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SEC REGULATION AND THE STRATEGIC DISCLOSURE OF ACCOUNTING RESTATEMENTS

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SEC REGULATION AND THE STRATEGIC DISCLOSURE OF ACCOUNTING RESTATEMENTS

by

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Dedication

To my wife, Holly, the love of my life.

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SEC REGULATION AND THE STRATEGIC DISCLOSURE OF ACCOUNTING RESTATEMENTS

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This dissertation investigates whether firms strategically disclose accounting restatements by coordinating restatement announcements with earnings releases, delaying the announcement of income-decreasing restatements, or obscuring restatement announcements by failing to disclose news of a restatement on a Form 8-K filing. I examine restatements announced after a Securities and Exchange Commission rule (effective August 24, 2004) that mandates a unique 8-K filing for restatements. Consistent with an attempt to lessen the negative impact of a restatement announcement, I find that when firms package restatement announcements with earnings releases they most often pair small income-decreasing restatements with positive earnings surprises. I also find that monitoring by the SEC decreases the probability of firms' mixing restatement and earnings news. On average, firms delay announcements of income-decreasing restatements longer than

announcements of income-increasing restatements, and institutional ownership is positively associated with more timely disclosures of restatement news. I show that firms with weak corporate governance or less external monitoring are more likely to make news of a restatement difficult to find. Restatements performed without a Form 8-K filing are much less likely to be disclosed in a company-issued press release or to receive attention in the business press, and I find some evidence that the initial market reaction to obscure restatement announcements is less negative than the reaction to restatements disclosed transparently. Collectively, these results suggest that even in the presence of strict disclosure requirements, some firms attempt to strategically manage the timing and transparency of restatement announcements and investors do not appear to undo the effects of firms' strategic behavior.

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Chapter 1: Introduction

This paper investigates whether firms strategically disclose accounting restatements by coordinating restatement announcements with earnings releases, delaying the announcement of income-decreasing restatements, or obscuring restatement announcements by failing to alert investors of a restatement with a required Form 8-K filing. I examine whether corporate governance, external monitoring, and the size or direction of a restatement influence how firms publicly disclose a restatement. Although the accounting literature has explored the causes and consequences of restatements (Efendi *et al*. 2007, Burns and Kedia 2006, Desai *et al*. 2006, Palmrose *et al*. 2004, Gleason *et al*. 2004, Srinivasan 2005), the literature has not investigated whether firms strategically manage the timeliness and transparency of restatement disclosures. This paper also addresses the impact of a new restatement disclosure rule and provides insights on whether strategic disclosure incentives affect the degree of compliance with SEC regulation.

Restatement disclosure choices have important implications for capital market participants because delaying the public disclosure of a restatement slows the market's ability to impound restatement information into the value of a company's securities. Additionally, obscure restatement announcements are difficult for outsiders to monitor. Restatements often result in significant stock price declines or management turnover, and restatement volume has increased considerably in recent years (Palmrose *et al.* 2004, Desai *et al.* 2006, and Glass Lewis 2006).

The disclosure literature demonstrates that managers may strategically time the release of negative earnings news (Patell and Wolfson 1982, DellaVigna and Pollet 2005, Bagnoli *et al*. 2006), delay the release of bad news relative to good news (Hong *et al*. 2000, Kothari *et al*. 2005), and coordinate the timing of good and bad news disclosures (Aboody and Kasznik 2000, Lansford 2006). Managers may choose to strategically delay or obscure the public disclosure of a restatement because of career or reputation concerns (Desai *et al*. 2006, Kothari *et al*. 2005). Restatements provide a unique research setting for examining how the motivation to strategically disclose bad news interacts with the strict regulatory requirement of a timely and transparent disclosure.

My main sample consists of 823 restatements announced between the effective date of a new SEC rule governing restatement disclosures (August 24, 2004) and December 31, 2005. All restatements in my sample correct accounting errors in previously issued financial statements. Using a logit model to predict the decision to announce a restatement on the same day as an earnings release, I find that small income-decreasing restatements are more likely than other restatements to be announced on the same day as a positive earnings surprise. External monitoring by the SEC reduces the likelihood of mixing earnings and restatement news.

I also find that firms delay announcements of income-decreasing restatements longer than announcements of income-increasing restatements, and institutional ownership is positively associated with a more prompt restatement disclosure. Logistic regression indicates that firms whose board chair also functions as CEO (a

proxy for weak corporate governance) are only one-fourth as likely as other firms to openly disclose a restatement on an 8-K, but monitoring by the SEC and institutional investors increases the likelihood of a Form 8-K filing. I also document that restatements not disclosed on a Form 8-K are also much less likely to be disclosed in a company-issued press release or in the business press. Finally, I find some evidence that the initial market reaction to obscure restatement announcements is less negative than the reaction to transparent announcements.

This paper extends the prior literature on accounting restatements by providing empirical evidence that the size and direction of a restatement affect firms' restatement disclosure strategies. My results also add to the body of evidence in the literature concerning the influence of external monitoring and corporate governance on disclosure quality. I show that institutional ownership and strong corporate governance are associated with more timely and transparent restatement disclosures. While it appears that many restating firms circumvented the SEC disclosure requirements by failing to file a Form 8-K, firms that did comply with the 8-K filing requirement made significantly more timely disclosures of restatements than firms that restated without an 8-K. The collective evidence in this paper suggests that strategic disclosure incentives can affect the degree of compliance with mandatory reporting requirements.

The rest of the paper is organized as follows: Chapter 2 presents the background and prior research. Chapter 3 describes the sample selection and descriptive statistics. The next chapters present the hypothesis development,

research design, and empirical results for the following topics: packaging restatements with earnings announcements (Chapter 4); delaying income-decreasing restatement announcements (Chapter 5); and obscuring restatement disclosures (Chapter 6). Chapter 7 summarizes and concludes.

Chapter 2: Background and Prior Research

2.1 Background

2.1.1 Prior Research on Disclosure

Existing research on disclosure choice provides insights into how managers may choose to disclose accounting restatements. While information asymmetry and agency conflicts between managers and outside investors drive the demand for external financial reporting, they also provide the opportunity for managers to withhold and strategically disclose bad news (see Healy and Palepu 2001, and Fields *et al*. 2001). Managers face a tradeoff between the costs and the benefits of making disclosures that reveal their superior knowledge about firm prospects. Kothari *et al*. (2005) document patterns of stock-price reactions to good and bad news that are consistent with the idea that managers steadily release good news but withhold bad news until they reach a "bad news threshold" after which it becomes too costly to delay bad news further. The authors suggest that the asymmetric payoff to managers for disclosing good vs. bad news may motivate the systematic delaying of bad news releases. While good news may help ensure continued employment or wealth increases, bad news can lead to abrupt consequences such as termination, even if the

manager is not directly responsible for the problem disclosed. Kothari *et al*. (2005) conclude that managers may attempt to use disclosures as a means of offsetting conservative accounting standards that accelerate the recognition of bad news.

Several additional papers in the academic literature provide potential motivations for managers' attempts to bury restatement news in financial statement footnotes. The "incomplete revelation hypothesis" (IRH) in Bloomfield (2002) predicts that managers will attempt to temporarily boost or maintain stock prices by disclosing bad news in financial statement footnotes because information in the footnotes may be more difficult for some investors to extract. Experimental evidence in the accounting literature has demonstrated that information's prominence or placement in the financial statements can influence the cost of extracting the information or affect the weight investors place on the information (e.g., Hirst and Hopkins 1998 and Maines and McDaniel 2000).

Hirshleifer and Teoh (2003) provide a theoretical framework that describes the financial-reporting implications of the "limited attention" of investors. Since time and attention are costly, the prominence with which information is presented in the financial statements may affect investors' interpretations and perceptions of the information—even for otherwise identical disclosures. Hirshleifer and Teoh explain that the salience of accounting information may also affect users' judgments about causality or the importance of the information, and they give the example of a footnote disclosure as one that some investors may fail to process because of a lack of salience. Collectively, the evidence in these papers supports the idea that

managers may attempt to temporarily delay or limit the negative reaction to an accounting restatement by burying restatement disclosures in financial statement footnotes.

2.1.2 Restatement Disclosure Practices

In practice, firms' choices concerning how and when to publicly disclose restatements have varied widely for many years, but this fact has received only cursory attention in the academic literature. Palmrose *et al*. (2004) note that restatements may be disclosed in a press release, on a Form 8-K filing with the SEC, or by the filing of amended financial statements. Past regulatory indifference to the disparity in disclosure practices is surprising because accounting restatement announcements often result in a significant market reaction. More recently, a number of high-profile accounting scandals and an increasing volume of restatements have resulted in new regulation governing accounting restatement disclosures.[1]

Section 409 of the Sarbanes-Oxley Act of 2002 ("Real Time Issuer Disclosures") requires that public companies disclose "on a rapid and current basis… information concerning material changes in the financial condition or operations of the issuer." The SEC implemented this requirement in the Final Rule on Additional 8-K Disclosure Requirements (effective August 2004). This rule created a new 8-K filing specifically for disclosing restatements that correct errors in previously issued

[1] Glass Lewis & Co (2006, 2007) estimates that average restatement volume in the U.S. between 1997 and 2002 was 220 restatements per year. In 2004, they count 627 restatements, in 2005 they count 1,255 restatements, and in 2006 restatement volume rose to 1,420.

financial statements and shortened the 8-K filing deadline for restatements to within four business days of determining the need to restate. The rule requires firms to alert investors of a forthcoming restatement on an 8-K even if the precise impact of the restatement has not yet been determined. The SEC explained that the new rule would "benefit markets" by providing investors with "better and more timely disclosure of important corporate events."[2]

While the SEC's Final Rule on 8-K Disclosures was intended to bring news of accounting errors to the market in a more timely and transparent way, the regulation has not been entirely effective. Between August 24, 2004, and the end of 2005, more than one-third of restatements by public companies to correct errors in the primary financial statements were performed with no accompanying Item 4.02 Form 8-K filing.[3] Beyond noncompliance with SEC regulation, failure to announce a restatement on an 8-K report is important to investors because most companies that restate without an 8-K report also do not issue a press release or amend the misstated financial statements and the restatement was much less likely to be mentioned in the press. Consequently, outsiders often have no opportunity to learn about obscure

[2] SEC "Final Rule: Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date" (2004).

[3] See Glass, Lewis & Co report "Getting It Wrong the First Time," March 2006. Some managers have attempted to explain the failure to file a 4.02 8-K by advocating that some restatements were "immaterial"; however, only material errors require a restatement in the first place. Furthermore, the SEC's Final Rule on Additional 8-K Disclosures holds that restatements are "unquestionably or presumptively material." (SEC 2004)

restatement disclosures unless they find the disclosure in the footnotes of a regularly scheduled 10-Q or 10-K filing.[4]

2.1.3 Prior Research on Accounting Restatements

A substantial number of papers in the academic literature have investigated the ex ante characteristics of firms that ultimately restate their financial statements. Efendi *et al*. (2007) investigate the factors that led to a large number of accounting restatements following the stock market bubble of the late 1990s. They find that the probability of a misstatement increases dramatically when the CEO holds a large number of "in-the-money" options, and the likelihood of a more severe misstatement also increases with larger amounts of in-the-money options. They also find that CEOs who simultaneously serve as chair of the board of directors ("CEO duality") are more likely to misstate financial statements. These results are consistent with CEO duality impairing the oversight role of the board of directors and with Jensen's (2005) argument that some managers of firms with overvalued equity will take actions—including misstating earnings—to support their stock price.

Burns and Kedia (2006) examine managers' motivations for misstating and find evidence that CEOs whose option portfolios are most sensitive to stock price have the highest probability of misstating earnings. They document that option sensitivity is positively related to aggressive accounting practices that lead to restatements. Abbott *et al.* (2004) investigate 88 annual restatements during the

[4] Glass, Lewis & Co. reported that 14 percent of restatements in 2005 were disclosed only in the footnotes of regular SEC filings, and Audit Analytics reports that 32 percent of restatements in the first half of 2006 were similarly obscurely disclosed (Audit Analytics 2006).

1990s and find that the independence and activity level of the audit committee are significantly negatively related to the occurrence of a restatement. They also find that firms with audit committees that include at least one member with financial expertise are less likely to restate. These results support the idea that the audit committee plays an important role in monitoring the financial reporting process.

Myers *et al.* (2005) investigate the relation between the length of the auditor-client relationship and the likelihood of an accounting restatement, but do not find significant evidence of an association. However, they do find that, among firms restating quarterly financial statements, longer auditor-client relationships are associated with a higher likelihood of income-increasing and core-earnings misstatements. Baber *et al.* (2005) is an example of a paper that fails to find any association between the probability of a restatement and a large group of corporate governance measures. Among several conclusions they draw from their results, the authors suggest that common empirical measures of corporate governance may fail to capture the dimensions of corporate governance that translate most directly into effective governance and monitoring.

Another body of papers in the academic literature has investigated the consequences of accounting restatements. Palmrose *et al.* (2004) examine the determinants of the market reaction to accounting restatement announcements during the period 1995-1999. They document mean abnormal stock market returns of negative 9 percent on restatement announcement dates. Restatements initiated by the external auditor and restatements involving fraud result in significantly more

negative returns. They also find that restatement announcements that fail to quantify the impact of the restatement are associated with a more negative market reaction. Finally, they document non-negative CARs for 29 percent of the restatement announcements in their sample and propose that one explanation for a non-negative market response is that firms may choose to coordinate restatement announcements with an earnings release in order to attenuate or subsume the impact of the restatement.

Gleason *et al.* (2004) document significant stock price declines among non-restating firms in the same industries as restating firms. Their evidence is strongest for non-restating firms with low-quality accounting, as measured by industry-adjusted accruals. They interpret this evidence as consistent with restatements causing an industry-wide increase in information risk. They also suggest that accounting restatements cause investors to reexamine the credibility of previously issued financial data from related non-restating firms. Hirschey *et al.* (2005) examine the long-term effects of restatements on the market value of restating firms and fail to find significant evidence of post-restatement announcement drift in their full sample. However, they do find significant negative drift for restatements involving fraud or decreases in core earnings, and the initial market underreaction is strongest for large firms with the highest pre-restatement profitability.

