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SEC Regulation of Corporate 10K Filing Dates:  
The Effect on Earnings Management and Market Recognition

A dissertation submitted in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy at Virginia Commonwealth University

By

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This is dedicated to my family for their support, to my father for his disposition, and to my grandfather for accounting. I also wish to thank my dissertation committee for their enormous patience and especially my dissertation chair.

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**ABSTRACT****SEC REGULATION OF CORPORATE 10K FILING DATES:  
THE EFFECT ON EARNINGS MANAGEMENT AND MARKET RECOGNITION**

Robert W. Russ, CPA

A dissertation submitted in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy at Virginia Commonwealth University

Virginia Commonwealth University, 2005

Director: Dr. Ruth W. Epps  
Professor and Chairman  
Department of Accounting

In November 2002, the Securities and Exchange Commission released a final ruling regarding a filing requirement change. The proposed requirement change was for domestic companies to file annual and quarterly reports within 60 and 30 days, respectively. This requirement was recommended for companies with a market value of at least \$75 million and would reduce by 30 days the time allowed to file these reports. *The Wall Street Journal* article announcing this proposal stated the change was an effort to address some of the problems arising from accounting scandals such as the Enron scandal of 2001. A potential added benefit of the SEC rule change might be a reduction in earnings management.

The purpose of this study is two fold. The first part is to test the theory that earnings management takes time. The second purpose is to examine the question of market recognition of earnings management. Sloan (1996) and other researchers report that the market does not recognize earnings management in the long term. Xie's (2001) results suggest that the market over prices earnings management. Balsam et al. (2002) found the market reacted negatively to abnormal accruals. The current research study uses a larger sample including firms not suspected of earnings management and fails to confirm the Balsam et al. result. The findings of the current study suggest that the results of the Balsam et al. study are either the result of the data selection process used in that study or the data selection process used by Balsam et al. controlled for other market fluctuations not included in the current study.

The results of this study suggest a positive relationship between earnings management and the time to file annual reports. This finding supports for the theory that moving earnings from a future period to the current period requires time. Thus, the SEC rule change to reduce the time to file annual reports should reduce a company's ability to manipulate earnings.



## **CHAPTER I**

### **INTRODUCTION**

In November 2002, the Securities and Exchange Commission released a final ruling regarding a filing requirement change. The requirement change is for domestic companies to file annual and quarterly reports within 60 and 30 days of the end of the period, respectively. This requirement is recommended for companies with a market value of at least \$75 million. The proposed change reduces by 30 days the time allowed to file these reports and will be phased in between 2003 and 2006.

The official SEC release states that annual reports contain significant information used by stakeholders in their investing and voting decisions, and more timely presentation of this information to the public would be beneficial (SEC 2002). The official SEC release is supported by prior research which found significant market reaction to 10K filings (Asthana and Balsam 2001; Griffin 2003). The prior research has found that the market reacts to annual report filings (Asthana et al. 2001) and in the case of late annual filings, the market reacts negatively (Griffin 2003). The conclusion of both of these studies is that information contained in the annual report filings is value relevant. Griffin (2003) further concludes that the timeliness of the annual reports is value relevant.

Prior research on the timeliness of annual report filings reveals several issues. Alford et al. (1994) found firms that are late filing 10K's are generally small and/or financially troubled. Typically, these firms are also experiencing negative market

adjusted stock returns. To reduce these negative stock returns, management could be motivated to manipulate the financial results of the company. Burgstahler and Dichev (1997; 1998) found that management has incentives to manage earnings to avoid earnings fluctuations.

Givoly and Palmon (1982) study the timeliness of annual report filings, concluded that over the period of 1960 to 1974, companies have shortened the number of days from an average of 63 days to an average 41 days to file reports. Defining bad news as earnings less than expected, they also found bad news reporting was delayed and the market reaction to the bad news was reduced by the duration of the delay. They speculate that information from other sources preempts the stock market reaction to the late earnings announcement. Givoly and Palmon (1982) also found that the timelines of the annual filings was more related to intra-industry patterns and company traditions than company attributes. This lead Givoly and Palmon to conclude that management has discretion over the time of the filing.

Earnings management research has presented evidence that when management is motivated and has the means to manipulate earnings, management manipulates earnings to reach company goals. Trueman (1990) theorized that earnings management takes time and proposed two possible explanations. One possibility is that management attempts to move earnings between periods and this effort takes time. The second possibility is that management waits for the results of other firms in the industry to announce earnings and then adjusts their earnings to match industry results. For example, Chai and Tung (2002) found that companies engaging in earnings management release earnings announcements

later than companies that do not engage in earnings management. The SEC rule change could have the benefit of reducing company ability to manipulate earnings.

