oversight

3.1 Hypotheses

In this section, we examine whether differences in information about regulatory oversight by the SEC have a bearing on the perceived ex ante costs of adopting aggressive accounting practices and consequently on the misreporting intensity in counties. Crucial to the SEC's effectiveness is its enforcement program that brings enforcement actions against individuals and firms that violate securities law. The SEC obtains its leads for potential violations of GAAP from several sources such as its internal review of filings, the market surveillance programs of NASD and NYSE, public complaints and tips, among others. To gather further information on a case, the SEC may initiate an informal investigation of a firm. Firms that are found to have violated GAAP requirements are then subject to a formal investigation, which is disclosed through the SEC's Accounting and Auditing Enforcement Releases (AAERs). If firms differ in their knowledge of SEC activities and ongoing investigations, they are likely to have different beliefs about both the probability of being investigated by the SEC and the penalties associated with such an investigation.

We posit two hypotheses about the SEC's role in affecting the ex-ante information costs considered by a manager before he decides to take an aggressive reporting stance. The first hypothesis, referred as the "asymmetric information" hypothesis, and proposed by Glaeser et al.

(1996) posits that criminals have different perceived probabilities of arrest. In particular, though the arrest probability is not a function of distance to the police station, agents farther away perceive the probability of arrest to be lower. This downward bias in perceived regulatory costs likely arises due to managerial overconfidence and the fact that SEC enforcements are inherently low probability events. In our context, we use two measures that might capture differences in ex ante costs of regulatory oversight of the SEC. The first proxy is the physical distance to the SEC and the second proxy is prior exposure to SEC investigations in the neighborhood.

The use of physical distance to proxy for regulatory information is motivated by evidence in prior work that shows information advantages associated with geographic proximity. Coval and Moskowitz (1999, 2001) find that mutual fund investments in geographic proximate securities earn positive abnormal returns. Audretsch and Stephan (1996) document the importance of geographical proximity of scientists and their firms for innovative activity. With regard to individual illegitimate activities, Sah (1991) and Glaeser et al. (1996) discuss how geographic proximity affects the perceived cost of criminal activity.⁶

Proximity to the SEC's office provides managers access to private and/or more precise information about the SEC's policing function, that is, how the SEC decides to go after potential misreporters and when the SEC might consider aggressive reporting to be outright fraud. Information about the SEC's policing function is inherently sensitive and deliberately ambiguous. Geographical proximity is especially helpful in discovering sensitive and ambiguous information that will be disclosed only to close business contacts via casual conversations. In

⁶ A natural follow up question in response to the cited research is why should geographical proximity affect the information set of agents in the current age of information technology and electronic communication? Audretsch (2003) argues that the answer lies in recognizing that there are two types of information: (i) information, such as the price of gold on the New York Stock Exchange, that can be easily codified and has a singular meaning and interpretation; and (ii) information that is vague, difficult to codify and often serendipitously recognized. With electronic communication the marginal cost of transmitting easily codified information does not depend on geographic distance. However, the marginal cost of transmitting tacit knowledge or difficult to codify information increases with distance. We believe that information about accounting policies to account for a transaction, circumstances specific to a firm or set of firms and enforcement activities of the SEC is of the latter kind.

other words, managers who are geographically proximate to the SEC are more likely to get a better sense of how far they can push the envelope in financial reporting. This happens because accountants and general counsel at firms that are geographically proximate (say in New York City than in Kansas City) are more likely to have easier and frequent access to SEC personnel. Moreover, firms located closer to the SEC's office are also more likely to hire accountants and lawyers who have worked before for the SEC if such professionals would rather not relocate outside their immediate geographic vicinity (see Kedia and Rajgopal 2008). In short, counties proximate to the SEC are likely to be better informed about the costs of regulatory oversight, while those that are farther away are likely to downwardly bias their ex ante costs of adopting aggressive accounting practices, and hence more likely to have a higher misreporting concentration.

Firms also learn about regulatory oversight by observing SEC investigations of other firms in their neighborhood. In particular, if other firms in the county have been subject to SEC investigations in the past, firms are likely to be better informed about the costs of regulatory inquiry. We therefore estimate what fraction of the county has been subject to AAERS in the past, i.e., prior to 1997 to capture exposure to regulatory oversight. We restrict our attention to AAERs filed before 1997 because restatements made between 1997 and June 2002 is our measure for misreporting.

The second hypothesis about the SEC's role is labeled the "constrained cop" hypothesis. Under this hypothesis, everyone knows that the local cops are constrained in some way and will not go out of their way to make arrests. More crimes are committed farther from the police station because the criminals rationally know that there is less chance of being caught. In the context of financial reporting, SEC may suffer from constraints related to the enforcement budgets. The press is replete with stories about tightening SEC enforcement budgets before

2002, the last year of restatements studied here. For example, between 1991 and 2001, the number of cases opened by the SEC's Enforcement Division increased by 65% while the staff grew by 27%. Richard Sauer, ex-employee at the Enforcement Division, says "because resources were so stretched, nobody had time to go around prospecting for new matters. You had a pile of stuff you knew were violations." (Wall Street Journal, 2003).

The SEC also likely knows more about the firm's misreporting if the firm is located closer to SEC offices. This is because closer interactions between the SEC and the executives of the firm can potentially inform the SEC about potential misconduct in proximate firms. Finally, note that the SEC relies on tips about financial reporting irregularities to detect misreporters. Employees of proximate firms are more likely to be aware of the SEC and this detection policy, and are therefore more likely to blow the whistle about problems than employees of distant firms. In sum, the "constrained cop" predicts that (i) the concentration of misreporting in a county is negatively associated with the distance between the SEC offices and county where the firm is located; and (ii) the concentration of AAERs issued by the SEC during the sample period 1997-2002 is positively associated with the distance between the SEC offices and county where the firm is located.

3.2 Empirical proxies

To estimate the distance between the counties and SEC offices, we use the latitude and longitude of counties and SEC offices obtained from the U. S. Census Bureau Gazetteer.⁷ SEC offices considered are the SEC headquarters in Washington D.C and regional offices located in

⁷ The Haversine Formula is used to calculate the distance d_{12} between counties 1 and 2. Distance d_{12} is calculated as $d_{12} = R \times 2 \times \arcsin(\min(1, \sqrt{a}))$ where R is the radius of the earth (≈ 6378 kilometers) and $a = (\sin(dlat/2))^2 + \cos(lat1) \times \cos(lat2) \times (\sin(dlon/2))^2$. In the above expression $dlat = lat2 - lat1$ and $dlon = lon2 - lon1$. Lat1 and lon1 are the latitude and longitude of county 1, and lat2 and lon2 are the latitude and longitude of the SEC office.

New York City, NY; Miami, FL; Chicago, IL; Denver, CO; and Los Angeles, CA.⁸ The distance to SEC offices is the lower of the distance to the SEC headquarters and the distance to regional headquarters.

To give the reader some flavor for the counties and distances involved, panel A of Table 3 reports data about the distance of firms located in the top 20 counties (sorted by number of firms headquartered in the county) to the SEC headquarters and the regional SEC office. This table raises an obvious question about whether the analysis to follow ought to treat as endogenous where the SEC chooses to locate its regional headquarters. That is, did the SEC choose to locate its five major centers in areas that had a high incidence of accounting crime?