Srinivasan (2005) documents significant labor market penalties for directors of firms that restate previously overstated earnings. Audit committee members bear the most significant reputational costs for restatements. During the three years

following a restatement, he finds that director turnover for firms that had overstated income before a restatement is 48 percent, compared to 33 percent for a performance-matched sample and 28 percent for a sample of firms that had understated income prior to a restatement. Among firms that overstate earnings, he finds that the likelihood of director departure increases with the severity of the restatement.

Desai *et al*. (2006) investigate management turnover following restatement announcements and find significant penalties for managers of restating firms. Within two years of announcing a restatement, approximately 60 percent of the firms in their sample experience turnover in at least one senior management position. In a control sample, the turnover rate is just 35 percent. Furthermore, Desai *et al*. (2006) document that rehire rates for managers of restating firms are just half that of managers from their control sample.

Following up on the Desai *et al*. (2006) study, Hennes *et al*. (2007) examine the importance of management intent in determining whether restatements result in executive turnover. They predict and find that intentional violations of GAAP are much more likely to result in management turnover than unintentional misstatements. Most of the turnover in their sample occurs between six months before and six months after the restatement announcement. Their findings suggest that boards act quickly to dismiss managers who intentionally mislead investors.

Kravet and Shevlin (2006) investigate the association between restatement announcements and changes in the pricing of a firm-specific information risk factor.

They use accruals quality as a proxy for information risk and show that, relative to the three years prior to a restatement announcement, the market prices information risk more highly during the three years after a restatement. Additionally, they find restatements initiated by auditors result in a larger increase in the pricing of information risk than restatements initiated by management, and they find that firms that restate more than once also experience a greater increase in the pricing of information risk. Finally, they provide evidence consistent with Gleason *et al*. (2004) that the pricing of information risk increases for non-restating firms in the same industries as restating firms.

Finally, several papers have examined the ability of sophisticated investors to anticipate accounting irregularities and adjust their holdings in restatement firms prior to public announcements of earnings restatements. Efendi *et al*. (2005) provide evidence on the ability of short sellers to identify accounting irregularities prior to restatement announcements. In their study, the level of short interest in restating firms increases approximately 18 months prior to the public restatement announcement and is highest in the six months prior to the announcement. Short interest peaks in the month of the restatement announcement. Additionally, consistent with evidence concerning the contagion effect of restatements in Gleason *et al*. (2004), Efendi *et al*. (2005) find that short interest in control firms that are industry- and size-matched with restating firms also increases following a restatement announcement.

Hribar *et al*. (2004) find that transient institutional investors begin to reduce their holdings in restating firms one calendar quarter prior to a restatement announcement. They conclude that the sophistication of institutional investors enables them to detect potential accounting problems and sell off shares of restating companies prior to public announcement of a restatement, but they cannot entirely rule out the possibility that their results may be partially attributable to institutional investors' access to private information from management prior to Reg-FD.

Li and Zhang (2006) show that insiders trade to their advantage around accounting restatement announcements. They find that beginning in quarter t-8 prior to the restatement announcement, insiders begin selling their shares in restating firms and their selling is related to the severity of the restatement. Consistent with insiders' attempts to minimize the probability of allegations of insider trading from regulators, trading in the month immediately before and immediately after a restatement announcement is not related to restatement announcement abnormal returns.

Chapter 3: Sample Selection and Descriptive Statistics

3.1 Sample Selection

My sample of restatement observations comes from an extensive database of accounting restatements created and maintained by Glass, Lewis & Co, LLC, which I

supplement with data I hand collect from SEC filings.[5] The database includes only restatements filed to correct accounting errors and excludes restatements for changes in accounting principle, GAAP-to-GAAP changes, changes in estimates, or minor changes in wording or typographical errors. If a company used multiple filings to correct the same underlying error, the database classifies it as a single restatement observation.

Between the effective date of the Final Rule on 8-K disclosures (August 24, 2004) and December 31, 2005, Glass Lewis identified 1,512 restatements filed by public companies in the U.S. Many of the 1,512 restatements come from very small companies, with 386 (26 percent) of the restatements filed by firms with $10 million or less in total assets. Of the 1,512 restatements, 591 (39 percent) were performed without an Item 4.02 Form 8-K filing. When I combine the Glass Lewis restatement sample with the financial statement data from the Compustat database needed for my empirical tests, the restatement sample is reduced to 823 restatement observations, 204 (25 percent) of which were never disclosed on a Form 8-K filing.

For the entire sample of 823 restatement observations, I hand collect detailed information from SEC filings about the direction and cumulative impact of the restatement on retained earnings. I also perform a comprehensive search of the press release wires, business wires, and business press to determine which restatements are disclosed outside of SEC filings. I obtain institutional ownership data from

[5] During 2005 alone, research analysts at Glass Lewis reviewed nearly 25,000 company filings to track restatement activity (Glass Lewis 2006).

Thomson Financial, corporate governance data from Board Analyst, and compensation data from ExecuComp.[6]

3.2 Descriptive Statistics

Table 1 shows the distribution of the full sample of 823 restatement observations by calendar quarter of the restatement announcement, industry affiliation, restatement category, and stock exchange. Panel A shows that, with the exception of an unusually small number of observations in the third quarter of 2004, the restatement announcement dates are relatively evenly distributed throughout the sample period. Since my sample period begins with the effective date of the Final Rule on 8-K Disclosures in the middle of the third quarter of 2004, restatement observations are smallest for that calendar quarter.

The large increase in restatement volume in the first quarter of 2005 corresponds with a February 2005 letter from the SEC's Chief Accountant, Donald Nicolaisen, that explained the SEC staff's view that many firms had incorrectly applied existing lease accounting rules. In response to the letter, many companies filed restatements in early 2005 to correct errors in lease accounting. Panel A also reveals that the percentage of restatements announced on Form 8-K filings peaked in the first full calendar quarter after the effective date of the SEC's rule on restatement disclosures. Thus restatements disclosed without 8-K filings during my sample

[6] Glass-Lewis did not collect information on the sign or magnitude of the restatement in terms of its impact on retained earnings. See the Appendix for a list of data items taken from Glass-Lewis, Thomson Financial, Compustat, ExecuComp, Board Analyst, and data hand collected from SEC filings.

period do not appear related to a "learning curve" firms experienced before becoming familiar with the new rule.

Panel B breaks the sample into industry categories based on the major divisions of the Standard Industrial Classification (SIC) codes. Professional services firms make up the smallest proportion of the restatement sample (4%), and industrial manufacturing firms represent the largest industry group in the sample (23%).[7] In Panel C, the restatement observations are classified according to the primary error corrected by the restatement.[8] Expense recognition, misclassification, and revenue recognition make up the three largest categories of errors in my restatement sample, representing 31 percent, 16 percent, and 12 percent of the observations, respectively.[9] Finally, Panel D reveals that nearly 90 percent of the restating firms in my sample are listed on either the NASDAQ exchange or the NYSE, and the remaining observations are AMEX or OTC firms.

Table 2 presents descriptive statistics for the primary variables of interest in my full sample. As shown in Panel A, the average restatement in my sample reduced retained earnings by 10 percent (median 1 percent reduction). More than 25 percent of the restatements in my sample reduced retained earnings by at least 5 percent, and another 25 percent of the observations had a non-negative impact on retained earnings. The mean number of misstated periods corrected by the restatements in

[7] To ensure that industry-related effects do not explain restatement disclosure strategy, I use industry-level fixed effects in all regression models, and I cluster standard errors by industry.
[8] Many restatements involve the correction of errors in more than one category. The variable PERVASIVE used later in the regression models corresponds to how many categories the restated errors affected. The categorization of errors is defined by Glass Lewis & Co.
[9] The expense recognition category includes errors related to accounting for leases.

my sample (NUM_YRS) is 2.1 years (median 2.0), and the average number of days between the end of the final period misstated and the initial public disclosure of the restatement (HORIZON) is 245 days (median 164 days).

Average total assets (ASSETS) for the firms in my sample is $3.8 billion (median $431 million), and average market value of equity (MVE) is $2.0 billion (median $345 million). The average restatement involves errors in between one and two (1.6) categories of accounting misstatements (PERVASIVE), the average market-to-book ratio (M/B) of restating firms is 2.76, average financial leverage (LEV) is 0.24, the mean earnings variability measure (EARN_VAR) is 108, and mean ROA is -0.03 (median 0.01).

Tables 3 divides the sample of 823 restatements into those that had a negative impact on retained earnings (516) and those that had a non-negative impact on retained earnings (307). Panel A reveals that misstatements that overstate income are likely to persist for longer periods of time than restatements that understate income (mean 2.21 years compare to 1.80 years). Negative restatements also have a significantly higher mean PERVASIVE score, which represents the number of misstatement categories included in the restatement.

Table 3 Panel B indicates that income-decreasing restatements are more likely to be performed without amending previously issued financial statements and are more likely to be annual restatements instead of restatements of interim or quarterly periods. Income-decreasing restatements are also more likely to correspond with an internal controls weakness disclosure and be related to lease

accounting. Table 4 presents the simple correlations between variables in my sample. These correlations are generally in the predicted direction, and no two independent variables are highly correlated enough to cause concern about multicollinearity in regression models.

In summary, evidence from the descriptive statistics suggests that the restatements in my sample were a result of accounting errors in many different areas of the financial statements and these errors occurred in firms across many different industries. Most accounting errors resulted in an initial overstatement of income, corrected during my sample period with an income-decreasing restatement. Errors that overstated income persisted for longer periods of time than errors that understated income. The next chapters present my hypotheses, research design, and empirical results.

Chapter 4: Packaging Restatement Announcements with Earnings News

4.1 Development of Hypotheses

Managers may be able to affect the market reaction to news of an income-decreasing restatement by strategically "mixing" news of the restatement with earnings news. Lansford (2006) provides empirical evidence that managers strategically coordinate the timing of good and bad news disclosures. He finds that the probability of disclosing good news related to patents in the period immediately before a negative earnings announcement increases in the magnitude of the negative earnings surprise. Additionally, more than one-third of the CFOs surveyed by

Graham *et al*. (2005) agreed with the idea of strategically mixing or "packaging" bad news with other disclosures.

Mixing news of an income-decreasing restatement with a positive earnings surprise may help "offset" the negative market reaction to the restatement. Alternatively, firms may opt for a "big bath" by mixing restatement news with a negative earnings surprise.[10] Collectively, these findings lead to my first hypothesis:

> H1a: Income-decreasing restatements are more likely than neutral or income-increasing restatements to be disclosed on the same day as an earnings announcement.

External monitoring and strong corporate governance may discourage firms from attempting to mitigate the consequences of a restatement by packaging restatement news with earnings news. For example, when an SEC investigation precedes a restatement, a firm may be less likely to publicly announce the restatement on the same day as an earnings announcement because the SEC could conclude that the firm has not complied with the four-day rapid disclosure rule when the initial public announcement occurs on the same day as an earnings announcement. Likewise, an independent audit committee and board chair may be more likely to insist on a rapid, transparent disclosure of a restatement, making it difficult to coordinate the announcement with an earnings release.

Additionally, firms who have recently changed external auditors (AUDIT_SWITCH) may be subject to additional monitoring both by the new audit

[10] Results consistent with "big bath" reporting behavior have been documented, for example, in the case of asset impairments (Riedl 2004, Zucca and Campbell 1992).

firm and by stakeholders or regulators who perceive the auditor switch as a signal of potential accounting problems. Finally, firms with high institutional ownership (INST_OWNERSHIP) are monitored more closely by sophisticated investors, which may reduce the likelihood that firms attempt to attenuate the reaction to a restatement announcement by packaging the announcement with an earnings release. These associations lead to my next hypothesis:

> H1b: External monitoring and strong corporate governance decrease the likelihood that firms disclose a restatement on the same day as an earnings announcement.

4.2 Research Design

I use logistic regression and a multinomial logit model to test Hypotheses 1a and 1b concerning the choice to disclose news of a restatement on the same day as an earnings announcement. Equation 1 shows the form of the regression model.

$$\begin{aligned} EARN\_ANNC_{j,t} = {} & \beta_0 + \beta_1 LARGE\_NEG_{j,t} + \beta_2 SMALL\_NEG_{j,t} + \beta_3 SMALL\_POS_{j,t} + \\ & \beta_4 LARGE\_POS_{j,t} + \beta_5 NUM\_YRS_{j,t} + \beta_6 IC\_WEAK_{j,t} + \\ & B_7 PERVASIVE_{j,t} + \beta_8 SEC_{j,t} + \beta_9 AUDIT\_SWITCH_{j,t} + \\ & \beta_{10} INST\_OWNERSHIP_{j,t} + \beta_{11} CEO\_CHAIR_{j,t} + \beta_{12} AUD\_INDEP_{j,t} + \\ & \beta_{13} LEV_{j,t} + \beta_{14} ROA_{j,t} + \beta_{15} M/B_{j,t} + \beta_{16} EARN\_VAR_{j,t} + \beta_{17} LOGTA_{j,t} \\ & + \varepsilon_{j,t} \end{aligned} \quad (1)$$

The dependent variable, EARN_ANNC, is an indicator variable that equals 1 if the firm announced the restatement on the same day as an earnings announcement,

and 0 otherwise.[11] I place all restatements into one of five buckets: LARGE_NEG, SMALL_NEG, ZERO_IMPACT, SMALL_POS, and LARGE_POS. ZERO_IMPACT are those restatements that had no impact on retained earnings; LARGE_NEG and LARGE_POS are the top and bottom 10 percent of the distribution of restatement impacts on retained earnings; and SMALL_NEG and SMALL_POS are restatements that had a negative or positive impact on retained earnings that was smaller in magnitude than the restatements in the LARGE_NEG and LARGE_POS buckets, respectively.[12]

Since the market reaction to income-decreasing restatements is likely to be more negative than the reaction to zero-impact or income-increasing restatements (Palmrose *et al*. 2004), managers' attempts to strategically package earnings news with restatement announcements should be focused on announcements of income-decreasing restatements. Consequently, I anticipate a significantly positive coefficient on LARGE_NEG and SMALL_NEG, *ceteris paribus*.

I also assess the impact of restatement severity (NUM_YRS, IC_WEAK, PERVASIVE), monitoring (SEC, AUDIT_SWITCH, INST_OWNERSHIP), and governance (CEO_CHAIR, AUD_INDEP) on the decision to mix restatement news and earnings news. NUM_YRS is the number of reporting periods (in years) that

[11] About 26 percent of the 823 restatement observations in my sample were announced on the same day as an earnings announcement.