Earnings management research investigates relationships/events that may give rise to management's manipulation of earnings. In a survey of the earnings management literature, Healy and Wahlen (1999) conclude that researchers have been successful in finding occasions where earnings management is present, but no research has examined how regulators might control or limit earnings management. The current study starts the process of identifying methods for regulators to limit earnings management.

Lynn Turner, past chief accountant at the SEC (Turner and Godwin 1999), called for more academic research to assist the SEC in identifying methods to reduce earnings management. The current research examines the impact of how regulators might limit earnings management by limiting the amount of time that is allowed to prepare and present annual financial information to investors.

To extend the earnings management literature to identifying a potential control for earnings management, the purpose of this research project is to test the theory that earnings management takes time. Trueman (1990) stated that either time is required to move earnings from one period to another or that companies wait to see results from competitors before making their own earnings management decisions as two possible reasons for delays in reporting caused by earnings management. Regardless of which factor (time to move earnings, or waiting to know the industry results) actually causes the delay, the SEC change in time to file reports will reduce the time available to file reports and might also limit their ability to manipulate earnings.

Specifically, this study uses a large sample of annual report filings and simultaneous equations to investigate if earnings management requires additional time in relationship to annual report filings. A sample of annual report filings from 1992 to 2003 is used. The companies included in the current study are non-financial, non-utility, domestic firms that have five or more years of annual filings in the EDGAR database with corresponding financial data available from Compustat. This study tests for a relationship between abnormal accruals (earnings management) and the timeliness of annual report filing. Findings of the current study that support the relationship between earnings management and reporting timeliness provide evidence that the SEC rule change can have the additional benefit of reducing earnings management.

Earnings management for the current study is measured by calculating abnormal accruals using the cash flow variant of the modified Jones model (Hribar et al. 2002). Timeliness is measured by the number of days between the company fiscal yearend and the date the annual 10K report is filed with the SEC.

The remainder of this dissertation is organized as follows. The next chapter reviews previous research on the timeliness of corporate reporting and earnings management. The model, hypotheses, and methodology are developed in chapter III. Chapter IV presents the results and Chapter V provides a summary, conclusion, limitations, and recommendations for future research.

## **CHAPTER II**

### **A REVIEW OF THE LITERATURE**

The purpose of this study is to test the relationship between earnings management and the timeliness of annual report filings. A significant relationship between earnings management and the timeliness of filings provides support for the theory that earnings management requires time (Trueman 1990). Finding support for this theory may indicate that the SEC rule change, reducing the time to file annual reports, may also reduce a company's ability to manipulate earnings.

Testing the relationship between earnings management and the timeliness of annual report filings generates two objectives for this study. One is a research question of testing the theory that earnings management takes time by testing the timeliness of annual report filings. The second objective is to answer the following research question: Does the market recognize earnings management?

Two major areas of literature are relevant to this study: Timeliness of corporate reporting in relationship to earnings management, and earnings management as it relates to market reaction. The research on reporting timeliness has produced literature regarding issues that affect the timeliness of earnings announcements and corporate report filings. The literature on earnings management has produced a wealth of literature indicating that there is incentive to manipulate earnings and where the incentive exists,

earnings management exists. Research on market recognition of earnings management has produced a small quantity of published studies in which all but one of these studies indicate that the market does not recognize earnings management.

In the section on timeliness, a review of the literature relating to when companies announce earnings and/or file statutory reports. The research on timeliness indicates that companies file reports/announce earnings at traditional time intervals. The literature also provides characteristics associated with reporting/announcement delays. Trueman's theory states that earnings management requires time, therefore companies that are engaging in earnings management should have delayed reporting/filings. Trueman's theory is supported by the work of Chai and Tung (2002) who found earnings management present in late announcing firms. The characteristics associated with late reporting/announcements are used as control variables in the current study. The timeliness of reporting section concludes with a summary of the selected literature regarding the market reaction to reporting/announcement timeliness.