In theory, the location of the SEC offices can certainly be endogenous to a firm's tendency to misreport. However, the last SEC office established, in Salt Lake City, was set up in 1954 (see http://www.sechistorical.org/collection/papers/1930/1935_SEC_Reg_Admin.pdf). Given that the opening of a new regional SEC office is a rare event and given the long periods of time that elapse between establishing new SEC regional offices, we argue that for all practical purposes, firms take the geographic distribution of SEC offices as exogenous. In particular, we have observed no change in SEC branch structure for nearly 40 years with respect to our sample period spanning 1997 to 2002. Hence, we believe that it is reasonable to treat the location of the SEC's office as exogenous for our analysis.

Panel B of Table 3 reports differences in the characteristics of counties with a high (Group 4) and low (Group 1) industry adjusted misreporting deviation. The average distance from SEC offices is 322.68 km for Group 1 which is 22% less than the mean distance of 394.82 km for the group with the largest industry-adjusted deviation. The difference is statistically

⁸ The SEC regional office responsible for the oversight of a particular state, and hence all counties in that state, is available from the SEC website. We estimated the distance from each county to the SEC regional office responsible for its supervision. The SEC also has district offices. However, the influence and geographic mandate of these district offices is unclear. Hence, the results reported here do not include district offices. However, inclusion of these does not qualitatively change our results.

significant at the 5% level (t-statistic = 2.18). A similar picture emerges when we consider untabulated median distances.

As information advantages may not be linear in distance, we define counties as being geographically proximate to the SEC if they are within 100km of the SEC. As seen in Panel B of Table 3, about 32.45% of counties in the group with the smallest misreporting deviation are geographically proximate to the SEC, i.e., are located within 100km. Note that several prior papers (e.g., Coval and Moskowitz 2001, Malloy 2005, and Kedia, Panchapagesan and Uysal 2005) consider distances within 100 km as proximate. In comparison, only 21.49% of counties with the largest misreporting deviation are geographically proximate to the SEC, and the difference between these proportions is significant at the 5% level (t-statistic = 2.35).

The second proxy for that captures potential differences in information about SEC oversight is the extent of past SEC activity in a county. Firms located in a county are more likely to be informed about the SEC's policing function, the greater the extent of past SEC activity in their county. Hence, we expect misreporting in a county to decrease with the extent of past AAER activity in the county. We obtain data on AAERs before 1997 from the KLM database developed by Gerald S. Martin, and first reported in Karpoff, Lee, and Martin (2008a, b). The KLM database includes 924 SEC enforcement actions for financial misrepresentation initiated from 1968 through 2004. As mentioned before, AAERs filed before 1997 are considered past policing activity because the measure of misreporting we investigate relies on restatements made between January 1997 and June 2002. Panel B of Table 3 shows that counties with the lowest misreporting had 1.97% of firms subject to AAERs prior to 1997. This is significantly higher than the 0.83% for counties with the highest misreporting deviations.

3.3 Controlling for county characteristics

In this section, we examine whether demographic characteristics of the counties could potentially account for the association between distance from the SEC and the industry-adjusted misreporting deviations of counties. We proxy for county size by (i) land area in square miles obtained from the U.S. Census Bureau and (ii) the number of corporate headquarters in the county. We control for county growth by including (i) the percentage change in population over 1990-2000; (ii) the percentage change in housing over 1990-2000; (iii) the number of new housing starts in 2000; (iv) the percentage change in private non-farm new establishments over 1990-1998; and (v) the percentage change in personal income over 1990-1998.⁹ Misreporting is likely to be higher when investor optimism is high and at the end of a rapid growth phase (see Bolton, Scheinkman, and Xiong 2003, Bebchuk and Bar-Gill 2003, and Povel, Singh and Winton 2007). However, we see little difference in these growth proxies across groups of counties ranked by misreporting deviations (see rows 7-12 in Panel B of Table 3).

We introduce stock option usage in a county as a potential control variable for our analyses because some evidence (e.g., Bergstresser and Philippon 2006, Burns and Kedia 2006, and Cheng and Warfield 2005) suggests an a positive association with the propensity to misreport although other evidence does not (e.g., Armstrong et al. 2008, Erickson, Hanlon and Maydew 2006; and Hribar and Nelson; 2008). As we do not have details of compensation for CEOs of firms in each county, we control for potential differences in the use of stock options across counties by including a proxy for stock option usage in the region. In particular, we use the fraction of total state employees working in industries that are characterized by high option usage, referred to as “high incentive” industries. The greater the usage of stock options the greater the misreporting intensity, if the literature linking option usage and misreporting were to

⁹ Note that the different time frames over which county characteristics data is collected is driven by data availability intersected with the restatement sample period that runs from 1997-2001. Further, 1990, the other year for which data on new housing starts are available, was not proximate in time to the restatement announcements sample covering 1997-2001. Further, introducing population levels instead of changes does not affect the reported results.

hold in our data. Otherwise, we ought to observe no relation between misreporting and option-related incentives.

We use the 1997 Economic Census data to obtain employment in different sectors of the state. Industries are categorized as “high incentive industries” if they belonged to the following four NAICS codes: 334 (computer and electronic product manufacturing), 514 (information services and data processing services), 5415 (computer system design and related services) and 5417 (scientific research and development services).¹⁰ The choice of these NAICS codes is based on prior evidence of industry patterns in the grant of incentives (See Core and Guay 2001, and Ittner, Lambert, and Larker 2001).¹¹ We find no evidence that the proxy for options usage is related to industry-adjusted misreporting deviations of the counties (row 13 in Panel B of Table 3).

3.4 State judicial quality

Though firms found to have violated GAAP rules are subject to federal securities laws, the integrity and quality of the state judicial system may potentially dissuade firms from adopting aggressive accounting practices. To examine if state judicial quality impacts the propensity of firms to misreport, we use the “overall state ranking” for the state reported in the 2001 State Liabilities Ranking Study conducted for the U.S. Chamber of Commerce (see Kahan 2004).¹²

3.5 Multivariate results

¹⁰ Note that we have switched from SIC codes earlier to NAICS here because the 1997 Economic Census data reports industry data using NAICS codes. NAICS is the North American Industry Classification System. The data is available on the website www.census.gov.

¹¹ Core and Guay (2001) find the maximum usage of options in software, pharmaceuticals and computers. Ittner, Lambert and Larker (2001) find larger option grants in new economy industries, i.e., computers, software, semiconductor manufacturing, telecommunications, networking and internet.

¹² This study was conducted by Harris Interactive group and is based on interviews with counsel and senior litigators. The overall rankings summarize states’ rankings on (i) overall treatment of tort and contract litigation, (ii) treatment of class action law suits, (iii) punitive damages, (iv) timeliness of summary judgment, (v) discovery, (vi) scientific and technical evidence, (vii) judge’s impartiality, (viii) judge’s competence, (ix) juries’ predictability, and (x) juries’ fairness.

The results from estimating a multiple regression model to determine the effect of regulatory oversight on the misreporting intensity of counties are presented in column (1) of Table 4. The dependent variable is the industry-adjusted misreporting deviation for the county for all columns except (5). In column (1), we find that distance to the SEC is positively related to the concentration of misreporting in counties (t-statistic = 2.43). Thus, counties that are farther away from the SEC are likely to have higher misreporting concentration.