[12] The distribution of restatement impacts on retained earnings is left skewed. The mean and median impacts are negative, and the third quartile (75th percentile) is zero impact. Results are generally similar using the top and bottom 15% of restatements for the cutoffs for LARGE_NEG and LARGE_POS; however when I use the top and bottom 15% of restatement impacts as the cutoff, there are very few restatements in the SMALL_POS bucket. So I chose the top and bottom 10% of restatements as the cutoffs for LARGE_NEG and LARGE_POS.

were misstated; PERVASIVE is the number of financial-statement categories that were misstated; and IC_WEAK is an indicator variable that represents whether the firm disclosed a material weakness in internal controls in connection with the restatement. Because the impact of severe restatements on stock price should be more severe, firms might be more likely to attempt to package severe restatements with earnings news. However, if firms are trying to "dilute" the negative market reaction to a restatement announcement by mixing the announcement with earnings news, they may anticipate that earnings news will only effectively dilute the impact of a *less* severe restatement. Consequently, I do not make specific predictions for the three restatement severity proxies.

For external monitoring, SEC is an indicator variable signifying the direct involvement of the SEC in the restatement; AUDIT_SWITCH is an indicator variable that represents whether the firm changed external auditors in the year prior to the restatement announcement; and INST_OWNERSHIP is the proportion of the firm's stock that is held by institutional investors. I expect external monitoring by the SEC (SEC), a new external auditor (AUDIT_SWITCH), or institutional investors (INST_OWNERSHIP) to decrease the likelihood of packaging restatement news with earnings news because managers may be wary of attempting to strategically package a restatement disclosure when external monitors are scrutinizing managerial behavior. Managers may perceive that external monitoring could cause the potential costs of strategic reporting to outweigh the benefits.

Two variables represent corporate governance: CEO_CHAIR is an indicator variable that takes a value of 1 if the chair of the board of directors is also the CEO of the firm, and AUD_INDEP represents the proportion of the audit committee that is comprised of directors who are outsiders. Since CEO duality is associated with greater agency problems (Efendi *et al*. 2007 and Core *et al*. 1999), I expect CEO_CHAIR to be positively related to the probability of mixing restatement news with earnings news. AUD_INDEP should be negatively related to decision to mix restatement and earnings news because a more independent audit committee will more effectively monitor firm reporting (Ajinkya *et al*. 2005, Karamanou and Vaefeas 2005).

In Equation 1 and all other models in the paper, my control variables consist of: financial leverage (LEV), operating performance (ROA), growth expectations (M/B), earnings variability (EARN_VAR), and firm size (LOGTA). These variables have been used as control variables in other research investigating strategic disclosure (e.g., Lougee and Marquardt 2004) because each variable may influence firm disclosure behavior. For example, the possibility of violating debt covenants may influence highly levered firms' disclosure behavior; and a desire to sustain recent firm performance, growth expectations, or earnings smoothness could motivate managers' choices about how they disclose a restatement. Similarly, the reporting environment at large firms is likely to differ from the environment at small firms in ways that might influence disclosure choices. Consequently, I include these control variables in each regression model.

4.3 Results for Hypotheses 1a and 1b

Table 5 Panels A, B, and C present the results of logistic regression models that predict the choice to announce an accounting restatement on the same day as an earnings announcement. The results are generally consistent with Hypothesis 1a, but support for Hypothesis 1b is less convincing. In Panels A, B, and C small income-decreasing restatements (SMALL_NEG) are significantly more likely than zero-impact restatements to be packaged with earnings news. Large, income-decreasing restatements, however, are not significantly more likely than zero-impact restatements to be disclosed on the same day as an earnings announcement. This result may indicate that firms believe there is less likelihood that packaging a restatement announcement with an earnings announcement will benefit the firm if the restatement is very large. Firms may also believe that large restatements will attract more attention from investors and the SEC, leading firms to avoid attempting to mix earnings news with news of large restatements.

The odds ratios for SMALL_NEG (1.59, 2.07, and 2.38) indicate that small, negative restatements are more than one-and-a-half times more likely than zero-impact restatements to be mixed with earnings announcements. This evidence is consistent with managers' believing they can either reduce the adverse impact of a negative restatement on their stock price by mixing restatement news with a positive earnings surprise or they believe they can take a "big bath" by mixing restatement news with a negative earnings surprise.

The results in Table 5 Panels A and B also confirm that SEC involvement in a restatement significantly reduces the likelihood that a firm will announce a restatement on the same day as an earnings release. The negative coefficients on SEC lend support to the assertion that packaging restatement news with earnings news is a strategic reporting choice because they indicate that regulator involvement decreases the likelihood of this disclosure behavior. The odds ratios for SEC in Panels A and B (0.40 and 0.34) suggest that firms are less than half as likely to mix restatement and earnings news when the SEC is involved in the restatement. The other monitoring and governance variables (AUDIT_SWITCH, INST_OWNERSHIP, CEO_CHAIR, and AUD_INDEP) fail to load significantly in any of the models in Panels A, B, or C. A recent switch in external auditor, institutional ownership, CEO duality, and the independence of the audit committee do not appear to significantly influence the decision to mix a restatement announcement with earnings news.

In Table 5 Panel D, I analyze whether the *sign* of the earnings surprise influences the decision to package earnings news with restatement news. Using a multinomial logit model, I divide earnings news into three categories: negative, zero, and positive earnings surprises.[13] Restatements that are announced on days with no earnings news provide the base case for comparing the coefficients. The results of this multinomial logit model indicate that the packaging of restatement news with

[13] I proxy for expected earnings using the last consensus (median) analyst forecast of earnings prior to the earnings announcement in the IBES database.

earnings news occurs primarily when firms mix a small income-decreasing restatement with a positive earnings surprise.

This combination is consistent with managers attempting to "offset" the negative market reaction to the restatement announcement with a positive market reaction to a positive earnings surprise. Compared with a zero-impact restatement, small negative restatements (SMALL_NEG) are 2.73 times more likely to be disclosed on the same day as a positive earnings surprise than disclosed on a day with no earnings announcement.[14] None of the other restatement categories (i.e., LARGE_NEG, SMALL_POS, LARGE_POS) is significantly more likely than zero-impact restatements to be disclosed on the same day as a positive earnings surprise. I believe this result provides some of the strongest evidence in this paper that managers attempt to strategically disclose accounting restatements.

Chapter 5: Strategically Delaying Restatement Announcements

5.1 Development of Hypotheses

Conventional wisdom and evidence from the management earnings forecast literature suggests that managers will be motivated to promptly disclose bad news in some settings for at least two reasons: litigation risk may increase if investors perceive a firm excessively delayed releasing bad news (Skinner 1994, Kasznik and

[14] The relative risk ratio (i.e., RRR) in a multinomial logit model is analogous to the odds ratio in logistic regression. In this case, the RRR of 2.73 equals the amount by which the predicted odds that the restatement is announced on a day with a positive earnings surprise (compared with restatement announcements on days with no earnings announcement) are multiplied when the restatement is in the SMALL_NEG category, other things being equal.

Lev 1995, and Field *et al*. 2005); and firms may be able to lower their cost of capital by reducing the information asymmetry faced by investors (e.g., Botosan 1997 and Botosan and Plumlee 2002). However, after managers conclude they must restate previously issued financial statements, career or reputation concerns may motivate managers to delay public disclosure of a restatement (Desai *et al*. 2006, Kothari *et al*. 2005). Managers may wait for the opportunity to coordinate a restatement announcement with other events such as: corporate events like stock option grants that directly affect the wealth of the manager (e.g., Aboody and Kasznik 2000 and Ertimur *et al*. 2006), the announcement of a restatement by an industry peer (Tse and Tucker, 2006), or positive news to mix with the news of the restatement (Lansford 2006).

Evidence that firms strategically time the disclosure of firm-specific information such as earnings releases has also existed in the literature for many years. Patell and Wolfson (1982) investigate the intraday timing of earnings and dividend announcements and find that managers release good news during trading hours but withhold bad news until after trading hours. More recently, DellaVigna and Pollet (2005) show that earnings news released on Fridays is more negative than news released during the week and Bagnoli *et al*. (2006) find that a vast majority of earnings news is now announced outside of trading hours.

Aboody and Kasznik (2000) find that firms strategically time the release of good news and bad news around stock option award dates in order to maximize stock-option compensation, and Ertimur *et al*. (2006) find evidence that managers

issue optimistically biased forecasts and tend to withhold bad news before IPO lockup expirations in order to maximize their personal profit upon selling IPO shares. Finally, in a survey of chief financial officers, Graham *et al.* (2005) report that 66 percent of CFOs agree or strongly agree with the idea of delaying bad news to allow more analysis or interpretation or in hopes that the firm's status will improve before the next required information announcement. Since the stock price reaction to income-decreasing restatements is significantly more negative than the reaction to neutral or income-increasing restatements (Palmrose *et al*. 2004), I expect managers to strategically delay the disclosure of negative restatements incrementally longer than neutral or positive restatements:

> H2a: Firms delay public announcements of income-decreasing restatements longer than announcements of income-increasing restatements.

Several papers in the academic literature have examined the monitoring role of institutional investors with respect to the firms whose stock they hold. Bushee (1998) finds that managers of firms with high institutional ownership are significantly less likely to reduce R&D expenditures to reverse an earnings decline. These results are consistent with the idea that, relative to individual investors, institutional investors are able to monitor and discipline managers and encourage them to maximize long-run value over short-term gains.

Additionally, Hartzell and Starks (2003) find that institutional ownership concentration is positively related to the pay-for-performance sensitivity of executive

compensation and negatively related to the level of compensation. This evidence suggests institutional investors serve a monitoring role and help mitigate the agency problem between shareholders and managers. Ajinkya *et al*. (2005) find that firms with greater institutional ownership are more likely to issue frequent management forecasts that are more accurate and specific. They conclude that monitoring by institutional investors is related to the extent and quality of discretionary information a manager discloses to the market.

Evidence in the accounting literature suggests that strong corporate governance is also associated with increased quality of disclosure. Efendi *et al*. (2007) show that firms whose CEO also serves as chair of the board of directors are more likely to misstate the financial statements, and Core *et al*. (1999) find evidence of greater agency problems when the board chair is also the CEO. Karamanou and Vafeas (2005) find that firms with more effective board and audit committee structures are more likely to issue and update accurate management earnings forecasts and conclude that effective corporate governance is associated with higher financial disclosure quality. Similarly, Ajinkya *et al*. (2005) find that firms with more outside directors issue more frequent and accurate management forecasts.

These papers all provide evidence suggesting a relation between disclosure quality and monitoring by either institutional investors or the board of directors. Agency problems and a firm's information environment will affect both the timeliness and transparency of firm disclosures (Boritz and Liu 2006). My next hypothesis concerns the effect of institutional ownership and board independence on

the timeliness of restatement disclosures, and I deal with disclosure transparency in the following chapter.

> H2b: Firms with high institutional ownership and more independent boards of directors disclose restatement news more promptly than other firms.

5.2 Research Design

I use duration analysis to test Hypotheses 2a and 2b concerning the impact of restatement direction, institutional ownership, and corporate governance on the timeliness of restatement announcements. Duration or survival analysis has become an increasingly common statistical method in the economic literature for analyzing duration data such as CEO tenure or the length of an unemployment spell (Kiefer 1988). This research design is well suited for testing my hypotheses because I am investigating the length of time that elapses between the end of the final period misstatement and the initial public disclosure of the restatement. Duration analysis estimates the conditional probability of an event (i.e., the restatement announcement) taking place at time $t + \delta$, given that the event has not yet taken place in time t. For example, the hazard model in this paper estimates the probability that a restatement will be announced 120 days after the end of the last period misstated, given that no announcement has been made by the 119^{th} day. The results of the model are analogous to an "instantaneous rate of change" in restatement announcement probability.

One commonly used method of duration analysis that examines the effects of multiple continuous or categorical predictors is a Cox proportional hazard model. The hazard rate at time *t* is defined as:

$$h(t) = \frac{probability\ of\ \ failing\ between\ times\ t\ and\ t+\delta}{(\delta)\,(probability\ of\ \ failing\ after\ time\ t)}$$

I define the hazard rate as a function of the baseline hazard (h_0) at time *t* and the effects of the following explanatory variables in Equation 2:

$$\begin{aligned} h(t) = h_0(t)\ \exp(&\beta_1\ LARGE\_NEG_{j,t} + \beta_2\ SMALL\_NEG_{j,t} + \\ &\beta_3\ SMALL\_POS_{j,t} + \beta_4\ LARGE\_POS_{j,t} + \beta_5\ NUM\_YRS_{j,t} + \\ &\beta_6\ IC\_WEAK_{j,t} + \beta_7\ PERVASIVE_{j,t} + \beta_8\ LEASES_{j,t} + \beta_9\ OBSCURE\_1_{j,t} + \\ &\beta_{10}\ OBSCURE\_2_{j,t} + \beta_{11}\ SEC_{j,t} + \beta_{12}\ INST\_OWNERSHIP_{j,t} + \\ &\beta_{13}\ CEO\_CHAIR_{j,t} + \beta_{14}\ AUD\_INDEP_{j,t} + \beta_{15}\ LEV_{j,t} + \beta_{16}\ ROA_{j,t} + \\ &\beta_{17}\ M/B_{j,t} + \beta_{18}\ EARN\_VAR_{j,t} + \beta_{19}\ LOGTA_{j,t}). \end{aligned} \tag{2}$$

The Cox regression method uses nonparametric estimation to obtain maximum likelihood estimates of the β parameters in the model. An advantage of this method is its insensitivity to the specification of a functional form for the baseline hazard.[15] The βs in Equation 2 represent the regression coefficients that are commonly exponentiated to create hazard ratios with a more intuitive interpretation. A negative sign on the coefficient estimate indicates a lower hazard rate, and a positive sign indicates a higher hazard rate. The hazard ratios created from the coefficient estimates indicate the incremental change in the hazard rate relative to a baseline hazard rate. The hazard model in Equation 2 is derived from the HORIZON

[15] Specification tests are necessary to assure the appropriateness of a proportional hazards model. "Log-log" plots and Kaplan-Meier plots suggest a proportional hazards model is appropriate for this data. (Stata Press 2005)

variable, which measures the number of days that elapse between the end of the final period misstated and the date firm initially publicly discloses the restatement.[16]

One of the primary objectives of the SEC's new rule on 8-K disclosures is to require firms to publicly alert investors of a pending restatement more rapidly than in the past. Because managers expect a negative market reaction to income-decreasing restatements, I predict that negative restatements (LARGE_NEG and SMALL_NEG) will have longer restatement horizons than the other restatement categories. In addition, if obscure restatement disclosures are less timely than transparent restatement disclosures, then the coefficients on OBSCURE_1 and OBSCURE_2 will also be negative. OBSCURE_1 represents restatements that were disclosed only in the footnotes of regularly scheduled financial statements (i.e., the most obscure way to disclose a restatement in SEC filings). OBSCURE_2 represents restatements disclosed with amended financial statements but without an 8-K filing (i.e., the second most obscure way to disclose a restatement in SEC filings).