The earnings management section presents a review of the literature which examines management incentive and opportunity to manage earnings. This review provides evidence that management engages in earnings management when motivation is sufficient. This section also provides control variables needed for the earnings management model used in the study. The earnings management section concludes with a review of the literature which examines market reaction to earnings management. The literature examining the market reaction to earnings management has mixed results. Some literature finds the market does not recognize earnings management. And one

study that finds, at least in the short term, which the market does react to earnings management present in financial reports. The earnings management section also includes a section on the evolution of the measurement of abnormal accruals, used in the literature to measure earnings management.

### Timeliness of Corporate Reporting

In an early study of timeliness of filings, Dyer and McHugh (1975) tested the attributes of 120 Australian companies from 1965 to 1971. The primary purpose of the research was to establish the impact of corporate attributes on corporate filing timeliness. Dyer and McHugh (1975) found that larger companies (above \$50M in total assets) reported sooner than smaller companies (less than \$5M in total assets). The characteristics found to be significant were corporate size and company year-end.

Whittred (1980b) replicated the Dyer and McHugh study using a random sample of 100 Australian firms from 1972 to 1977. The purpose of the replication was to test the effect of a new listing requirement by the Australian Associated Stock Exchanges. The listing requirement change was a reduction in the time allowed for companies to file their annual reports. The results of the Whittred study indicate that the change in requirement had no effect on the timeliness of corporate reporting. The companies that were able to file before the four month requirement were already filing before that date and the firms that failed to file timely before the reduced reporting requirement also failed to file timely after the reduced time period requirement was implemented.

Using the same 100 Australian companies from the Whittred study, Davies and Whittred (1980) study research further examine company attributes that might help explain the reporting delay reported in the Dyer and McHugh (1975) study. Davies and Whittred ranked all companies in the sample and used quartiles to determine large and small companies. The results revealed that both the small and large firms (first and fourth quartiles) reported sooner than the moderate size firms (second and third quartiles). Further, Davies and Whittred tested auditor attributes for their effect on delay. While the testing found no association between then Big 8 audit firms and other audit firms, there was an association between a change in auditors and reporting delay. In contrast to Dyer and McHugh, Davies and Whittred did not find firm yearend or profitability to be significant. They did find that companies experiencing extremes in profitability experienced reporting delays.

Zeghal (1984) tested the usefulness of accounting information in relation to the timeliness of that information. Using the announcement of financial statement publication for 1400 firms between 1973 and 1975, Zeghal tested the market reaction to the financial statement announcements. The results of this study showed that information presented earlier to financial statement users earlier has more relevance (greater market reaction). Zeghal found the relevance of the information was greater for interim statements than for annual reports. He suggested that the information in the annual report was anticipated more than the information contained in the interim statements and the market had already reacted to the information contained in the annual report, making the



annual report a confirmatory process. The lower reaction to annual reports could be related to the time required to distribute the annual reports.

Alford et al. (1994) examined firms that file SEC form 10K after the statutory filing period of 90 days. Using a sample of 38,775 10K filings from 7,887 firms between 1978 and 1985, the authors found that 20 percent of firms missed the statutory filing date. Further examination revealed common characteristics for late filers. In particular, late filers are not random but are generally small, have negative earnings changes, low liquidity, high leverage, and experience negative market reactions. The majority of these firms also have experienced an unfavorable economic event. Fifty percent of the late filers in their sample indicated the reason for late filing was due to debt renegotiation or financial distress.

Givoly and Palmon (1982) examined earnings announcements and found a significant but weak relationships with bad news delays. The authors used a sample of 2,836 earnings announcements collected from *The Wall Street Journal Index* for the years 1960 to 1974. Their results reveal a steady decline in reporting delay over the time period. The purpose of their study was to find common firm characteristics related to the observed timeliness of earnings announcements. Givoly and Palmon found that company size and complexity of the audit were associated with the timeliness of earnings announcements. Company size was inversely related to the timeliness of filing<sup>1</sup>; larger companies report earlier than small companies. The authors used a ratio of inventory to total assets as a proxy for complexity.

Keller (1986) hypothesized that qualified audit opinions would cause a delay in earnings announcements and report filings. Using a sample of firms from 1973 to 1977 Keller found a delay in announcement and filings by firms that were given subject to audit opinions by their auditors. Keller also found that the correct event date for studying audit delay was not the earnings announcement date but the annual report date. Similarly, Whittred (1980a) collected a random sample of 100 companies financial statements between 1965 and 1974 and discovered that qualified audit opinions would lead to a delay in the annual report filing. Indeed, for Australian companies, qualified audit opinions had a significant effect on the timeliness of annual reports.