In untabulated results, we find that the result related to SEC offices is robust to several checks. First, we examine whether regulatory information is linearly decreasing with SEC distance or whether only proximate counties appear to have information advantages regarding regulatory oversight. To capture geographic proximity we create a proximity dummy that takes the value of one if the county is within 100km of the nearest SEC office. We find that the coefficient of the proximity dummy is negative and significant. Counties that are close to the SEC have lower misreporting deviations, as expected. Robustness checks using distance other than 100km to define geographic proximity indicate that this impact of being close to the SEC is only significant for distances of 150km or less. Second, we examine the impact of including counties that have no restating firms. By construction, counties with no restating firms have negative misreporting deviations. Excluding these counties reduces but does not eliminate the statistical significance of the coefficient estimate of the SEC distance variable. Thirdly, we also include SEC district offices, along with SEC headquarters and regional offices, to estimate the minimum distance to an SEC office. Once again, this does not qualitatively impact our result.

Notably in column (1) of Table 4, the coefficient on AAERs issued in the county prior to 1997 is negative (t-statistic = 1.88), suggesting that restatements in a county decrease with higher past SEC activity in the county. Taken together, the significant results related to SEC distance and past AAER activity are consistent with the “asymmetric information” hypothesis. In line

with the univariate results in Panel B of Table 3, county characteristics do not significantly impact concentration of misreporting. State judicial quality also does not appear to impact misreporting concentration in counties. We also proxied for state judicial quality by using a dummy for the 10 worst states with no qualitative change in results.

3.6 Impact of geographic proximity on SEC's choice of firms to investigate

As discussed above, counties geographically closer to the SEC are less likely to adopt aggressive accounting practices consistent with the “asymmetric information” hypothesis. The “constrained cop” hypothesis posits that the SEC due to resource constraints prefers to investigate firms that are closer to its offices. We examine whether SEC investigations or AAERs over 1997-2002 to test whether the SEC is indeed more likely to investigate firms that are closer. The dependent variable is the fraction of firms in the county that were subject to SEC AAERs during the 1997-2002 period and is constructed using the KLM dataset described earlier. We pick the time period 1997-2002 to be consistent with the time period over which income-decreasing restatements, our main proxy of misreporting, is measured.

As seen in Table 4, column 5, the SEC issues more AAERS over the 1997 to 2002 period to firms in counties that are proximate. The results are consistent with the “constrained cop” hypothesis in that the number of SEC enforcement actions decreases with the distance between firms’ headquarters and the SEC offices. Thus, the SEC is more likely to investigate firms that are located closer perhaps because of constraints related to budgets or information advantages it may possess due to geographic proximity. We do not find any evidence that AAERs issued over the 1997-2002 period are related to prior SEC activity in the county suggesting that firms learn about misreporting from past SEC actions in their neighborhood. Interestingly, the SEC does

appear to increase its activity in high growth counties as the coefficient of housing starts is positive and significant and also in counties with a larger number of firm headquarters.

4.0 Auditor Characteristics

Next, we examine information about aggressive accounting practices obtained from auditor characteristics. Auditors attest to the financial statements of firms. Obtaining the validation of the auditor allows the firm to justify its aggressive accounting practices and hence reduces the ex ante cost of any potential investigation. Gibbins, Salterio and Webb (2001) document that negotiations between the auditor and client firms are routinely observed and arise mostly due to unclear GAAP. They further state that solutions to these negotiations are not unique and are typically based on what the auditor has agreed to before (“precedents”). Such a strategy enables the auditor to justify a proposition as an acceptable best practice. These arguments suggest that an auditor office with clients that use aggressive accounting is more likely to agree to similar practices in its negotiations with other firms. Such precedents may cause an auditor office to be an explicit or an inadvertent channel of the spread of aggressive accounting practices in the region. Further, a regional auditor office, either through its lack of independence or incompetence, could be directly responsible for a number of restatements, which consequently could lead to clustering of restatements in the region.¹³ Consistent with this hypothesis, Chaney and Phillipich (2002) find that on the three days following Andersen's admission that a significant number of documents had been shredded, firms whose audits were performed by Andersen's Houston office suffered a more severe decline in abnormal returns relative to Andersen's other clients.

¹³ David Duncan of Andersen's Houston office overruled objections from Andersen's head office about Enron's controversial accounting policies on as many as four occasions. Further, Duncan was instrumental in getting Carl Bass, one of the chief skeptics of Enron's accounting at Andersen's head office, fired (*Business Week* 2002).

If auditors did not significantly influence the adoption of aggressive accounting practices, misreporting firms should be randomly distributed across auditing firms. In other words, an auditor's share of misreporting firms should be no different from its market share in the region. In the extreme, if a single auditor office accounted for the bulk of all misreporting firms, then the region should have a high concentration of misreporting across auditors. Consequently, we estimate the extent of concentration of misreporting across auditors to examine the role played by auditors in the adoption of aggressive accounting practices.

The data for the firm's external auditor is obtained from COMPUSTAT (data 149).¹⁴ Unfortunately, we do not have data on which regional office of the auditing firm serviced the firm. We therefore assume that an auditor office servicing a county is likely to service firms in the neighboring region. Measures of concentration across auditors are calculated for the neighboring region (excluding the county in question) and are given as follows:

$$\text{auditor_coefficient of concentration} = \frac{1}{2} * \sum |deviation_i| = \frac{1}{2} * \sum |x_k - y_k| \quad (2)$$

where $x_k = \text{Auditor's share of restatements in region} = \frac{\text{Number of restating firms with auditor}_k}{\text{Total restating firms in region}}$

$y_k = \text{Auditor's share of public firms in region} = \frac{\text{Number of firms with auditor}_k}{\text{Total firms in Region}}$

We report results using a 250km radius to define the neighboring region over which auditor concentration is estimated. Note we do not use the 100km radius to construct the concentration of coefficient across auditors because a 100km based neighboring region results in missing value for many counties. This arises because information on auditors is missing for several firms and in many instances a 100km radius does not have firms with auditor data. As seen in Panel B of Table 3, counties in Group 1 or those with the lowest concentration of

¹⁴ The data on auditors is for the year 2001. When the data is unavailable for 2001, we take the last reported year over the period 1997 to 2000. For firms with no data on auditors on COMPUSTAT from 1997 to 2001, we collect this data from their 10-Ks. COMPUSTAT reports the data for 29 auditors.

misreporting have a smaller coefficient of concentration among auditors relative to counties in Group 4 or those with the highest concentration of misreporting. This significant role of auditors in adoption of aggressive accounting practices continues to hold after we control for county characteristics. As seen in Table 4, column 2, the coefficient of auditor concentration is significant at the 1% level. This strong impact of auditors is robust to including SEC regulatory oversight (column 4).

5. Impact of the Neighboring Region

An important factor that might influence a firm's subjective costs of misreporting is the beliefs and choices of other firms, especially those that are geographically proximate. Proximity to other firms that misreport is likely to reduce the perceived cost of adopting aggressive accounting practices. This may be especially true when there is ambiguity regarding gray areas in financial reporting rules for which there is no authoritative guidance from the FASB or the SEC. In general, the intuition is that CFOs likely mimic the behavior of other CFOs, under the assumption that others' behavior reflects their judgment of the costs and benefits of misreporting (see Hirshleifer and Teoh 2008).