I expect the monitoring variables SEC and INST_OWNERSHIP to be positively related to the hazard rate because outside monitoring should lead managers to disclose restatements more promptly. I also expect AUD_INDEP to be positively related to the hazard rate since a more independent audit committee should result in more timely disclosure practices in accordance with the prompt disclosure requirements of the SEC rule. CEO_CHAIR should be negatively related to the

[16] The initial public disclosure of the restatement may take the form of a press release, an 8-K filing, an amended 10-K or 10-Q filing, or a note in a regularly scheduled 10-K or 10-Q filing.

hazard rate because CEO duality has been shown to negatively impact the monitoring role of the board of directors (Efendi *et al*. 2007, Core *et al*. 1999).

5.3 Results for Hypotheses 2a and 2b

Table 6 Panels A and B present the results of estimating two Cox proportional hazard models to assess the effect of the sign of the restatement and external monitoring and governance on the timeliness of restatement announcements. The results are mixed with respect to my predictions in Hypotheses 2a and 2b. In Panel A, which uses all 823 restatement observations, the results reveal that disclosure transparency is significantly related to the restatement horizon: the least transparent restatement announcements (OBSCURE_1 and OBSCURE_2) are delayed longer than the more transparent restatement announcements. The hazard ratios of 0.35 for OBSCURE_1 and 0.51 for OBSCURE_2 indicate that, conditional on not having been announced at time *t*, obscure restatement announcements are only 35 or 51 percent as likely as the most transparent announcements to be disclosed at time $t + \delta$. However, neither the sign of the restatement nor the monitoring variable (SEC) is significantly related to restatement announcement timeliness.

The results of the second Cox proportional hazard model in Panel B are more consistent with Hypotheses 2a and 2b. Because of data restrictions, this model uses 249 restatement observations.[17] In this model, announcements of the largest income-decreasing restatements (LARGE_NEG) are delayed the longest of all restatements as indicated by the hazard ratio of 0.42. Announcements of smaller income-

[17] The smaller sample of restatements is more heavily weighted toward large, stable companies because the Board Analyst database is comprised primarily of larger companies.

decreasing restatements (SMALL_NEG) are also significantly delayed relative to zero-impact restatements (hazard ratio of 0.64). The 0.42 hazard ratio on LARGE_NEG means that conditional on not having been disclosed by time *t*, a large negative restatement is only 42 percent as likely as a zero-impact restatement to be disclosed at time $t + \delta$. These results are consistent with Hypothesis 2a that managers will strategically delay the announcement of income-decreasing restatements.

The model in Panel B also reveals that institutional ownership is positively related to more timely announcements of restatements (hazard ratio of 1.46), but the governance variables are not significantly related to the restatement horizon. Once again, the most obscure restatement disclosures (OBSCURE_1 and OBSCURE_2) are also the least timely in this model, with hazard ratios of 0.34 and 0.46 respectively. One of the purposes of the SEC's Final Rule on Form 8-K Disclosures was to uniformly improve the timeliness of restatement announcements, but these results suggest that the magnitude and direction of the restatement together with monitoring by institutional investors all influence the timeliness of restatement announcements. Since firms delay announcements of income-decreasing restatements longer than announcements of other restatements, this behavior is consistent with strategic reporting of accounting restatements.

In Table 6 Panels C and D, I rerun the same hazard models from Panels A and B, this time using a Weibull distribution for the hazard function as a robustness check on the results from Panels A and B. The Weibull distribution is commonly

used in hazard functions that analyze economic events (Kiefer 1988). Unlike the Cox proportional hazard model, this parametric method of duration analysis specifies the functional form of the hazard function (i.e., the Weibull distribution). The results in Panels C and D are qualitatively very similar to the results in Panels A and B. As with the Cox proportional hazard model, the Weibull model reveals that firms delay the disclosure of income-decreasing restatements (LARGE_NEG and SMALL_NEG) longer than disclosures of income-increasing or zero-impact restatements.

The Weibull model also demonstrates that announcements of obscure restatements (OBSCURE_1 and OBSCURE_2) are delayed longer than announcements of transparent restatements. The primary difference is that the results of the Cox model showed that institutional ownership was positively related to a more timely restatement disclosure, but INST_OWNERSHIP is not statistically significant in the hazard model that uses the Weibull distribution. Since the results of the Weibull model are misspecified unless survival times actually follow a Weibull distribution, the results of the Cox proportional hazard model are more useful in this case.

Chapter 6: Transparency of Restatement Disclosures

6.1 Development of Hypotheses

If sophisticated investors are more likely to monitor financial statement footnotes or if they are more likely to use valuation models to process the economic

implications of a restatement irrespective of the form of the disclosure, then managers of firms monitored by institutional investors should be less likely to attempt to obscure bad news by burying it in financial statement footnotes. Alternatively, firms held by institutional investors may try to please institutions by providing more timely or transparent disclosures, or institutional investors may initially choose to invest in firms that they determine provide high quality disclosures. Firms whose restatements involve the SEC directly should also be more likely to comply with the SEC rule to disclose news of a restatement on an 8-K filing. This leads to the following hypothesis concerning the effect of institutional ownership and SEC monitoring on restatement disclosure choice:

> H3a: Firms monitored by institutional investors or the SEC are more likely to openly disclose news of a restatement on a Form 8-K filing.

Consistent with the evidence discussed above concerning the impact of corporate governance on disclosure quality, I expect board structure and independence to affect the choice to alert investors and regulators of a restatement with a Form 8-K filing. Firms with more independent boards should be more likely to disclose restatement news on a Form 8-K.

> H3b: Firms with a board chair who is not the CEO and firms with a higher proportion of outsiders on the audit committee are more likely to openly disclose a restatement with an 8-K filing.

Efendi *et al*. (2007) and Burns and Kedia (2006) provide evidence that the sensitivity of a CEO's personal wealth to his or her firm's stock price may encourage

misreporting that benefits the CEO at the expense of long-term shareholder value. If managers or directors believe that obscure restatement disclosures may temporarily delay the market reaction to restatement news, they may try to hide restatement news to benefit their personal wealth. I thus expect CEO and director stock holdings to impact restatement disclosure strategy as follows:

> H3c: The amount of stock held by the CEO and the board of directors is negatively related to the probability of openly announcing a restatement on a Form 8-K filing.

Since there was no requirement to disclose a restatement on a Form 8-K prior to the new SEC rule, it does not follow that good corporate governance or external monitoring by regulators or institutional investors would make disclosing a restatement on a Form 8-K more likely in the pre-rule period. Prior to the rule, I should not find evidence that the 8-K decision is related to corporate governance or external monitoring.

> H3d: Prior to the SEC rule mandating a Form 8-K filing for restatements, the decision to announce a restatement on a Form 8-K is unrelated to corporate governance or external monitoring.

If firms that restate without a Form 8-K filing are attempting to obscure or bury news of their restatements, then I should observe an absence of a company-issued press release concerning the restatement whenever an 8-K is not filed. Additionally, if failing to alert the market of a restatement with a Form 8-K filing actually helps conceal news of a restatement, I should fail to find discussion of the

restatement in other media sources when an 8-K is not filed. For example, Dow Jones News Services monitors 8-K filings and issues a "corporate filing alert" on the business wires when a restatement is disclosed on a Form 8-K filing. Other newspapers and magazines in the business press, including *The Wall Street Journal*, frequently highlight companies who restate their previously issued financial statements. Consequently, I expect to find less discussion of restatements outside of SEC filings when the restatement is performed without 8-K filings:

> H3e: Restatements performed without an accompanying 8-K filing are less likely to be disclosed in a press release or mentioned in the business press.

According to the theoretical arguments presented above in Bloomfield (2002) and Hirschleifer and Teoh (2003), restatements disclosed obscurely in the footnotes of regularly scheduled SEC filings may result in less of an initial market reaction because the news is more difficult to uncover. By contrast, restatements announced on Form 8-K filings are more transparent and more timely; thus, the market should react more strongly to those restatement announcements.

> H3f: Restatements performed without an accompanying 8-K filing are characterized by a smaller initial market reaction to the restatement news.

6.2 Research Design

The logit model in Equation 3 tests Hypotheses 3a, 3b, and 3c:

$$\begin{aligned} FILED\_8K_{j,t} = {} & \beta_0 + \beta_1 LARGE\_NEG_{j,t} + \beta_2 SMALL\_NEG_{j,t} + \beta_3 SMALL\_POS_{j,t} + \\ & \beta_4 LARGE\_POS_{j,t} + \beta_5 NUM\_YRS_{j,t} + \beta_6 IC\_WEAK_{j,t} + \\ & \beta_7 PERVASIVE_{j,t} + \beta_8 LEASES_{j,t} + \beta_9 HORIZON_{j,t} + \\ & \beta_{10} NO\_AMEND_{j,t} + \beta_{11} SEC_{j,t} + \beta_{12} INST\_OWNERSHIP_{j,t} + \\ & \beta_{13} CEO\_CHAIR_{j,t} + \beta_{14} AUD\_INDEP_{j,t} + \beta_{15} BOARD\_SHARES_{j,t} + \\ & \beta_{16} CEO\_SHARES_{j,t} + \beta_{17} LEV_{j,t} + \beta_{18} ROA_{j,t} + \beta_{19} M/B_{j,t} + \\ & \beta_{20} EARN\_VAR_{j,t} + \beta_{21} LOGTA_{j,t} + \varepsilon_{j,t} \end{aligned} \quad (3)$$

The dependent variable (FILED_8K) in Equation 3 is an indicator variable that equals 1 if the restatement was disclosed on a Form 8-K, and 0 otherwise. Since all restatements in this sample correct accounting errors in the primary financial statements and are announced after the effective date of the SEC's Final Rule on Additional 8-K Disclosures, each restatement should have been disclosed on an 8-K filing. The new SEC rule makes clear that managers cannot argue that a misstatement was material enough to require a restatement yet immaterial enough to avoid the need to alert investors to the restatement with a Form 8-K filing.

Several variables in Equation 3 capture the severity or materiality of the restatement: NUM_YRS, the number of periods corrected by the restatement; PERVASIVE, the number of financial statement categories that were misstated; and IC_WEAK, an indicator variable that represents whether the firm disclosed a material weakness in internal controls in connection with the restatement. All else equal, these proxies for restatement materiality should be positively related to the decision to disclose the restatement on an 8-K because failure to properly alert

investors of a more material restatement is more likely to attract the scrutiny of investors and regulators.

Since a large number of firms were required to restate due to errors in lease accounting in 2005, managers likely believed that the potential costs of obscuring a restatement disclosure related to lease accounting outweighed the benefits. However, since managers may have believed lease-related restatements were benign, managers may have feared that investors had a greater chance of negatively misinterpreting these restatements, so I make no specific prediction for lease-related restatements (LEASES).

I expect HORIZON to be negatively related to the choice to disclose a restatement on a Form 8-K because managers may have believed restatements correcting periods further back in time were less material or less relevant to investors. Alternatively, restatement announcements that have been strategically delayed (i.e., have a long restatement horizon) may also be strategically obscured by managers who restate without an 8-K filing. I expect the decision to restate openly on a Form 8-K to be positively related to the decision to file amended financial statements with the SEC, so the variable NO_AMEND (i.e., the absence of an amended filing) is expected to have a negative coefficient. Amended filings are a transparent means of indicating nonreliance on past filings due to the correction of prior errors, and companies that restate transparently will use both an 8-K filing and an amended 10-K/A or 10-Q/A filing.

I expect both variables representing external monitoring (SEC, INST_OWNERSHIP) to be positively related to the decision to announce the restatement on an 8-K filing. Institutional investors are sophisticated users of financial information and are likely to search SEC filings for "current events" disclosed on 8-K filings. I expect CEO_CHAIR to be negatively related to the choice to file an 8-K and AUD_INDEP to be positively related to announcing a restatement on an 8-K. CEO_CHAIR is an indicator variable that equals 1 if the chair of the restating company's board of directors is also the CEO, a proxy for weak corporate governance or the influence of the CEO on the board of directors, and 0 otherwise; and AUD_INDEP is the proportion of the company's audit committee that is comprised of independent outsiders.

The compensation variables (BOARD_SHARES and CEO_SHARES) represent a connection between the personal wealth of directors or CEOs and the company stock price. I expect both compensation variables to be negatively related to the choice to openly disclose the restatement on a Form 8-K, consistent with evidence in Efendi *et al*. (2007) and Burns and Kedia (2006) that wealth sensitivity to stock price may induce misreporting by managers.

In Equation 4, I use a logit model to examine the determinants of the choice to disclose a restatement on a Form 8-K *prior to* the SEC rule that mandated 8-K filings for restatements. The sample of restatements used to test Hypothesis 3d in Equation 4 consists of 112 restatements announced between January 1, 2003, and the effective date of the SEC rule, August 24, 2004.

$$\begin{aligned} FILED\_8K_{j,t} = {} & \beta_0 + \beta_1 NEG\_IMPACT_{j,t} + \beta_2 POS\_IMPACT_{j,t} + \beta_3 NUM\_YRS_{j,t} + \\ & \beta_4 IC\_WEAK_{j,t} + \beta_5 PERVASIVE_{j,t} + \beta_6 LEASES_{j,t} + \beta_7 HORIZON_{j,t} + \\ & \beta_8 NO\_AMEND_{j,t} + \beta_9 SEC_{j,t} + \beta_{10} INST\_OWNERSHIP_{j,t} + \\ & \beta_{11} CEO\_CHAIR_{j,t} + \beta_{12} AUD\_INDEP_{j,t} + \beta_{13} LEV_{j,t} + \beta_{14} ROA_{j,t} + \\ & \beta_{15} M/B_{j,t} + \beta_{16} EARN\_VAR_{j,t} + \beta_{17} LOGTA_{j,t} + \varepsilon_{j,t} \end{aligned} \quad (4)$$

The dependent variable in Equation 4 (FILED_8K) is the same as in Equation 3. In Equation 4, however, since the number of restatements is smaller than the post-SEC rule sample, I divide the restatements into only three categories: positive, negative, and zero-impact. The primary expectation for Equation 4 is that because 8-K filings were not required for restatements prior to August 2004, I do not expect the monitoring variables (SEC, INST_OWNERSHIP, CEO_CHAIR, and AUD_INDEP) to be significantly related to the decision to file an 8-K.