Because audit delay can affect reporting delay, Dyer and McHugh (1975) examined audit signatures as a source of delay in financial reporting. Their results suggest that the timing of audit signatures was stationary over time, having an effect on the time of the filing, but not an effect on early or late filing. Ashton et al. (1989) examined audit delay in more detail because audit delay can affect reporting delay. The authors used a sample of 842 Canadian firms that traded on the Toronto exchange. Ashton et al. found that companies reporting net losses and extraordinary items had greater audit delays. Companies with December and January yearends had fewer audit delays. While the results were significant, they explained very little of the variation in reporting timeliness. Intra-industry patterns explained more variability in reporting delay than individual company characteristics.

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<sup>1</sup> Timeliness of filing was defined in Givoly and Palmon (1982) as the number of days between the company year end and the filing date.

Extending the audit delay research, Bamber et al. (1993) studied audit factors that influence audit reporting delay. The authors hypothesized that the extent of audit work, audit firm technology, and auditor incentives to expend more time were determinants of audit reporting lag. Using a sample of 972 firm years between 1983 and 1985, the authors found that auditor business risk (proxied by concentration of ownership and financial condition), audit complexity (proxied by industry), company size, and other factors (extraordinary items, net losses, and qualified opinions) were all significant factors in explaining audit delay.

Other research has examined the release date of earnings information. The extant research in this area suggests that companies with bad news tend to release information later, and that companies with good news tend to release information earlier (Chambers and Penman 1984). Chambers and Penman (1984) used a random sample of 100 firms listed on the New York Stock Exchange; collected annual dates from *The Wall Street Journal Index*, and obtained a sample of 2,756 firm-years from 1970 to 1976. These authors found an inverse relationship between size and announcement timing (large firms announce earlier). Chambers and Penman also found early reports generally reflect good news while later reports reflect bad news.

In extending this concept to 10K, filings Easton and Zmijewski (1993) used a sample of 76,866 10K filings and 193,283 10-Q filings from 1962 to 1985. The authors found that the good news, (bad news) issue did not affect annual filings. The good news, bad news was found to be an issue with earnings announcements but not in annual filings.

Courtis (1976) used a sample of 204 New Zealand firms and found results comparable to Chambers and Penman (1984). Courtis found some industry variation in the timeliness of filings. Also, early and late reporting firms had statistically significant differences in profitability.

Chai and Tung (2002) examined earnings announcement timing and earnings management. Using a sample of 10,503 firm year observations, Chai and Tung report that discretionary accruals were influenced by late announcements. They defined late announcements as earnings announcements that were made more than five days later than the prior year. Further, the magnitude of discretionary accruals was also associated with the magnitude of the delay in making the earnings announcement.

Bankruptcy issues have also been associated with reporting delays. Whittred and Zimmer (1984) reported that Australian companies approaching bankruptcy had significant reporting delays for three years prior to a company filing bankruptcy. Their sample consisted of 53 failed firms between 1964 and 1978. Lawrence (1983) used a sample of 110 firms that filed bankruptcy between 1975 and 1981 and also found significant reporting delays for those companies filing bankruptcy.

### **Market Reaction to Earnings Management Literature**

A large volume of literature has examined market reaction to various characteristics of earnings announcements/report filings. The following section reviews the literature regarding the market reaction to the timeliness of announcement/filing dates. Research has addressed other issues that theoretically affect market reaction to earnings announcements. Included in this research is the issue of the timing of earnings

announcements. Kross and Schroeder (1984), using sample consisted of 3,552 quarterly observations from 1977 to 1980. Kross and Schroeder hypothesize a relationship between type of news (good news vs. bad news) and the timing of the earnings announcement. They further hypothesize a relationship between the market reaction and the timeliness of the earnings announcement. The abnormal return reaction was significantly greater (lower) for firms that announced earlier (later). In the study, the authors divided the sample of firms into three groups: those that announce early, those that announce on-time, and those that announce late. Correlating these sub-samples to bad news vs. good news resulted in six groups. Controlling for earnings forecast error, they tested the abnormal returns surrounding the announcement date. The data used in the study included quarterly and annual earnings announcements. To control for the variation between quarterly announcements and annual announcements, the authors used the number of days between the announcement date and the period end date in their time series analysis. The median date for each firm was used to compute the early (late) timing. The market reaction, after controlling for earnings forecast error, was the same for all firms regardless of firm size, whether the firm reported good (bad) news, used annual vs. quarterly announcement, or contained moderately good (bad) news.