We use the fraction of firms that misreport in the neighboring region to proxy for the degree of exposure to misreporting firms and their practices. Consistent with the 250km radius definition of the auditor concentration coefficient, we define the fraction of misreporting firms as the ratio of the number of misreporting firms to total firms headquartered in the neighboring counties within 250km. Though there is some evidence that the restatement rate of neighboring regions positively impacts the misreporting intensity of the county in the univariate data, the result does not survive controlling for county characteristics and SEC oversight (Table 4, column 4).

6.0 Additional Analyses

6.1 Other monitors

Thus far, we have examined the role played by two monitors: regulators and auditors. A natural question arises about the role of other monitors such as analysts, institutional investors, the disciplining role of debt, and the takeover market. Are the results related to the proximity of regulators and auditors robust to the geographical proximity of these other monitors? To examine potential monitoring by other agents, we construct the following variables:

- (i) Industry adjusted mean number of analysts following firms in the county: We obtain the number of analysts providing annual earnings forecasts for firms from I/B/E/S tapes. We compute the average industry adjusted number of analysts following the firms in a county over the period 1997-2001 to proxy for the level of analyst monitoring in the geographic area. Industry is defined at the two digit SIC level.
- (ii) Industry adjusted average institutional ownership of firms in the county: We obtain the fraction of the firm owned by institutions from SPECTRUM database from which we subtract the mean ownership of all firms in the same two digit SIC. We then calculate the average industry adjusted institutional ownership of firms in a county over the years 1997-2001.
- (iii) Industry adjusted mean debt ratio of firms in the county: We measure firm leverage as the ratio of long-term debt to total assets. We then industry adjust this ratio and estimate the average leverage of all firms in the county over the period 1997-2001. The data to compute leverage comes from COMPUSTAT.
- (iv) Average exit rate of firms in the county due to mergers and acquisitions: To examine the disciplining role of the takeover market, we identify all firms that exit due to mergers and acquisitions over the five years prior to the restatement. We then calculate the fraction of firms exiting at the county level.¹⁵

The *a priori* expectation is that the concentration of misreporting in a county is inversely related to outside monitoring as captured by the industry adjusted analyst coverage, level of institutional ownership, industry adjusted debt ratios, and the average exit rate of firms in the

¹⁵ Several restating firms become takeover targets after announcing the restatement. Note that we focus on takeovers prior to the restatement to capture the disciplining role of the takeover market because we want to avoid confounding our proxy of takeover intensity with the outcome of the restatements.

county.¹⁶ Table 5 reports the results of introducing proxies for these other monitors into the model reported in Table 4. Note that we set missing analyst coverage to zero values, and that procedure leaves us with 858 usable counties.¹⁷ Controlling for the role of these other monitors has no qualitative impact on our results. We continue to find significant evidence that counties located closer to the SEC, those with higher prior SEC activity and those with greater auditor concentration in misreporting have significantly higher misreporting intensity. We also find no support for a significant role of neighboring firms. With respect to a significant role of other monitors, we find that counties with large institutional ownership have a higher misreporting deviation. This is somewhat counterintuitive as the result documents that institutional ownership is associated with more aggressive accounting. However, this result is consistent with the findings of Burns, Kedia and Lipson (2005) who find a similar positive effect of institutional ownership on misreporting. They document that this positive relationship arises entirely due to the presence of transient institutions whose short investment horizons and policy of rapid sell-off on bad news puts pressure on firms to manage earnings and deliver good performance.

6.2 Firm level analyses

The unit of analysis used thus far is the county not the firm. We emphasize county-level analysis of misreporting in the paper for two reasons. First, the county, as opposed to the firm, is a natural unit of analysis in our context because our proxies for ex ante costs such as distance from the SEC office, past AAER activity in the county, misreporting in the neighboring region, and auditor concentration do not display cross-firm variation for firms located in any given county. Second, our design is consistent with the economics literature that demonstrates

¹⁶ Debt ratios vary significantly across industries and it is quite likely that analyst coverage, as well as institutional ownership show industry variation. Therefore, we industry adjust these to capture higher than average monitoring and not merely cross section differences in industries.

¹⁷ We lose counties because firms in these counties are not covered in the SPECTRUM. Untabulated results suggest that restricting the sample to only those counties that have analyst coverage reduces the sample to 683 counties but does not alter reported inferences.

clustering of crime or other economic activity for a spatial unit such a precinct, county or a state (e.g., Audretsch and Stephan 1996, Glaeser et al. 1996).

We recognize, however, that aggressive accounting is a firm-level decision and an analysis of the effect of the information set and experience of neighboring agents on firms' incentives to misreport can potentially complement the county-level results. Hence, in this section, we assess whether our proxies for ex ante costs of reporting such as SEC distance, prior AAERs, misreporting in neighboring regions and auditor concentration explain misreporting intensity at the firm-level. Because proxies for ex ante costs might not display much cross-sectional variation for firms in a county, our firm-level tests are likely to suffer from lower statistical power.

Table 6 presents results from a cross sectional probit analysis of factors that discriminate between restating and non-restating firms for which complete data are available. The sample consists of all firms on COMPUSTAT over the period 1997 to 2001, and firm level controls have been averaged over the time period.¹⁸ We also included dummies for two digit SIC 35, 36, 38 and 73 as these industries were over represented among restating firms. We also controlled for firm level characteristics such as market value, size, age, book to market and whether the firm is a member of the Fortune 500 index. The introduction of the number of firms in the county as an independent variable serves as a control for the tendency of restatements to increase with the size of economy of the county.

There is a positive relation between the probability of restating and (i) the distance to the SEC office; and (ii) the restating rate associated with the firm's auditor in all specifications.

¹⁸ We did not consider the effect of executive compensation such as stock options on the firm's propensity to restate because focus on executive compensation would require intersection of our sample with Execucomp that only covers S&P 1500 firms and would thus severely cut our sample size. As a compromise designed to preserve sample size, we have included two key instrumental variables for stock option plans (size and market to book) in the Probit analysis, consistent with Smith and Watts (1992).

Model 1 also demonstrates that large firms are more likely to misreport, consistent with Burns and Kedia (2006). In particular, the coefficient on the small size dummy (dummy is set to one if the firm is below \$200 million in market capitalization and zero otherwise) is negative (coefficient = -0.11, t-statistic = 1.99). Moreover, large, influential firms, as proxied by inclusion in the Fortune 500 index, also have a significantly higher probability of misreporting. Consistent with prior results, other corporate monitors do not appear to be associated with a higher probability of restatement. In model 3, we drop the two proxies for size (market value and small size dummy) and replace those with the natural log of market value of equity with no major change in results. The effect of the neighboring region on a firm's decision to restate and prior AAER activity in the county is not statistically significant (model 3 of Table 6) as feared for lack of cross-firm variation. In sum, the tenor of the results reported in Table 6 is similar to that documented in earlier tables when the unit of analysis is the county. This is somewhat reassuring because observations at the county level are weighted differently from those at the firm level.