The logistic regression model in Equation 5 tests the association between several restatement attributes—including the failure to disclose the restatement on an 8-K filing—and the existence of a company-issued press release or other media coverage of the restatement:

$$\begin{aligned} NO\_PRESS_{j,t} = {} & \beta_0 + \beta_1 LARGE\_NEG_{j,t} + \beta_2 SMALL\_NEG_{j,t} + \beta_3 SMALL\_POS_{j,t} + \\ & \beta_4 LARGE\_POS_{j,t} + \beta_5 NUM\_YRS_{j,t} + \beta_6 IC\_WEAK_{j,t} + \beta_7 PERVASIVE_{j,t} \\ & + \beta_8 LEASES_{j,t} + \beta_9 HORIZON_{j,t} + \beta_{10} OBSCURE\_1_{j,t} \\ & + \beta_{11} OBSCURE\_2_{j,t} + \beta_{12} SEC_{j,t} + \beta_{13} INST\_OWNERSHIP_{j,t} + \beta_{13} \\ & CEO\_CHAIR_{j,t} + \beta_{14} AUD\_INDEP_{j,t} + \beta_{15} BOARD\_SHARES_{j,t} + \beta_{16} \\ & CEO\_SHARES_{j,t} + \beta_{17} LEV_{j,t} + \beta_{18} ROA_{j,t} + \beta_{19} M/B_{j,t} + \beta_{20} EARN\_VAR_{j,t} \\ & + \beta_{21} LOGTA_{j,t} + \varepsilon_{j,t} \end{aligned} \quad (5)$$

In Equation 5, the dependent variable (NO_PRESS) is an indicator variable that equals 1 if a search of company-issued press releases, and archives of news

wires and the business press failed to turn up any reference to the restatement.[18] Once again, my expectation is that the failure to disclose the restatement on a Form 8-K will be positively related to the absence of a press release or media mention of the restatement. In other words, restatements that are difficult to find within SEC filings should also be difficult to find outside SEC filings.

Two indicator variables in Equation 5 represent the transparency of the restatement disclosure within SEC filings: OBSCURE_1 and OBSCURE_2. OBSCURE_1 represents restatements that were disclosed only in the footnotes of regularly scheduled financial statements (i.e., the most obscure way to disclose a restatement in SEC filings). OBSCURE_2 represents restatements disclosed with amended financial statements but without an 8-K filing (i.e., the second most obscure way to disclose a restatement in SEC filings).

Finally, the OLS regression model in Equation 6 investigates the determinants of the initial market reaction to restatement announcements.

$$\begin{aligned} RET_{j,t} = {} & \beta_0 + \beta_1 LARGE\_NEG_{j,t} + \beta_2 SMALL\_NEG_{j,t} + \beta_3 SMALL\_POS_{j,t} + \\ & \beta_4 LARGE\_POS_{j,t} + \beta_5 NUM\_YRS_{j,t} + \beta_6 IC\_WEAK_{j,t} + \beta_7 LEASES_{j,t} + \\ & \beta_8 PERVASIVE_{j,t} + \beta_9 HORIZON_{j,t} + \beta_{10} OBSCURE\_1_{j,t} + \\ & \beta_{11} OBSCURE\_2_{j,t} + \beta_{12} SEC_{j,t} + \beta_{13} INST\_OWNERSHIP_{j,t} + \\ & \beta_{14} LEV_{j,t} + \beta_{15} ROA_{j,t} + \beta_{16} M/B_{j,t} + \beta_{17} EARN\_VAR_{j,t} + \beta_{18} LOGTA_{j,t} + \\ & \varepsilon_{j,t} \end{aligned} \tag{6}$$

The dependent variable in Equation 6 represents the size-adjusted buy-and-hold abnormal returns surrounding the day of the initial public announcement of the

[18] See the Appendix for a more detailed discussion of the process used to search for coverage of the restatements outside SEC filings.

restatement. The returns are cumulated over a (-2, 2) day window around the announcement.[19] I expect the coefficients on LARGE_NEG and SMALL_NEG to be negative, since the market usually reacts negatively to an announcement that income was previously overstated (Palmrose *et al*. 2004). The magnitude of the coefficient on LARGE_NEG should also be larger than the coefficient on SMALL_NEG. I do not make a prediction for the coefficients on SMALL_POS and LARGE_POS because other researchers have shown the market reaction to income-increasing restatements is not significantly different from zero (Callen *et al*. 2006).

Restatements that are disclosed obscurely may result in a smaller or less-negative initial market reaction because they are more difficult for investors to identify. Additionally, prior evidence in this paper suggests that obscure restatement disclosures are often less timely than transparent disclosures. Thus, I predict positive coefficients for both OBSCURE_1 and OBSCURE_2. I expect SEC involvement in a restatement to indicate a more severe restatement, so I predict a negative coefficient on SEC. However, it is unclear how institutional ownership will affect the initial reaction to a restatement announcement; so I do not make a prediction for the coefficient on INST_OWNERSHIP. The next section discusses the results of each hypothesis test.

6.3 Results for Hypotheses H3a – H3f

Table 7 presents the results of several univariate tests of the differences between restatements disclosed with or without a Form 8-K filing. Table 7 Panel A

[19] Similarly, Hribar et al. (2004) use a (-2, 2) window to analyze the short-term market reaction to restatement announcements.

divides the sample based on the decision to restate with or without a Form 8-K filing and compares the means and medians of key variables in the two samples. Panel A shows that 75 percent (619 of 823) of the restatements in my main sample were disclosed on an Item 4.02 Form 8-K. Restatements disclosed on a Form 8-K filing have a significantly more negative impact on retained earnings (IMPACT_RE) than restatements disclosed without an 8-K (mean impact of -11 percent compared to mean impact of -6 percent), and restatement disclosed on an 8-K also correct longer periods (NUM_YRS) of misstatements (mean of 2.16 years compared to mean of 1.74 years). These results indicate that firms were more likely to disclose a restatement on a Form 8-K if the restatement had a large, negative impact on retained earnings and the misstatement persisted for long periods of time.

Tests of HORIZON reveal that restatements disclosed on a Form 8-K filing are announced significantly closer to the last period misstated (median of 151 days compared to median of 397 days), and tests of PERVASIVE indicate that restatements disclosed on an 8-K affect a significantly higher number of categories of accounting errors. The mean and median tests find no significant differences across the 8-K and no 8-K samples for market value of equity (MVE), total assets (ASSETS), earnings variability (EARN_VAR), market-to-book ratio (M/B), return on assets (ROA), and financial leverage (LEV).[20]

[20] The failure to find a significant difference in the size (ASSETS or MVE) of firms that restate with or without a Form 8-K alleviates concerns about the no 8-K sample being disproportionately comprised of small firms that may not understand SEC reporting requirements as well as large firms.

Panel B compares the distribution of categorical variables between the 8-K and no 8-K samples. Restatements filed with an 8-K filing were more likely to have a negative impact on retained earnings (67 percent compared to 50 percent), and restatements disclosed without an 8-K filing were also more likely to be performed without amended financial statements (58 percent compared to 41 percent). This latter result suggests that 8-K filings and amended financial statements complement each other instead of being substitutes for each other. In other words, firms that desire to transparently disclose a restatement will use both amended financial statements and an 8-K filing; but firms wishing to obscure the disclosure will use neither.

Disclosures of a material weakness in internal controls (IC_WEAK) were significantly more likely for restatements that occurred with an 8-K filing (73 percent compared to 36 percent).[21] Restatements disclosed on an 8-K were also significantly more likely to be related to lease accounting (LEASES), but there is no significant difference in the proportion of restatements that correct annual periods (i.e., as opposed to only interim periods) or the proportion of restatements that directly involved the SEC. Panel C of Table 7 compares the industry composition of the two samples. While there is a marginally significant difference in the overall industry composition of the two samples, tests of the proportion of each sample from

[21] Although the descriptive results indicate that restatements disclosed without an 8-K filing have significantly lower measures of restatement pervasiveness and significantly lower incidences of a disclosure of a material weakness in internal controls, these measures alone do not determine the necessity of an 8-K filing. The Final Rule on 8-K Disclosures requires an 8-K filing for *all* restatements that correct accounting errors in the primary financial statements.

each industry group failed to find any significant differences for any of the industry groupings. Restatement disclosure strategy does not appear to be driven by industry-specific trends for disclosing restatements with or without a Form 8-K.

In summary, the univariate statistics in Table 7 indicate that the severity of the restatement is positively related to the decision to alert investors to a restatement with a Form 8-K filing. Large restatements, restatements connected to a disclosure of a material weakness in internal controls, and restatements that negatively affected retained earnings are all more likely to be disclosed on a Form 8-K filing. Descriptive evidence also indicates that restatements disclosed on an 8-K are announced significantly closer to the last period misstated, consistent with a more timely disclosure. However, firm size, industry affiliation, leverage, recent accounting performance, growth expectations, and earnings variability are not significantly different across the samples of firms that restate with or without an 8-K filing. The next set of analyses examine these relations in a more conclusive multivariate setting.

The results in Table 8 Panels A, B, and C provide mixed support for Hypotheses 3a and 3b concerning the impact of monitoring and governance on restatement disclosure strategy, but they do not support Hypothesis 3c concerning the impact of compensation on disclosure strategy. In Panel A, which includes the full sample of 823 restatement observations, SEC monitoring is not significantly related to the choice to disclose the restatement on a Form 8-K filing. The significantly positive coefficients on LARGE_NEG, SMALL_NEG, and

LARGE_POS indicate that, all else equal, small income-increasing restatements are the least likely to be announced on a Form 8-K filing. This result may indicate that firms believe small income-increasing restatements are less material to investors than the other types of restatements.

Restatements that impact more periods (NUM_YRS) or are connected with a disclosure of a material weakness in internal controls (IC_WEAK) are more likely to be disclosed on an 8-K, but restatements performed with no amended filings (NO_AMEND) are less than half as likely as restatements that include amended financial statements to be disclosed on a Form 8-K. The negative relation between NO_AMEND and FILED_8K confirms that beyond choosing not to file an 8-K, most companies that do not announce a restatement on an 8-K eventually disclose the restatement only in the footnotes of regular SEC filings without filing amended financial statements. HORIZON is negatively related to the probability of alerting investors of a restatement with a Form 8-K filing, indicating that firms were less likely to file an 8-K for restatements that corrected periods further back in time.

Data requirements for the second and third logit models in Table 8 Panels B and C reduce the number of observations used in each test.[22] In the second model, monitoring by the SEC or institutional investors is positively related to the probability of disclosing a restatement on a Form 8-K. Additionally, as hypothesized, CEO duality (i.e., the CEO functions as both chair of the board of

[22] Data on CEO duality (CEO_CHAIR) and audit committee independence (AUD_INDEP) was gathered from the Board Analyst database, which covers approximately 2000 of the largest public companies. Data on the shares held by CEOs and audit committee members comes from ExecuComp, which covers substantially fewer firms than the Compustat Annual database.

directors and CEO) is negatively related to the decision to openly disclose a restatement on a Form 8-K. The odds ratio on CEO_CHAIR (0.25) indicates that these firms are only one-fourth as likely to disclose a restatement on an 8-K as firms that have separate CEOs and board chairs. The proportion of the audit committee that is comprised of outsiders (AUD_INDEP) is not significantly related to the decision to disclose a restatement on a Form 8-K.

In the third logit model in Panel C, the signs on SEC, INST_OWNERSHIP, and CEO_CHAIR are the same as in the second model, but INST_OWNERSHIP is not statistically significant in this model. This model also finds no support for Hypothesis 3c: there is not a significant association between BOARD_SHARES or CEO_SHARES and the decision to announce a restatement on a Form 8-K filing. Although other papers have found significant results for the impact of CEO wealth sensitivity on other forms of misreporting, this effect does not appear to significantly influence the way firms disclose a restatement in my sample.[23]

The logistic regression model in Table 8 Panel D examines the determinants of 8-K filings for 112 restatements announced prior to the new SEC rule. Prior to the new SEC rule, an 8-K filing was not required for restatements, but firms could choose to disclose restatements on an 8-K. In Panel D, the results show that prior to the SEC rule, income-decreasing restatements (NEG_IMPACT), income-increasing restatements (POS_IMPACT), and restatements covering longer periods of time

[23] Based on evidence in Efendi et al. (2007) and Burns and Kedia (2006), I also tested the association between the number and value of CEO "in-the-money" options and the choice to disclose a restatement on a Form 8-K filing. I did not find a significant relation between options and disclosure choice.

(NUM_YRS) were all more likely than their counterparts to be disclosed on a Form 8-K. Restatements related to lease accounting were also less likely to be reported on a Form 8-K.

Importantly, none of the external monitoring or corporate governance variables in this model is significant, suggesting that prior to the SEC rule, the filing of an 8-K for restatements was not necessarily the result of good corporate governance or monitoring by outsiders. Firms may have used simple rules of thumb concerning the impact of the restatement on earnings to determine whether a restatement warranted an 8-K filing. The results in Panel D are generally consistent with Hypothesis 3d.

The results of the logistic regression model in Table 9 are consistent with Hypothesis 3e. These results indicate that restatements disclosed obscurely within SEC filings are much less likely to be disclosed or discussed outside of SEC filings. Specifically, restatements disclosed in only the footnotes of regularly scheduled SEC filings (OBSCURE_1) were 11 times more likely than restatements disclosed on an 8-K filing to have no accompanying press release or media mention. Restatements performed with amended financial statements but no 8-K filing were also more than five times as likely to receive no mention outside the SEC filings as restatements disclosed with an 8-K filing. This result provides strong evidence of a potential motivation for failing to disclose a restatement on a Form 8-K: a desire to keep news of the restatement out of the media. This finding is also further evidence that

choosing not to alert investors or regulators of a restatement on a Form 8-K filing is a strategic reporting decision.

Additional results in Table 9 indicate that restatements with a negative impact on retained earnings (LARGE_NEG, SMALL_NEG) and restatements with a large positive impact on earnings (LARGE_POS) are more likely than zero-impact restatements and small positive restatements to be disclosed outside SEC filings. A longer period of misstatement (NUM_YRS), and a related disclosure of a material weakness in internal controls (IC_WEAK) also increase the probability that a restatement will be disclosed in a press release or receive media coverage. A longer restatement horizon (HORIZON), however, decreases the likelihood that a restatement is mentioned in the media. Overall, the results in Table 9 confirm that the level of transparency with which a restatement is disclosed within SEC filings is highly related to the probability that a restatement is disclosed outside SEC filings in a company-issued press release or other form of media coverage.

Finally, Table 10 presents the results of an OLS regression model that analyzes the size-adjusted buy-and-hold abnormal returns in a five-day window surrounding the initial public announcement of a restatement. In Hypothesis 3f, I predict that restatements disclosed obscurely will result in a smaller initial market reaction because they are more difficult for investors to identify. The results in Table 10 provide only weak support for this hypothesis. The coefficient on OBSCURE_1 is not significantly different from zero, but the coefficient on OBSCURE_2 is marginally significantly positive. This result provides some support

for the idea that obscure restatements receive a less negative initial reaction than restatements disclosed openly on a Form 8-K filing.

These results may also indicate that, because markets are efficient, the differences in restatement disclosure transparency I investigate are not significant enough to impact the market reaction to restatement announcements. As expected, the results in Table 10 also indicate that the market reaction to restatement announcements is most negative for large negative restatements (LARGE_NEG), followed by small negative restatements (SMALL_NEG). Restatements related to lease accounting also received a less negative market reaction than other restatements.

Chapter 7: Summary and Conclusion

This paper provides new evidence concerning the strategic choices firms make when disclosing accounting restatements. Restatements in my sample correct accounting errors in previously issued financial statements and were announced after a new SEC rule (effective August 24, 2004) intended to make restatement disclosures more timely and transparent to outsiders. In tests of whether firms strategically "mix" restatement news with earnings news, I find that firms most often package small, income-decreasing restatements with positive earnings surprises. This result is consistent with managers' attempting to neutralize or offset a negative market reaction to the restatement announcement with a positive reaction to the

earnings surprise. Direct SEC involvement in the restatement makes firms less likely to mix a restatement announcement with an earnings release.

Using the number of days that elapse between the end of the last period misstated and the initial public announcement of a restatement, I estimate a hazard model to analyze the timeliness of restatement announcements. After controlling for other determinants of disclosure timeliness, I find that obscure restatement disclosures are less timely than transparent disclosures, and announcements of income-decreasing restatements are delayed longer than announcements of restatements with no effect or a positive effect on income. In other words, firms are more likely to quickly disclose and correct a large understatement of earnings than a large overstatement of earnings. Institutional ownership is also positively related to the timeliness of restatement announcements.

As hypothesized, I also find evidence that external monitoring by institutional investors or the SEC is positively related to the choice to openly disclose news of a restatement on an 8-K, but firms whose board chair also functions as the company CEO are only one-fourth as likely to disclose a restatement on an 8-K as firms that fill the board chair and CEO positions separately. I do not find evidence that the probability of disclosing a restatement on a Form 8-K is related to the number of company shares held by the CEO or granted to nonemployee directors in the year prior to the restatement.

Addressing the relevance of disclosure choices within SEC filings, I document that restatements disclosed most obscurely in SEC filings are also less

likely to be disclosed in a company-issued press release or in the business press. Restatements that are difficult to uncover in SEC filings are also difficult to identify in information sources outside SEC filings. Finally, I find marginally significant evidence that restatements disclosed obscurely result in a less-negative initial market reaction, possibly due to the difficulty of identifying that a restatement has taken place.

This paper extends the prior literatures on strategic disclosure and accounting restatements by providing empirical evidence that external monitoring, corporate governance, and the size and direction of a restatement all influence restatement disclosure strategy. I find that strategic reporting behavior centers around restatements that decrease previously reported income. Holding materiality of the restatement constant, I document significant differences between firms that do or do not disclose accounting restatements in a transparent and timely manner. I also provide evidence on the impact of the new SEC rule governing restatement disclosure practices. While it appears that many firms circumvented the disclosure requirements by failing to file an Item 4.02 8-K, firms that complied with the 8-K filing requirement made significantly more timely disclosures of restatements than firms that restated without an 8-K. Strong corporate governance and external monitoring are associated with greater compliance with the SEC disclosure rule, resulting in more timely and transparent restatement disclosures.

TABLE 1
Distribution of Restatement Sample

Panel A: Distribution of restatement announcements by calendar quarter

Calendar Quarter	Restatement Observations (Percent of Sample)	Percent Announced on 8-K Filings
2004 Q3	31 (4%)	71%
2004 Q4	112 (14%)	82%
2005 Q1	319 (39%)	75%
2005 Q2	156 (19%)	74%
2005 Q3	97 (12%)	68%
2005 Q4	108 (13%)	78%
Total	823	

Panel B: Distribution of restatements by industry

Industry[a]	Restatement Observations	Percent of Sample
Manufacturing Industrial	193	23%
Wholesale and Retail Trade	181	22%
Finance, Insurance, Real Estate	109	13%
Miscellaneous Services	98	12%
Manufacturing Consumer	82	10%
Transportation, Communication, Electric, Gas, Sanitary Services	86	10%
Mining and Construction	40	5%
Professional Services	34	4%
Total	823	100%

Panel C: Distribution of restatements by restatement category

Restatement Category[b]	Restatement Observations	Percent of Sample
Expense Recognition	252	31%
Misclassification	130	16%
Revenue Recognition	95	12%
Equity	88	11%
Tax Accounting	68	8%
Equity - Other Comp. Income	52	6%
Acquisitions / Investments	37	4%
Capital Assets	31	4%
Inventory	24	3%
Other	20	2%
Liabilities / Contingencies	13	2%
Reserves / Allowances	13	2%
Total	823	100%

Table 1 continued

Panel D: Distribution of restatements by stock exchange

Stock Exchange	Restatement Observations	Percent of Sample
NASDAQ	413	50%
NYSE	298	36%
AMEX	89	11%
OTC	23	3%
Total	823	100%

[a] Industry categorizations are based on descriptions of major divisions of Standard Industrial Classification (SIC) codes.
[b] Restatement categories as defined by Glass, Lewis & Co.

TABLE 2
Descriptive Statistics for Restatement Sample

Panel A: Univariate statistics for continuous variables

Variable	N	Mean	Median	Q1	Q3	Stdev
IMPACT_RE	823	-0.10	-0.01	-0.05	0.00	0.39
NUM_YRS	823	2.06	2.00	1.00	3.00	1.31
HORIZON	823	245	164	130	389	172
PERVASIVE	823	1.60	1.00	1.00	2.00	1.09
LEV	823	0.24	0.19	0.03	0.38	0.24
ROA	823	-0.03	0.01	-0.03	0.05	0.17
M/B	823	2.76	2.00	1.29	3.31	4.32
EARN_VAR	823	108.1	10.4	3.4	39.7	440.5
ASSETS ($mm)	823	3,758	431	107	1,802	12,544
MVE ($mm)	823	1,988	345	98	1,362	5,301

***, **, * indicate statistical significance at the 0.01, 0.05, and 0.10 levels respectively.

See Appendix for definitions of variables.

TABLE 3

Descriptive Statistics for Restatement Sample by Direction of Restatement Impact

Panel A: Comparison of means and medians of continuous variables

	Restatement Impact			
Variable	**Negative**	**Non-Negative**	**Mean Test**	**Median Test**
Number of Periods Misstated (NUM_YRS)				
Mean	2.21	1.80	-4.40***	
Median	2.00	1.75		-3.82***
Observations	516	307		
Restatement Horizon (HORIZON)				
Mean	247	242	-0.39	
Median	167	156		-1.34
Observations	516	307		
Number of Areas Restated (PERVASIVE)				
Mean	1.72	1.39	-4.53***	
Median	1.00	1.00		-4.63***
Observations	516	307		
Financial Leverage (LEV)				
Mean	0.23	0.26	1.28	
Median	0.18	0.22		1.68*
Observations	516	307		
Return on Assets (ROA)				
Mean	-0.02	-0.03	-0.61	
Median	0.02	0.01		-1.49
Observations	516	307		
Market-to-Book (M/B)				
Mean	2.70	2.86	0.50	
Median	2.00	2.02		0.24
Observations	516	307		
Ranked Earnings Variability (EARN_VAR)				
Mean	0.49	0.50	0.44	
Median	0.49	0.46		-0.33
Observations	516	307		
Total Assets $mm (ASSETS)				
Mean	3,458	4,262	0.85	
Median	452	403		-0.48
Observations	516	307		
Market Value of Equity (MVE)				
Mean	1,921	2,100	0.47	
Median	368	326		-0.48
Observations	516	307		

Table 3 continued

Panel B: Test of differences in the distribution of discrete variables by direction of restatement impact

	Restatement Impact		
Variable	**Negative** (n=516)	**Non-Negative** (n=307)	**Chi-Square Test**
Did Not File an Amended 10-K or 10-Q (NO_AMEND=1)			
Observations	268	102	
Percentage of sample	52%	33%	p < 0.01
Restatement of Annual Period (ANNUAL=1)			
Observations	419	221	
Percentage of sample	81%	72%	p < 0.01
SEC Involvement (SEC=1)			
Observations	34	17	
Percentage of sample	7%	6%	ns
Internal Control Weakness (IC_WEAK=1)			
Observations	349	176	
Percentage of sample	68%	57%	p < 0.01
Lease Accounting Related (LEASES=1)			
Observations	182	27	
Percentage of sample	35%	9%	p < 0.01

***, **, * indicate statistical significance at the 0.01, 0.05, and 0.10 levels respectively.

These descriptive statistics divide the restatement sample into two subsamples: those restatements that negatively impacted retained earnings (i.e., income was previously overstated) and those restatements that have either no impact or a positive impact on retained earnings..

See Appendix for all definitions of variables.

TABLE 4

Simple Correlations Between Variables (Pearson above / Spearman below)

Variable	ABS_IMPACT	NEG_IMPACT	NUM_YRS	FILED_8K	NO_AMEND	HORIZON	ANNUAL	PERVASIVE	SEC	IC_WEAK	LEASES	LOGTA
ABS_IMPACT	1.00	0.18	0.08	0.07	~~0.03~~	~~-0.01~~	~~0.03~~	0.07	~~0.01~~	0.08	~~0.04~~	~~-0.03~~
NEG_IMPACT	0.51	1	0.15	0.14	0.18	~~0.01~~	0.11	0.15	~~0.02~~	0.10	0.29	~~0.01~~
NUM_YRS	0.15	0.14	1	0.14	0.13	~~-0.04~~	0.64	0.24	0.11	0.10	0.29	0.18
FILED_8K	0.16	0.14	0.13	1	-0.15	-0.41	~~0.00~~	0.08	~~0.03~~	0.33	0.11	~~0.00~~
NO_AMEND	0.07	0.18	0.12	-0.15	1	0.30	0.13	0.08	0.08	~~-0.02~~	0.29	0.11
HORIZON	~~0.01~~	~~0.05~~	~~0.03~~	-0.38	0.35	1	0.15	~~-0.04~~	~~0.00~~	-0.20	~~0.02~~	0.06
ANNUAL	0.16	0.11	0.71	~~0.00~~	0.13	0.18	1	0.14	0.08	~~-0.01~~	0.22	0.07
PERVASIVE	0.17	0.17	0.24	0.10	0.07	~~0.03~~	0.15	1	0.16	0.19	0.09	0.13
SEC	~~0.03~~	~~0.02~~	0.11	~~0.03~~	0.08	~~0.00~~	0.08	0.11	1	~~0.03~~	-0.07	0.18
IC_WEAK	0.16	0.10	0.10	0.33	~~-0.02~~	-0.17	~~-0.01~~	0.21	~~0.03~~	1	~~0.00~~	~~-0.02~~
LEASES	0.12	0.29	0.30	0.11	0.29	~~0.05~~	0.22	0.12	-0.07	~~0.00~~	1	0.09
LOGTA	~~-0.03~~	~~0.01~~	0.19	~~0.00~~	0.11	~~0.03~~	0.08	0.10	0.17	~~-0.03~~	0.12	1

Correlations with a strike-through line are not statistically significant at conventional levels.

See Appendix for all definitions of variables.

TABLE 5

Predicting Mixing Restatement News with Earnings Announcements

Panels A,B,C: Determinants of the choice to mix restatement news with earnings news

		Panel A		Panel B		Panel C	
Independent Variable	**Predicted Sign**	**Odds Ratio**	**Estimate**	**Odds Ratio**	**Estimate**	**Odds Ratio**	**Estimate**
Restatement Attributes							
LARGE_NEG	+	1.11	0.10	1.03	0.03	1.44	0.37
SMALL_NEG	+	1.59	0.47***	2.07	0.73***	2.38	0.87**
SMALL_POS	?	1.35	0.30	2.13	0.75***	1.72	0.54
LARGE_POS	?	1.07	0.06	1.20	0.19	1.09	0.09
NUM_YRS	?	0.92	-0.08	0.92	-0.08	0.94	-0.06
IC_WEAK	?	0.92	-0.09	0.75	-0.28	0.91	-0.09
PERVASIVE	?	0.92	-0.09**	0.93	-0.08	0.90	-0.11
Monitoring							
SEC	-	0.40	-0.93**	0.34	-1.07***	0.30	-1.19
AUDIT_SWITCH	-			0.40	-0.91	0.42	-0.88
INST_OWNERSHIP	-			1.14	0.13	1.45	0.37
CEO_CHAIR	+					0.74	-0.30
AUD_INDEP	-					4.45	1.49
Control Variables							
LEV	?	0.85	-0.16	1.07	0.06	1.34	0.30
ROA	?	3.21	1.17	4.45	1.49**	257.26	5.55*
M/B	?	1.01	0.01	1.00	0.005	0.99	-0.01
EARN_VAR	?	2.42	0.89	2.04	0.71*	2.06	0.72
LOGTA	?	0.99	-0.01	0.96	-0.04	0.94	-0.06
Sample Size			823		650		249
Pseudo R-Square			0.04		0.07		0.10
Percent Correctly Classified			74.0%		73.7%		69.9%

Table 5 (contd)

The logistic regression models in Table 5 Panels A, B, and C examine the relation between restatement direction and the choice to mix the public announcement of a restatement with an earnings announcement. The dependent variable, EARN_ANNC, is an indicator variable that takes a value of 1 if the firm announces its restatement on the same day as an earnings announcement and 0 otherwise. In all regressions, I use industry-level fixed effects and robust standard errors using the Huber (1967) / White (1980) procedure with industry-level clustering (Rogers 1993). The results of this regression show that restatements that have a relatively small negative effect on retained earnings are more likely than zero-impact restatements to be publicly disclosed on the same day as an earnings announcement. Results also indicate that if the SEC is involved in a restatement, the firm is less likely to announce the restatement on the same day as earnings news.