6.3 Increasingly severe restatements

In Table 7, we present county-level regressions (similar to Table 4) for sub-samples of increasingly egregious misstatements, the definition of some of which are discussed in Agrawal and Cooper (2006). The four dependent variables that capture industry adjusted misreporting in the county in these regressions are based on (i) all restatements; (ii) restatements after eliminating SAB 101 and EITF releases; (iii) restatements where the income-effects are either zero or negative; and (iv) restatements where the income-effects are negative.¹⁹

¹⁹Note that we considered even finer cuts such as restatements of earnings releases but not financial statements or cases with more restated quarters but decided against embarking on such analyses because the usable sample sizes of such restatements tends to become uncomfortably small. Further, we do not include the fraction of firms restating in the 250 km radius as a treatment variable because this variable is insignificant in all our analyses.

The idea behind this analysis is two fold. First, the analysis helps us verify whether the effect of ex-ante costs of misreporting are more severe for egregious restatements, e.g., restatements where the income-effects are negative rather than for all restatements. Second, the analysis presents results with other potential measures of misreporting and therefore serves as robustness check. Table 7 simply summarizes the main coefficients of interest (SEC distance, past AAERs and auditor concentration) for each of the sub-samples. Interestingly, we find that though distance to SEC is significant with all measures of misreporting, the estimated coefficient and the associated t-statistics increase with the egregiousness of the misreporting. Similarly, we find that past AAER activity becomes significant only when we consider the most severe measure of misreporting i.e., income decreasing restatements. Auditor concentration is significant for three of the four measures and, like SEC distance, the estimated coefficient and t-statistic increases in the severity of the misreporting.

6.4 Rural folk more honest

One potential explanation for our results documented thus far is that managers in hinterlands located away from SEC are more honest and therefore restate more willingly. Indeed, sociological research (Halfacree 1995) has found that rural folk are seen as more honest than urban dwellers. To assess whether this explanation is supported by the data, we added an urban dummy to the full specification in Table 4. The urban dummy is set to 1 if the county belongs to the 10 largest Metropolitan Statistical Areas (MSA) as per the 2000 census, consistent with the definition of urban in Loughran and Schultz (2005). These MSAs are those that include New York, Los Angeles, Chicago, Washington-Baltimore, San Francisco, Philadelphia, Boston, Detroit, Dallas and Houston. The hypothesis is that if urban folk are indeed less honest, we ought to see significant difference in the restatement intensity of urban counties. Untabulated results, however, suggest that the urban dummy is not significant with a t-statistic = 0.56.

6.5 Firm age as a confound

Another alternate explanation for our results is as follows. The SEC chooses office locations based on the extent of economic development (and probably some form of political consideration). Assuming the price of land is high in such areas of high economic development, (such as Los Angeles, Chicago and New York), young firms, which potentially constitute the most likely group of SEC enforcement targets, choose to begin operations elsewhere and they do so for economic reasons. In this alternative story, the results reported are an artifact of age rather than geography. To address this concern, we included firm age as a control variable in our analysis of a firm's proclivity to restate (Table 6) but found that firm age is not statistically significant (t-statistic = 0.75).

7.0. Conclusions

In this paper, we characterize the information set of firms to proxy for differences in perceived ex ante cost of adopting aggressive accounting practices. We find that these proxies for differences in ex ante costs significantly affect the misreporting concentration in counties. We find two interesting results about the SEC role in influencing such costs. First, counties closer to the SEC are associated with significantly lower misreporting deviations. Second, the misreporting intensity is decreasing in the past SEC enforcement actions in that county. The results, especially the latter finding, supports the "asymmetric information" hypothesis that firms have heterogeneous information about regulatory oversight and therefore, differ in their ex ante costs of misreporting. We also find evidence in support of the "constrained cop" hypothesis which posits that the SEC is more likely to investigate firms that are located closer to its offices. Moreover, a potentially lax local auditor office also appears to influence the information set of firms and resulting beliefs about the costs of misreporting.

The literature on the recent wave of earnings restatements has emphasized the role of the benefits and *ex post* costs of misreporting to the executives and firms, as well as, the failure of governance mechanisms in deterring misreporting. The evidence in this paper suggests differences in firms' *ex ante* information sets. In other words, costs perceived by managers before they decide to misreport are potentially also important in explaining why firms adopt aggressive accounting practices in the first place. Mitigating these information differences either through the establishment of local SEC offices or via better disbursement of information might lower the probability of misreporting in the future. Our results may also be interpreted as justification for an increase in the SEC's enforcement budget and for regulatory overhaul to enhance the SEC's geographical reach.

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Table 1
Misreporting Patterns Across States

This table reports the number of firms and restating firms for states in the U.S. Number of counties refers to the number of counties in that state that had at least one corporate headquarters. Number of firms refers to all active COMPUSTAT firms over the period 1997 to 2001. Restating firms are those that announced an income-decreasing restatement over the period 01/97 to 06/02. Share of restatements is the percentage of restating firms that are located in the state in column (6). Deviation refers to the difference between a county's share of restatement and that county's share of COMPUSTAT firms, averaged at the state level, in this table. However, deviation is difference between a county's share of restatement and that county's share of COMPUSTAT firms for the purposes of analysis in all the other tables in the paper. Industry-adjusted deviations refer to the difference between a county's share of restatement and its industry adjusted expected share of restatement, averaged at the state level, in this table. Industry-adjusted deviations at the county-level are used for the purposes of analysis in all analyses reported in other tables of the paper.

State	Number of counties	Number of firms	Share of COMPUSTAT (%)	Number of restatements	Share of restatements (%)	Deviation (%)	Industry adjusted deviations (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
AL	19	74	0.63	2	0.60	-0.001	0.003
AK	1	6	0.05	0	0.00	-0.051	-0.038
AZ	3	150	1.28	4	1.21	-0.024	-0.068
AR	15	43	0.37	3	0.91	0.036	0.037
CA	38	2059	17.56	142	19.78	0.118	0.079
CO	21	347	2.96	17	2.37	0.003	0.000
CT	8	290	2.47	17	2.37	-0.083	-0.076
DE	2	41	0.35	1	0.14	-0.175	-0.136
DC	1	49	0.42	1	0.14	-0.418	-0.310
FL	31	552	4.71	36	5.01	-0.015	-0.017
GA	40	315	2.69	21	2.92	0.008	0.012
HI	3	21	0.18	1	0.14	0.041	0.056
ID	9	24	0.20	1	0.14	-0.023	-0.017
IL	31	476	4.06	33	4.60	0.044	0.049
IN	41	165	1.41	11	1.53	-0.005	0.003
IA	24	64	0.55	2	0.28	-0.023	-0.019
KS	17	60	0.51	6	0.84	0.041	0.042
KY	19	73	0.62	2	0.28	-0.001	0.004
LA	19	79	0.67	2	0.28	-0.004	-0.001
ME	11	28	0.24	1	0.14	-0.022	-0.016
MD	13	223	1.90	11	1.53	-0.053	-0.046
MA	12	588	5.02	46	6.41	0.136	0.104
MI	33	212	1.81	15	2.09	0.009	0.012
MN	28	307	2.62	19	2.65	0.004	-0.007
MS	18	48	0.41	1	0.14	-0.006	0.000
MO	23	171	1.46	5	0.70	-0.024	-0.022
MT	10	15	0.13	2	0.28	0.048	0.050
NE	8	40	0.34	4	0.56	-0.005	-0.003
NV	5	126	1.07	9	1.25	-0.034	-0.020
NH	9	48	0.41	3	0.42	-0.012	-0.012
NJ	20	537	4.58	25	3.48	-0.063	-0.068
NM	5	23	0.20	0	0.00	-0.039	-0.040
NY	51	1087	9.27	54	7.52	-0.099	-0.088
NC	46	204	1.74	9	1.25	-0.005	-0.002
ND	4	9	0.08	0	0.00	-0.019	-0.022
OH	52	371	3.16	22	3.06	-0.020	-0.017
OK	8	95	0.81	7	0.97	0.050	0.045
OR	14	115	0.98	8	1.11	0.059	0.057
PA	41	488	4.16	25	3.48	0.002	0.008
RI	5	39	0.33	1	0.14	-0.067	-0.057
SC	19	75	0.64	3	0.42	0.014	0.021