Table 5 (contd)

Panel D: Multinomial logit model predicting mixing restatement news with negative earnings news, no earnings news, and positive earnings news.

	Earnings Surprise < 0		Earnings Surprise = 0		Earnings Surprise > 0	
Independent Variable	**RRR**	**Estimate**	**RRR**	**Estimate**	**RRR**	**Estimate**
Restatement Attributes						
LARGE_NEG	1.36	0.31	0.99	-0.01	1.68	0.52
SMALL_NEG	2.62	0.96	1.12	0.12	2.73	1.00**
SMALL_POS	2.03	0.71	1.28	0.24	1.27	0.24
LARGE_POS	1.03	0.02	0.87	-0.14	1.91	0.65
NUM_YRS	0.99	-0.01	0.79	-0.24***	1.09	0.09
IC_WEAK	1.53	0.42	0.76	0.27	1.08	0.08
PERVASIVE	0.79	-0.24	1.09	0.09	0.77	-0.26**
Monitoring						
SEC	0.28	-1.27	0.25	-1.38**	0.59	-0.52
Control Variables						
LEV	0.45	-0.79	1.09	0.09	0.64	-0.45
ROA	0.88	-0.13	4.46	1.49	5.18	1.65**
M/B	0.12	0.03	4.82	-0.001	3.77	0.04
EARN_VAR	1.03	-2.12	1.00	1.57*	1.04	1.33*
LOGTA	1.64	0.49	0.78	-0.25**	1.16	0.15
Sample Size		823				
Pseudo R-Square		0.08				

The multinomial logit model in Table 5 Panel D examines the relation between restatement direction and the choice to mix the public announcement of a restatement with (1) a negative earnings surprise, (2) a zero earnings surprise, or (3) a positive earnings surprise. The results indicate that most of the packaging of restatement announcements with earnings news occurs when a relatively small income-decreasing restatement is packaged with a positive earnings surprise. This result is consistent with firms' strategically attempting to offset or dilute the negative market reaction to a relatively small income-decreasing restatement with positive earnings news.

***, **, * indicate statistical significance at the 0.01, 0.05, and 0.10 levels respectively.

See Appendix for definitions of variables.

TABLE 6

Hazard Model Examining Timeliness of Restatement Announcements

Panels A,B: Cox proportional hazard model

		Panel A		Panel B	
Independent Variable	**Predicted Sign**	**Hazard Ratio**	**Estimate**	**Hazard Ratio**	**Estimate**
Restatement Attributes					
LARGE_NEG	-	0.80	-0.22	0.42	-0.86***
SMALL_NEG	?	0.98	-0.02	0.64	-0.45**
SMALL_POS	?	1.14	0.13	0.92	-0.08
LARGE_POS	+	1.18	0.16	0.67	-0.40
NUM_YRS	-	1.01	0.01	0.92	-0.08*
IC_WEAK	?	1.10	0.10	0.99	-0.01
PERVASIVE	-	1.00	-0.001	1.00	-0.002
LEASES	?	0.91	-0.09	0.94	-0.06
Disclosure Transparency					
OBSCURE_1	-	0.35	-1.05***	0.34	-1.08***
OBSCURE_2	-	0.51	-0.67***	0.46	-0.77***
Monitoring					
SEC	?	0.89	-0.12	0.91	-0.09
INST_OWNERSHIP	+			1.46	0.38***
CEO_CHAIR	-			1.10	0.09
AUD_INDEP	+			1.14	0.13
Control Variables					
LEV	?	1.41	0.34*	2.02	0.70***
ROA	?	0.78	-0.24	2.36	0.86
M/B	?	1.00	0.004	1.00	0.001
EARN_VAR	?	0.68	-0.39**	0.80	-0.23
LOGTA	?	1.04	0.04**	1.10	0.10**
Sample Size			823		249
LR Chi-sq			163.9		63.2
Prob > Chi-sq			0.00		0.00

The hazard models in Table 6 Panels A and B use a Cox proportional hazard model to examine the relation between the timeliness of the initial public announcement of a restatement (i.e., HORIZON) and restatement size and direction and external monitoring. The results of the full model including monitoring variables indicate that announcements of restatements that negatively impact retained earnings are delayed significantly longer than restatements with no impact or a positive impact on retained earnings. Additionally, the most obscure restatement disclosures are delayed longer than more transparent disclosures; and the timeliness of initial restatement announcements is positively associated with the proportion of the firm held by institutional investors (INST_OWNERSHIP). In all regressions, I use industry-level fixed effects and robust standard errors using the Huber (1967) / White (1980) procedure with industry-level clustering (Rogers 1993).

***, **, * indicate statistical significance at the 0.01, 0.05, and 0.10 levels respectively.

See Appendix for definitions of variables.

Table 6 (contd)

Panels C,D: Hazard model using Weibull distribution for hazard function

		Panel C		Panel D	
Independent Variable	**Predicted Sign**	**Hazard Ratio**	**Estimate**	**Hazard Ratio**	**Estimate**
Restatement Attributes					
LARGE_NEG	-	0.84	-0.18	0.38	-0.96***
SMALL_NEG	?	1.01	0.01	0.66	-0.41*
SMALL_POS	?	1.19	0.18	1.03	0.03
LARGE_POS	+	1.22	0.20	0.59	-0.52
NUM_YRS	-	1.03	0.03	0.94	-0.07
IC_WEAK	?	1.13	0.12	1.05	0.05
PERVASIVE	-	1.02	0.02	1.04	0.04
LEASES	?	0.88	-0.13	0.84	-0.17
Disclosure Transparency					
OBSCURE_1	-	0.35	-1.05***	0.31	-1.16***
OBSCURE_2	-	0.51	-0.67***	0.45	-0.79***
Monitoring					
SEC	?	0.92	-0.09	0.96	-0.04
INST_OWNERSHIP	+			1.42	0.35
CEO_CHAIR	-			1.08	0.07
AUD_INDEP	+			1.12	0.11
Control Variables					
LEV	?	1.51	0.41*	2.16	0.77***
ROA	?	0.75	-0.28*	1.98	0.68
M/B	?	1.00	0.004	1.01	0.01
EARN_VAR	?	0.67	-0.40	0.75	-0.29
LOGTA	?	1.02	0.02	1.07	0.07
Sample Size			823		249
LR Chi-sq			188.4		77.9
Prob > Chi-sq			0.00		0.00

The hazard models in Table 6 Panels C and D assume a Weibull distribution for the hazard function and examine the relation between the timeliness of the initial public announcement of a restatement (i.e., HORIZON) and restatement size and direction and external monitoring. The results of the full model including all monitoring variables show that announcements of restatements that negatively impact retained earnings are delayed significantly longer than restatements with no impact or a positive impact on retained earnings. Additionally, the most obscure restatement disclosures are delayed the longer than the more transparent disclosures. In all regressions, I use industry-level fixed effects and robust standard errors using the Huber (1967) / White (1980) procedure with industry-level clustering (Rogers 1993).

***, **, * indicate statistical significance at the 0.01, 0.05, and 0.10 levels respectively.

See Appendix for definitions of variables.

TABLE 7

Univariate Statistics Comparing Restatements Announced With or Without an 8-K Filing

Panel A: Mean and median tests for continuous variables

	Restatement Disclosure Choice			
Variable	**Yes 8-K**	**No 8-K**	**Mean Test**	**Median Test**
Restatement Impact As % of Retained Earnings (IMPACT_RE)				
Mean	-0.11	-0.06	2.13**	
Median	-0.01	-0.0002		3.73***
Observations	619	204		
Number of Periods Misstated (NUM_YRS)				
Mean	2.16	1.74	-4.57***	
Median	2.00	2.00		-2.91***
Observations	619	204		
Restatement Horizon (HORIZON)				
Mean	205	367	10.62***	
Median	151	397		9.86***
Observations	619	204		
Number of Areas Restated (PERVASIVE)				
Mean	1.65	1.45	-2.43**	
Median	1.00	1.00		-2.79***
Observations	619	204		
Financial Leverage (LEV)				
Mean	0.24	0.24	-0.33	
Median	0.18	0.22		0.99
Observations	619	204		
Return on Assets (ROA)				
Mean	-0.02	-0.04	-1.13	
Median	0.02	0.01		-1.11
Observations	619	204		
Market-to-Book (M/B)				
Mean	2.66	3.07	1.11	
Median	2.05	1.91		-1.43
Observations	619	204		
Ranked Earnings Variability (EARN_VAR)				
Mean	0.48	0.51	1.17	
Median	0.48	0.53		0.67
Observations	619	204		
Total Assets $mm (ASSETS)				
Mean	3,456	4,674	1.20	
Median	431	448		0.02
Observations	619	204		
Market Value of Equity (MVE)				
Mean	1,834	2,453	1.34	
Median	382	308		-0.79
Observations	619	204		

Table 7 continued

Panel B: Test of differences in the distribution of discrete variables by 8-K disclosure choice

	Restatement Disclosure Choice		
Variable	**Yes 8-K** (n=619)	**No 8-K** (n=204)	**Chi-Square Test**
Restatement Negatively Impacted Retained Earnings (NEG_IMPACT=1)			
Observations	413	103	
Percentage of sample	67%	50%	p < 0.01
Did Not File an Amended 10-K or 10-Q (NO_AMEND=1)			
Observations	252	118	
Percentage of sample	41%	58%	p < 0.01
Restatement of Annual Period (ANNUAL=1)			
Observations	482	158	
Percentage of sample	78%	77%	ns
SEC Involvement (SEC=1)			
Observations	41	10	
Percentage of sample	7%	5%	ns
Internal Control Weakness (IC_WEAK=1)			
Observations	452	73	
Percentage of sample	73%	36%	p < 0.01
Lease Accounting Related (LEASES=1)			
Observations	174	35	
Percentage of sample	28%	17%	p < 0.01

Panel C: Comparison of industry composition by 8-K disclosure choice

	Restatement Disclosure Choice		
Industry[a]	**Yes 8-K**	**No 8-K**	**Z-stat**
Mining and Construction			
Percentage of total observations in industry	3.88	6.86	0.42
Number of observations	24	14	
Manufacturing Consumer			
Percentage of total observations in industry	9.85	10.29	0.06
Number of observations	61	21	
Manufacturing Industrial			
Percentage of total observations in industry	21.97	27.94	0.89
Number of observations	136	21	
Transportation, Communication, Electric, Gas, Sanitary Services			
Percentage of total observations in industry	9.37	13.73	0.62
Number of observations	58	28	
Wholesale and Retail Trade			
Percentage of total observations in industry	23.75	16.67	-0.90
Number of observations	147	34	

Table 7 continued

Industry[a]	Yes 8-K	No 8-K	Z-stat
Finance, Insurance, Real Estate			
Percentage of total observations in industry	14.22	10.29	-0.48
Number of observations	88	21	
Miscellaneous Services			
Percentage of total observations in industry	12.60	9.80	-0.34
Number of observations	78	20	
Professional Services			
Percentage of total observations in industry	4.04	3.92	-0.02
Number of observations	25	8	
Chi-square test of differences in overall distribution (9 degrees of freedom) = 15.41*			

***, **, * indicate statistical significance at the 0.01, 0.05, and 0.10 levels respectively.

[a] Industry categorizations are based on descriptions of major divisions of Standard Industrial Classification (SIC) codes.

See Appendix for definitions of all variables.

TABLE 8

Logistic Regression Predicting the Choice to Submit an 8-K Filing for a Restatement

Panels A,B,C: Determinants of the choice to disclose a restatement on an 8-K after the new SEC rule requiring an 8-K filing

		Panel A		Panel B		Panel C	
Independent Variable	**Predicted Sign**	**Odds Ratio**	**Estimate**	**Odds Ratio**	**Estimate**	**Odds Ratio**	**Estimate**
Restatement Attributes							
LARGE_NEG	+	2.82	1.04***	12.51	2.53	34.56	3.54**
SMALL_NEG	?	2.50	0.92***	4.33	1.47**	10.29	2.33**
SMALL_POS	?	1.69	0.53	3.17	1.15	1.23	1.23
LARGE_POS	+	2.27	0.82**	1.83	0.60	1.07	0.07
NUM_YRS	+	1.19	0.18***	1.53	0.43***	1.82	0.60***
IC_WEAK	+	4.41	1.48***	7.05	1.95***	5.84	1.76***
PERVASIVE	+	0.95	-0.05	0.84	-0.17	0.76	-0.28
LEASES	?	1.50	0.41	0.90	-0.10	1.51	0.41
HORIZON	-	1.00	-0.005***	0.99	-0.01***	0.99	-0.01***
NO_AMEND	-	0.49	-0.72***	0.53	-0.64	0.15	-1.91***
Monitoring							
SEC	+	1.66	0.51	6.82	1.92***	15.29	2.73**
INST_OWNERSHIP	+			8.68	2.16***	6.75	1.91
CEO_CHAIR	-			0.25	-1.38***	0.18	-1.69**
AUD_INDEP	+			1.03	0.03	0.34	-1.08
Compensation							
BOARD_SHARES	-					0.83	-0.19
CEO_SHARES	-					1.00	0.00
Control Variables							
LEV	?	1.05	0.04	3.28	1.19	182.68	5.21***
ROA	?	1.71	0.54	89.93	4.50	254.26	5.54
M/B	?	0.98	-0.02*	0.93	-0.07	0.83	-0.18**
EARN_VAR	?	0.74	-0.30	0.44	-0.82	0.59	-0.52
LOGTA	?	0.99	-0.01	1.04	0.04	0.85	-0.16
Sample Size			823		249		208
Pseudo R-Square			0.27		0.32		0.41
Percent Correctly Classified			82.6%		86.8%		89.4%

Table 8 (contd)

The logistic regression models in Table 8 Panels A, B, and C examine the determinants of the choice to file a Form 8-K to announce a restatement after the effective date of the SEC rule that mandated 8-K filings for restatements. In all regressions, I use industry-level fixed effects and robust standard errors using the Huber (1967) / White (1980) procedure with industry-level clustering (Rogers 1993). Results in the first model indicate that negative restatements (large and small) and large positive restatements are more likely than zero-impact restatements to be disclosed on an 8-K filings. Restatements correcting a larger number of reporting periods and restatements connected to a disclosure of a material weakness in internal controls are also positively related to the probability of filing a Form 8-K. Restatements performed without amended 10-K or 10-Q filings and restatements correcting misstatements further back in time are less likely to be announced with an 8-K filing. The second model demonstrates that effects of external monitoring on the decision to file an 8-K: SEC involvement and higher institutional ownership are both positively related to filing an 8-K. However, if the chair of the board of directors is also the CEO of the firm (a proxy for weak corporate governance), then a firm is just one-fourth as likely to announce a restatement on an 8-K. The third model investigates the effects on restatement disclosure choice of CEO stock holdings and stock compensation received by members of the board of directors in the year prior to the restatement announcement, but these effects are not statistically significant.