Table 1 (Cont'd)
Misreporting Patterns Across States

State	Num of counties	Num of firms	Share of COMPUSTAT	Number of restatement	Share of restatements (%)	Deviation (%)	Industry Adj. deviations (%)
SD	5	13	0.11	1	0.14	0.038	0.041
TN	20	148	1.26	18	2.51	0.028	0.030
TX	55	1027	8.76	73	10.17	0.000	-0.011
UT	8	131	1.12	6	0.84	-0.026	-0.026
VT	7	19	0.16	0	0.00	-0.023	-0.018
VA	57	285	2.43	16	2.23	0.005	0.003
WA	14	208	1.77	16	2.23	0.067	0.066
WV	11	24	0.20	0	0.00	-0.019	-0.012
WI	24	123	1.05	9	1.25	0.007	0.009
WY	7	9	0.08	0	0.00	-0.011	-0.008

Table 2
Misreporting Patterns Across Two-Digit SIC Codes

This table reports number of firms and income-decreasing restating firms for two-digit SIC codes. Nuber of firms refers to all active COMPUSTAT firms over the period 1997 to 2001. Restating firms are those that announced an income-decreasing restatement over the period 01/97 to 06/02. Share of restatements is the percentage of restating firms in the two digit SIC for this table. Deviation refers to the difference between the industry's share of restatements and the expected share of restatements based on the industry's share of COMPUSTAT firms for this table.

Two-Digit SIC	Number of Firms	Share of COMPUSTAT (%)	Number of Restatements	Share of restatements (%)	Deviation (%)
1	19	0.16	0	0.00	-0.16
2	5	0.04	0	0.00	-0.04
7	6	0.05	0	0.00	-0.05
8	5	0.04	0	0.00	-0.04
9	1	0.01	0	0.00	-0.01
10	54	0.46	1	0.30	-0.16
12	12	0.10	0	0.00	-0.10
13	305	2.60	11	3.32	0.72
14	16	0.14	1	0.30	0.17
15	64	0.55	1	0.30	-0.24
16	27	0.23	2	0.60	0.37
17	35	0.30	0	0.00	-0.30
20	210	1.79	6	1.81	0.02
21	11	0.09	0	0.00	-0.09
22	57	0.49	1	0.30	-0.18
23	91	0.78	3	0.91	0.13
24	44	0.38	0	0.00	-0.38
25	49	0.42	3	0.91	0.49
26	85	0.73	3	0.91	0.18
27	130	1.11	1	0.30	-0.81
28	723	6.17	21	6.34	0.18
29	53	0.45	1	0.30	-0.15
30	122	1.04	3	0.91	-0.13
31	24	0.20	0	0.00	-0.20
32	68	0.58	2	0.60	0.02
33	116	0.99	2	0.60	-0.39
34	138	1.18	3	0.91	-0.27
35	601	5.13	27	8.16	3.03
36	728	6.21	19	5.74	-0.47
37	187	1.60	5	1.51	-0.08
38	618	5.27	22	6.65	1.38
39	108	0.92	1	0.30	-0.62
40	18	0.15	0	0.00	-0.15
41	8	0.07	0	0.00	-0.07
42	71	0.61	1	0.30	-0.30
44	22	0.19	0	0.00	-0.19
45	56	0.48	1	0.30	-0.18
46	13	0.11	0	0.00	-0.11
47	42	0.36	3	0.91	0.55
48	426	3.63	10	3.02	-0.61
49	432	3.68	8	2.42	-1.27
50	241	2.06	9	2.72	0.66
51	158	1.35	5	1.51	0.16
52	20	0.17	1	0.30	0.13
53	51	0.44	4	1.21	0.77
54	54	0.46	2	0.60	0.14

Table 2 (Cont'd)
Misreporting Patterns Across Two-Digit SIC Codes

Two-Digit SIC	Num of Firms	Share of COMPUSTAT Firms (%)	Number of Restatements	Share of restatements (%)	Deviation (%)
55	45	0.38	4	1.21	0.82
56	74	0.63	5	1.51	0.88
57	49	0.42	6	1.81	1.39
58	165	1.41	2	0.60	-0.80
59	218	1.86	5	1.51	-0.35
60	1098	9.37	15	4.53	-4.83
61	184	1.57	3	0.91	-0.66
62	130	1.11	4	1.21	0.10
63	263	2.24	6	1.81	-0.43
64	55	0.47	1	0.30	-0.17
65	107	0.91	1	0.30	-0.61
67	389	3.32	4	1.21	-2.11
70	57	0.49	0	0.00	-0.49
72	29	0.25	2	0.60	0.36
73	1646	14.04	61	18.43	4.39
75	21	0.18	0	0.00	-0.18
76	8	0.07	1	0.30	0.23
78	88	0.75	4	1.21	0.46
79	139	1.19	5	1.51	0.32
80	183	1.56	5	1.51	-0.05
81	3	0.03	0	0.00	-0.03
82	38	0.32	3	0.91	0.58
83	31	0.26	3	0.91	0.64
86	1	0.01	0	0.00	-0.01
87	259	2.21	8	2.42	0.21
99	120	1.02	0	0.00	-1.02

Table 3 Panel A: Location of SEC offices and Distances to Top 20 Counties

The table reports data for the top 20 counties in the sample sorted by the number of firms headquartered (# firms) in the county. # restaters refers to the number of income-decreasing restaters during 01/97 to 06/02. Distance from the county to the SEC's headquarters (HQ) in Washington D.C. and the relevant regional office have been rounded off to the nearest kilometer. Note that SEC distance used in the empirical analysis is the distance between the county where firms are headquartered and the closest SEC office (HQ or the regional office).

Sr.no	# firms	# restaters	Distance to SEC HQ (km)	Distance to SEC Reg. Office (km)	County and State	Regional SEC Office that covers the county
1	522	7	333	11	New York County, NY	New York City, NY
2	451	13	3694	8	Los Angeles County, CA	Los Angeles, CA
3	446	22	3879	347	Santa Clara County, CA	Los Angeles, CA
4	347	12	1960	1103	Harris County, TX	Denver, CO
5	317	8	1904	779	Dallas County, TX	Denver, CO
6	305	9	619	202	Middlesex County, MA	New York City, NY
7	276	8	3672	48	Orange County, CA	Los Angeles, CA
8	269	13	960	6	Cook County, IL	Chicago, IL
9	230	6	3612	121	San Diego County, CA	Los Angeles, CA
10	199	7	1518	352	Hennepin County, MN	Los Angeles, CA
11	174	2	403	61	Fairfield County, CT	New York City, NY
12	151	4	3885	394	Alameda County, CA	Los Angeles, CA
13	139	4	3228	85	Maricopa County, AZ	Los Angeles, CA
14	139	9	3930	370	San Mateo County, CA	Los Angeles, CA
15	138	7	3705	1487	King County, WA	Los Angeles, CA
16	129	3	877	892	Fulton County, GA	Miami, FL
17	121	1	1401	96	Palm Beach County, FL	Miami, FL
18	115	5	2390	0	Denver County, CO	Denver, CO
19	114	5	1456	41	Broward County, FL	Miami, FL
20	111	1	434	30	Suffolk County, NY	New York City, NY

Table 3 Panel B: Descriptive Statistics for County Groups Sorted on Misreporting Intensity

This table displays the distribution of regulatory oversight across groups of counties formed on the basis of their misreporting deviations. Misreporting deviation is the difference between the county's share of restatement during 01/97-06/02 and its industry-adjusted expected restatement share as explained in the text. Distance from the SEC is the distance from the county to the closest SEC national or regional headquarters. Coefficient of concentration across auditors summarizes the differences between an auditor's market share and share of restatements in a radius of 250 km around the county and is defined in the text. For each of the groups of counties formed on the basis of misreporting deviations, we report the following county characteristics: (i) land area is the average land area in square miles of the counties; (ii) population change is the average percentage change in population over 1990 to 2000 in the county; (iii) housing change is the average percentage change in housing over the period 1990 to 2000 in the county; (iv) housing starts are the number of new housing starts in 2000 in the county; (v) change in private, non-farm establishments is the average percentage change in such establishments in the county over the period 1990 to 1998; (vi) change in personal income is the percentage change in personal income in the county over the period 1990 to 1998; (vii) employment in high incentive industries is the fraction of the state employees that are employed in industries with high stock options usage. Analyst following, institutional ownership, and leverage are calculated as the mean industry adjusted value of these for all firms in the county over 1997-2001. Leverage is defined as the ratio of long-term debt to total assets. Exit rate is the fraction of firms that were acquired in the county during 1991-1996. The t-statistics captures differences in means of Group 1 and 4. *, **, *** represent significance at the 10, 5, and 1 level respectively.

Row	Variable	Group 1	Group 2	Group 3	Group 4	T-Stat (1)-(4)
<i>Dependent variable</i>						
1	Mean deviation (%)	-0.083	-0.014	-0.007	0.07	-1.96**
<i>Test variables</i>						
2	Average distance from the SEC (in km)	322.68	421.72	414.36	394.82	-2.18**
3	SEC AAERs prior to 1997	0.0197	0.018	0.012	0.0083	2.42**
4	Counties within 100km of SEC (%)	32.45	19.07	11.29	21.49	2.35**
5	Restating firms within 250km (%)	2.89	3.10	3.11	3.07	-6.18*
6	Auditor concentration coefficient	0.37	0.38	0.38	0.40	-1.63*
<i>County variables</i>						
7	Land Area (square miles)	888.89	687.28	735.37	788.99	0.29
8	Population change (%)	15.81	14.52	13.50	14.15	0.83
9	Housing change (%)	16.82	17.64	14.70	15.93	1.02
10	Housing starts (million)	2149.20	629.28	430.62	1736.41	0.66
11	Change in private non-farm establishments (%)	17.11	18.72	17.43	16.28	1.69*
12	Change in personal income (%)	54.79	54.90	51.42	54.28	0.45
13	Employment in high incentive industries	2.96	2.49	2.75	2.76	0.25
<i>Other monitors</i>						
14	Industry adjusted mean analyst coverage in county	-0.58	-0.96	-0.93	-0.71	0.71
15	Industry adjusted mean institutional ownership in county (%)	0.39	-2.62	-4.95	-2.86	3.44***
16	Industry adjusted mean leverage in county	-0.122	-0.169	-0.214	-0.041	0.78
17	Exit Rate due to M&A	0.12	0.084	0.105	0.122	0.07

Table 4

Proxies for Ex Ante Information Sets and County Misreporting Deviations

The dependent variable for Models 1- 4 is the industry adjusted misreporting deviation estimated at the county level of all income decreasing restatements announced from 1997 to June 2002. For Model 5, a probit specification, the dependent variable is the number of AAERs issued over 1997-2001 divided by the number of firms in the county. Population change is the percentage change in population over 1990 to 2000. Housing change is the percentage change in housing over the period 1990 to 2000. Housing starts are the number of new housing starts in 2000. Private, non-farm income establishments is the percentage change in the number of new private, non-farm establishments over the period 1990 to 1998. Personal income change is the percentage change in personal income over the period 1990 to 1998. High Incentive is the fraction of state employees that are employed in industries with high stock options usage. Number of firms is the number of active COMPUSTAT firms with headquarters in the county. SEC distance is the distance to the closest SEC national or regional headquarters. AAERs prior to 1997 is the fraction of firms in the county that had AAERS prior to 1997. Auditor concentration captures the differences between an auditor's share of restating firms and its market share in a radius of 250 km around the county. Percentage misreporting is the percentage of firms that restated in a radius of 250 km around the county. All coefficients for the above variables have been multiplied by 10⁶ in models 1-4 unless otherwise mentioned. Ranking for state judicial quality is from the overall rankings in the 2001 U.S. Chamber of Commerce State Liabilities. Errors have been corrected for heteroscedasticity. T statistics are displayed in parenthesis below. *,**,*** represent significance at the 10, 5, and 1 level respectively. Intercepts have not been tabulated below. N=958 counties in models 1, 3-5 and N=892 in model 2.

	Misreporting Deviation				AAER 1997-2002
	Model 1	Model 2	Model 3	Model 4	Model 5
County level controls					
Land area in square miles	-0.07 (1.31)	-0.06 (1.02)	-0.05 (0.85)	-0.01 (1.52)	-0.0002 (1.55)
Population change	-11.57 (1.23)	-9.23 (0.89)	-11.88 (1.26)	-10.00 (0.95)	0.006 (0.38)
Housing change	1.37 (1.38)	1.58 (0.14)	3.05 (0.30)	1.10 (0.09)	-0.007 (0.47)
Housing starts	0.06 (0.51)	0.08 (0.58)	0.05 (0.47)	0.01 (0.63)	0.0001*** (3.02)
Private, non-farm income establishments	-2.48 (0.75)	-4.39 (1.25)	-3.53 (1.09)	-4.70 (1.29)	0.0006 (0.09)
Personal income change	8.72 (1.38)	9.64 (1.39)	9.75 (1.51)	9.00 (1.29)	0.002 (0.23)
High incentive	69.38 (1.03)	84.96 (1.32)	53.26 (0.91)	99.70 (1.51)	0.041 (0.64)
Number of firms	-0.30 (0.02)	-1.36 (0.09)	-0.29 (0.02)	-0.14 (0.09)	0.031*** (6.42)
Ranking for state judicial quality	16.40 (0.33)				
Test variables					
SEC distance	0.40*** (2.43)			0.34** (1.89)	-0.0007*** (2.31)
AAERs prior to 1997	-473.24** (1.88)			-513.40** (1.80)	-0.362 (0.25)
Auditor concentration		928.57*** (2.73)		817.80*** (2.43)	0.163 (0.28)
% of firms restating in 250km (x 1000)			70.37** (2.13)	501.74 (1.09)	-4.143 (0.46)
Adjusted r square (%)	1.44	1.66	1.08	2.35	

Table 5
County Misreporting Deviations and the Role of Other Corporate Monitors

The dependent variable is the misreporting deviation per county measured as the deviation of a county's share of restatements made during 01/97-06/02 from its expected industry-adjusted share of restatement and more fully explained in the text. Analyst following, institutional ownership, and leverage are calculated as the mean industry adjusted value of these for all firms in the county over 1997-2001. Leverage is defined as the ratio of long-term debt to total assets. Exit rate is the fraction of firms that were acquired in the county during 1991-1996. The other variables are as defined in Table 4. Coefficients of all variables have been multiplied by 10^6 unless otherwise mentioned. Errors have been corrected for heteroscedasticity. T statistics are displayed in parenthesis below. *, **, *** represent significance at the 10, 5, and 1 level respectively. Intercepts have not been tabulated below.