***, **, * indicate statistical significance at the 0.01, 0.05, and 0.10 levels respectively.

See Appendix for definitions of all variables.

Panel D: Determinants of the choice to disclose a restatement on an 8-K before the new SEC rule

Independent Variable	Predicted Sign	Odds Ratio	Estimate
Restatement Attributes			
NEG_IMPACT	+	15.03	2.71***
POS_IMPACT	+	14.07	2.64***
NUM_YRS	+	1.52	0.42**
IC_WEAK	+	0.84	-0.17
PERVASIVE	+	0.85	-0.16
LEASES	?	0.07	-2.68**
HORIZON	-	1.00	-0.001
NO_AMEND	+	11.06	2.40
Monitoring			
SEC	?	4.38	1.48
INST_OWNERSHIP	?	4.53	1.51
CEO_CHAIR	?	1.45	0.37
AUD_INDEP	?	0.12	-2.16
Control Variables			
LEV	?	0.07	-2.67***
ROA	?	1.61	0.48
M/B	?	1.07	0.07
EARN_VAR	?	77.56	4.35
LOGTA	?	0.64	-0.44*
Sample Size			112
Pseudo R-Square			0.37
Percent Correctly Classified			78.6%

The logistic regression model in Table 8 Panel D analyzes the determinants of the choice to disclose a restatement on a Form 8-K *prior to* the SEC rule mandating 8-K filings for restatements. In the pre-SEC rule time period, both positive and negative restatements were more likely than zero-impact restatements to be disclosed on an 8-K, as were restatements affecting longer periods of time. Restatements regarding lease accounting were less likely to be disclosed on an 8-K. Importantly, none of the monitoring variables is significantly related to the decision to file an 8-K in the pre-SEC rule period.

***, **, * indicate statistical significance at the 0.01, 0.05, and 0.10 levels respectively.

See Appendix for definitions of all variables.

TABLE 9

Logistic Regression Predicting the Absence of Restatement Disclosures Outside of SEC Filings

Independent Variable	Predicted Sign	Odds Ratio	Estimate
Restatement Attributes			
LARGE_NEG	-	0.58	-0.55*
SMALL_NEG	-	0.37	-1.01***
SMALL_POS	?	0.88	-0.13
LARGE_POS	?	0.64	-0.45*
NUM_YRS	-	0.68	-0.39***
IC_WEAK	-	0.44	-0.83***
LEASES	-	0.59	-0.53
PERVASIVE	-	1.02	0.02
HORIZON	+	1.00	0.002***
Disclosure Transparency			
OBSCURE_1	+	11.14	2.41***
OBSCURE_2	+	5.29	1.67***
Monitoring			
SEC	-	0.72	-0.33
INST_OWNERSHIP	-	0.61	-0.50
Control Variables			
LEV	?	1.68	0.52
ROA	?	1.70	0.53
M/B	?	1.02	0.02
EARN_VAR	?	0.81	-0.21
LOGTA	-	0.92	-0.08
Sample Size			650
Pseudo R-Square			0.34
Percent Correctly Classified			86.2%

The logistic regression model in Table 9 analyzes the determinants of press coverage of accounting restatements. The dependent variable, NO_PRESS, is an indicator variable that equals 1 if I found no company-initiated press release or any other press coverage concerning the restatement, and 0 otherwise. For each restatement in my sample, I conducted an exhaustive search for media coverage using (1) the results of the GAO (2006) Lexis Nexis search for restatement announcements in the press during the same time period; (2) keyword searches of over 4500 news sources on Google News; and (3) keyword searches on Factiva to investigate the business wires, press-release wires, and *The Wall Street Journal*. The results in Table 8 indicate that restatements disclosed the most obscurely in SEC filings were also the least likely to be disclosed or discussed in the press. Additionally, small positive restatements are the least likely to be discussed in the press. In all regressions, I use industry-level fixed effects and robust standard errors using the Huber (1967) / White (1980) procedure with industry-level clustering (Rogers 1993).

***, **, * indicate statistical significance at the 0.01, 0.05, and 0.10 levels respectively.

See Appendix for definitions of all variables.

TABLE 10

Determinants of the Initial Market Reaction to Restatement Announcements

Independent Variable	Predicted Sign	Estimate	Std. Error
Restatement Attributes			
LARGE_NEG	-	-0.04**	0.01
SMALL_NEG	-	-0.02**	0.01
SMALL_POS	?	0.01	0.01
LARGE_POS	?	-0.01	0.01
NUM_YRS	-	0.01***	0.00
IC_WEAK	-	-0.002	0.00
LEASES	+	0.02**	0.01
PERVASIVE	-	-0.002	0.00
HORIZON	+	0.00	0.00
Disclosure Transparency			
OBSCURE_1	+	0.01	0.01
OBSCURE_2	+	0.02*	0.01
Monitoring			
SEC	-	-0.03	0.02
INST_OWNERSHIP	?	-0.002	0.01
Control Variables			
LEV	?	0.02	0.01
ROA	?	0.02	0.01
M/B	?	0.00	0.00
EARN_VAR	?	0.001	0.02
LOGTA	?	0.00	0.00
Sample Size	634		
R-Squared	0.10		

The OLS regression model in Table 10 analyzes the size-adjusted buy-and-hold abnormal returns surrounding the day of the initial public announcement of the restatements. The results in Table 9 are for a (-2, 2) window surrounding the restatement announcement date. As shown in Table 9, I find some evidence that restatements disclosed more obscurely receive a marginally less negative market reaction during the initial announcement window than restatements disclosed openly. The market reaction to restatement announcements is significantly most negative for large, negative restatements (-4 percent) and small, negative restatements (-2 percent). Restatements related to lease accounting also received a less negative market reaction than other restatements. In all regressions, I use industry-level fixed effects and robust standard errors using the Huber (1967) / White (1980) procedure with industry-level clustering (Rogers 1993).

***, **, * indicate statistical significance at the 0.01, 0.05, and 0.10 levels respectively.

See Appendix for definitions of all variables.

APPENDIX

Variable Definitions (alphabetical)

ABS_IMPACT is the absolute value of the cumulative impact of the restatement, as a proportion of retained earnings. The author hand-collected this information from SEC filings pertaining to the restatement.

ANNUAL is an indicator variable that equals 1 if the restatement corrects at least one annual (10-K) filing, and 0 if the restatement corrects only interim (10-Q) fillings.

ASSETS is the dollar value (in millions) of total assets (Compustat item 6) as reported in the last 10-K filing prior to the restatement announcement.

AUD_INDEP represents the proportion of directors serving on the audit committee who are characterized as outsiders by Board Analyst.

AUDIT_SWITCH is an indicator variable that equals 1 if the restating firm changed external auditors in the year prior to the restatement and 0 otherwise.

BOARD_OUT is the proportion of the board of directors that were outside members in the year prior to the restatement announcement, as defined by Board Analyst.

BOARD_SHARES is the number of shares of stock (including restricted stock) that were granted to each nonemployee director during the year prior to the restatement announcement, as indicated on the ExecuComp database.

CEO_CHAIR is an indicator variable that equals 1 if Board Analyst reports that the CEO of the restating company is also the chair of the board of directors and 0 otherwise.

CEO_SHARES is the number of shares of company stock (including restricted stock) held by the CEO in the year prior to the restatement announcement, as reported on the ExecuComp database.

EARN_ANNC is an indicator variable that equals 1 if news of a restatement was publicly disclosed on the same day as an earnings announcement and 0 otherwise.

EARN_VAR is the standard deviation of income before extraordinary items (Compustat item 18) for the three years prior to the year of the restatement announcement. In the regression models, this variable is rank transformed to lie between 0 and 1.

FILED_8K is an indicator variable that equals 1 if the restatement was disclosed on an Item 4.02 Form 8-K (as required by the SEC's Final Rule on 8-K Disclosures for all material restatements) and 0 otherwise.

HORIZON is the number of days that elapse between the last day of the final period misstated and the date of the initial public disclosure of the restatement.

IC_WEAK is an indicator variable that, in the full sample of 823 observations, equals 1 if the restating company disclosed a material weakness in internal controls in the year before or the year after the restatement announcement and 0 otherwise. In regression models with less than the full 823

observations, IC_WEAK represents whether a material weakness in internal controls was disclosed in the year prior to the announcement.

IMPACT_RE is the cumulative impact of the restatement, as a proportion of retained earnings. The author hand-collected this information from SEC filings pertaining to the restatement.

INST_OWNERSHIP is the proportion of the restating firm's outstanding shares that are held by institutional investors in the quarterly reporting period prior to the restatement.

LARGE_NEG is an indicator variable that equals 1 if the impact of the restatement on retained earnings was in the bottom (most negative) 10 percent of the distribution of restatement impacts and 0 otherwise.

LARGE_POS is an indicator variable that equals 1 if the impact of the restatement on retained earnings was in the top (most positive) 10 percent of the distribution of restatement impacts and 0 otherwise.

LEASES is an indicator variable that equals 1 if the restatement was related to errors in accounting for leases and 0 otherwise.

LEV is long-term debt (Compustat item 9) plus debt in current liabilities (Compustat item 34) scaled by total assets (Compustat item 6), as reported on the last annual filing before the restatement announcement.

LOGTA is the natural log of total assets (Compustat item 6), as reported on the last annual filing before the restatement announcement.

M/B is the market-to-book ratio, defined as the market value of equity (Compustat item 25 multiplied by item 199) divided by the book value of equity (Compustat item 60), as reported in the last annual filing before the restatement announcement.

MVE is the market value of equity (Compustat item 25 multiplied by item 199), as reported in the last annual filing before the restatement announcement.

NEG_IMPACT is an indicator variable that equals 1 if the cumulative impact of the restatement on retained earnings is negative and 0 if the restatement does not impact retained earnings or has a positive cumulative impact on retained earnings.

NO_AMEND is an indicator variable that equals 1 if the restatement was performed without filing any amended forms (e.g., 10-K/A or 10-Q/A) and 0 otherwise. Companies that restate previously issued financial statements without amended forms make their corrections in regularly scheduled 10-Q or 10-K filings.

NO_PRESS is an indicator variable that equals 1 if I found no discussion of the restatement outside of SEC filings: i.e., no press release and no other media coverage of the restatement, and 0 otherwise. For each restatement in my sample, I conducted an exhaustive search for disclosures outside SEC filings using (1) the results of the GAO (2006) Lexis Nexis search of restatement announcements in the press; (2) keyword searches of over 4,500 news

sources on Google News; and (3) keyword searches on Factiva to investigate the business wires, press-release wires, and *The Wall Street Journal*.

NO_8K is an indicator variable that equals 1 if the restating company did not disclose its restatement on a Form 8-K filing and 0 otherwise.

NUM_YRS is the cumulative number of misstated periods corrected by the restatement. Each annual period restated is a value of 1 and each additional interim period restated is 0.25.

OBSCURE_1 is an indicator variable that equals 1 if the restatement was disclosed in the *most* obscure manner: only in a footnote to a regularly scheduled 10-K or 10-Q filing with no amended financial statements and no 8-K filing, and 0 otherwise.

OBSCURE_2 is an indicator variable that equals 1 if the restatement was disclosed in the second most obscure manner: with amended financial statements but without any 8-K filing, and 0 otherwise.

OBSCURE_3 is an indicator variable that equals 1 if the restatement was disclosed in the least obscure manner: with an 8-K filing, and 0 otherwise.

PERVASIVE is the number of financial statement categories affected by the restatement (e.g., expense recognition, inventory, revenue recognition, etc.). See Table 1 Panel C for a full list of restatement categories.

POS_IMPACT is an indicator variable that equals 1 if the restatement had a positive impact on retained earnings and 0 otherwise.

ROA is return on assets, defined as income before extraordinary items (Compustat item 18) scaled by total assets (Compustat item 6), as reported on the last annual filing before the restatement announcement.

SEC is an indicator variable that equals 1 if the Securities and Exchange Commission (SEC) was involved in the restatement (informal inquiry or formal investigation) and 0 otherwise.

SMALL_NEG is an indicator variable that equals 1 if the impact of the restatement on retained earnings was between zero and the 10^{th} percentile (most negative) of the distribution of restatement impacts and 0 otherwise.

SMALL_POS is an indicator variable that equals 1 if the impact of the restatement on retained earnings was between zero and the 90^{th} percentile (most positive) of the distribution of restatement impacts and 0 otherwise.

SUE is standardized unexpected earnings for firms that announce a restatement on the same day as an earnings announcement. SUE is calculated as the difference between the actual earnings number and the median of analysts' forecasts in the month prior to the earnings announcement on the IBES database, scaled by the restating firms' stock price at the end of the prior fiscal year.

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Vita

Nathan Young Sharp was born in Salt Lake City, Utah, on March 14, 1977. He is the son of Christopher and Karen Sharp. Nate received Bachelors and Masters degrees in Accounting from Brigham Young University, graduating cum laude in August 2002. From 1996 to 1998, Nate served a church mission in South Korea, and later became a Korean language instructor at the Missionary Training Center in Provo, Utah. He also interned in accounting positions at Novell, Inc. and Arthur Andersen. In August 2002, Nate entered the accounting Ph.D. program at The University of Texas at Austin. Nate is the husband of Holly Carroll Sharp and the proud father of a daughter (Kennedy, 3) and a son (Jackson, 1).

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