	Model 1	Model 2
<i>County level controls</i>		
Land area in square miles	-0.08 (1.25)	-0.09 (1.47)
Population change	-9.50 (0.86)	-9.94 (0.89)
Housing change	1.88 (0.16)	2.43 (0.21)
Housing starts	0.08 (0.56)	0.09 (0.58)
Private, non-farm income establishments	-4.18 (1.20)	-4.64 (1.30)
Personal income change	7.89 (1.13)	8.21 (1.16)
High incentive	104.39 (1.52)	105.06 (1.53)
Number of firms	-1.28 (0.08)	-1.33 (0.09)
<i>Other monitors</i>		
Industry adjusted mean analyst following in county	86.70 (0.49)	83.70 (0.48)
Industry adjusted mean institutional ownership in county (%)	0.04* (1.93)	0.04* (1.87)
Industry adjusted mean leverage in county	0.19 (0.51)	0.26 (0.69)
Exit rate due to M&A	136.06 (1.26)	134.34 (1.24)
<i>Test variables</i>		
SEC distance	0.42** (2.37)	0.34* (1.83)
AAERs prior to 1997	-563.24* (1.74)	-593.30* (1.78)
Auditor concentration	871.02*** (2.44)	883.15*** (2.46)
% of firms restating in 250km (x 1000)		5.13 (1.07)
Adjusted r-square (%)	2.42	2.51
Number of observations (counties)	858	858

Table 6: Firm Level Analyses of Misreporting

The dependent variable is one if the firm announced an income decreasing restatement over 1997-June 2002. Market Value is the average market value of equity for the firm over the period 1997 to 2001. Small size dummy is 1 if the average market value of equity is less than 200 million. Fortune dummy is set to 1 if the firm is a member of the Fortune 500 group of companies. Leverage is the average ratio of long-term debt to total assets over the period 1997 to 2001. Book to market is the average ratio of the book value of equity to market value over the period 1997 to 2001. Firm age is measured in months from the first date on which the firm appears in COMPUSTAT. Fraction of restating firms in the 250km radius is the ratio of number of restating firms to total firms in the area. Market share of firm's auditor is the percentage of firms with the auditor in the 250km region around the firm. Restating rate is for the firm's auditor in the 250 km region around the firm, excluding the firm itself. SEC distance is the distance to the closest SEC national or regional headquarters. Several coefficients have been multiplied by 10^6 for expositional ease. The regression includes four industry dummies for two digit industries 35, 36, 38 and 37 respectively. T-statistics appear in parentheses. *, **, *** represent significance at the 10, 5, and 1 level respectively. The values for other monitors is the average industry adjusted value of these for all firms in the county over 1997-2001. Leverage is defined as the ratio of long-term debt to total assets. Exit rate is the fraction of firms that were acquired in the county during 1991-1996. Number of observations is 10285.

Variables	Model 1	Model 2	Model 3
<i>Test variables</i>			
SEC distance (x 10^6)	117.67 (1.8)**	113.25 (1.65)	116.692 (1.78)*
AAERs prior to 1997 (x 10^6)	-0.92 (1.01)	-0.91 (1.01)	-0.93 (1.02)
Market share of auditor	-0.657 (1.4)	-0.661 (1.41)	-0.706 (1.49)
Restating rate of the auditor	7.521*** (4.59)	7.468*** (4.5)	6.565*** (3.91)
Fraction of restating firms in 250km radius		0.485 (0.21)	
<i>Control variables</i>			
Market Value (x 10^6)	-2.789 (0.91)	-2.79 (0.91)	
Small size dummy	-0.104* (1.88)	-0.104* (1.88)	
Ln (1+market value)			0.048*** (3.36)
Fortune dummy	0.308*** (2.92)	0.308*** (2.92)	-0.153 (1.43)
Leverage	-0.035 (0.46)	-0.035 (0.45)	-0.028 (0.38)
Book to Market (x 10^6)	0.001 (0.37)	0.001 (0.37)	0.001 (0.30)
Firm age	-0.002 (0.98)	-0.002 (0.99)	-0.002 (0.75)
<i>Other monitors</i>			
Average Industry Adjusted analyst following	-0.006 (0.33)	-0.006 (0.34)	-0.008 (0.46)
Average Industry Adjusted institutional ownership	-0.265 (0.68)	-0.26 (0.66)	-0.224 (0.57)
Average industry adjusted leverage	-0.018 (1.16)	-0.018 (1.15)	-0.019 (1.20)
Exit rate due to M&A	-0.001 (0.7)	-0.001 (0.69)	-0.001 (0.63)
Pseudo r-square after adjusting for degrees of freedom (%)	2.56	2.56	2.82

Table 7
Proxies for Ex Ante Information Sets and County Misreporting Deviations for Sub-Samples of Restatements

The dependent variable is misreporting deviation per county where the deviation is computed as the difference between a county's share of restatements made during 01/97 to 06/02 from its expected industry-adjusted share of restatement. However, the nature of restatements considered to compute this deviation changes depending on the column considered. Column 1 considers all restatements, column 2 considers all restatements except for those involving SAB 101 and EITF releases. Column 3 restricts the data to restatements that have both a zero or a negative effect on earnings whereas column 4 focuses on restatements with only a negative effect on earnings. All the control variables discussed in the model 1 of Table 4 were estimated but the coefficients on those variables have not been reported below for parsimony. The definitions of variables reported here appear in the notes to Table 4. Note that we do not include fraction of firms restating as a treatment variable here because it is not significant in the combined model 5 in Table 4. % All coefficients for the above variables have been multiplied by 10^6 unless otherwise mentioned. Errors have been corrected for heteroscedasticity. T statistics are displayed in parenthesis below. *, **, *** represent significance at the 10, 5, and 1 level respectively. Intercepts have not been tabulated below. N=892 counties.

Sample	Model 1 All restatements	Model 2 Without SAB 101 and EITF	Model 3 Zero and Negative Earnings Impact	Model 4 Only Negative Earnings Impact
<i>Test variables</i>				
SEC distance	0.32*** (2.74)	0.24*** (2.02)	0.38*** (2.15)	0.42** (2.42)
AAERs prior to 1997	-193.45 (0.92)	-117.29 (0.53)	-349.97 (1.35)	-486.53** (1.76)
Auditor concentration	221.11 (1.08)	373.37** (1.86)	540.58** (1.99)	809.32*** (2.41)
Coefficients on control variables used in model 1 of Table 4 estimated but not reported here for parsimony.				
Adjusted r square (%)	6.6	6.37	2.78	2.35