Zeghal (1984) used a sample of quarterly and annual earnings announcements for 1,402 companies between 1973 and 1975. The results indicate that earlier information has greater usefulness to stakeholders. Usefulness was estimated by calculating abnormal returns associated with the earnings announcement dates.

Atiase et al. (1989), using a sample of 8,320 annual earnings announcements between 1975 and 1984, found that large firms tend to announce their earnings earlier than small firms and the market reaction was less for the large firms. The authors hypothesized a relationship between the timeliness of the earnings announcement and the market reaction to the announcement. Controlling for firm size, the length of announcement delay was inversely related to the size of the market reaction.

In a theoretical paper, Gennotte and Trueman (1996) researched the timing of disclosures in more detail by researching the time of day the disclosure was made and the subsequent market reaction. The authors conclude that there should be a greater market reaction for disclosures made during the trading day than for disclosures made after the market has closed.

Penman (1984) found that investment strategies using the announcement dates of firms could produce abnormal returns to investors. Penman used a sample of 2,327 annual and quarterly earnings announcements to test the hypothesis that an investment strategy based upon the earnings release timing could result in abnormal returns. The results indicate that short positions taken on companies reporting late experienced abnormal returns. The abnormal returns were larger for small firms and greater abnormal returns were experienced for longer delays. Additionally, the research indicates that long positions taken prior to an early announcement would also have produced abnormal returns.

Sinclair and Young (1991) also found that abnormal returns could be obtained by using an investment strategy based upon the timing of the earnings announcement.

Sinclair and Young used a sample of 1,110 half yearly earnings announcements between 1982 and 1988 for Australian firms. The authors hypothesized that results found by US researchers would be the same using Australian firms. They found that while the reaction was slightly less than the reactions reported in US firms, they did find that firms that report early generally have good news to report, and that abnormal returns around the announcement date were associated with unexpected changes in earnings per share. However, Sinclair and Young found no evidence of market reaction to timeliness of reporting as reported by Kross and Schroeder (1984) when controlling for the information content of the earnings announcement.

Chambers and Penman (1984) used a sample of 2,756 annual and quarterly earnings announcements over the period of 1970 to 1976. Their findings show an inverse relationship between size and announcement timing (large firms announce earlier), and smaller firms have a greater market reaction to earnings announcements. Chambers and Penman also found that early announcements generally indicate good news and late announcements generally report bad news. The market also reacts negatively to late announcements before the reports are issued. Chambers and Penman theorize that the market was anticipating bad news.

Givoly and Palmon (1982) in their study of earnings announcements found that bad news delays were significant but the relationship was not a strong one. They used a sample of 2,836 firm years between 1960 and 1974 to test trends and attributes of companies that could affect the timeliness of company filings. The market reaction to the later announcements was very small. The conclusion was that the longer the delay in

making earnings announcements the more information is obtained from other sources and integrated into stock prices before the announcement date.

Easton and Zmijewski (1993) used a sample of 76,866 10K reports and 193,283 10-Q reports from 1962 to 1985. They researched 10K and 10-Q filings, prior to EDGAR, and found that firms did not delay bad news or present good news early in annual or quarterly filings as found by Chambers and Penman (1984). Easton and Zmijewski state that most reports were filed close to the filing deadline and left no room for delay. They conclude that the timing issue described by Chambers and Penman must be limited to earnings announcements.

Asthana and Balsam (2001) examined the effect of the SEC website EDGAR on information distribution. Using a sample of 195 randomly selected firms, they collected filing dates from 1993 to 1997. Prior to EDGAR, market reaction to annual report filings was not possible because the distribution of data required such a long period that it permitted many other events to pollute the results. Using a sample of firms that are first time filers on EDGAR, Asthana and Balsam found both a volume and price reaction to 10K's filed on EDGAR and consistent with prior literature, there was no reaction to filings made before EDGAR.

Griffin (2003), using a sample of 10,805 10K filings and 52,262 10-Q filings, examined market reactions to corporate filings on the SEC EDGAR website. His results indicate that the market reacts to quarterly and annual filings. Firms with large institutional investor holdings and larger firms experience lower market reactions, and there was no significant reaction to the magnitude of accounting accruals. For the



accruals portion of his research Griffin used net income from continuing operations less operating cash flow deflated by stockholder equity. Griffin further finds that the market response increased over the study period (1996 to 2001).

Han and Wild (1997) examined how earnings announcement timing effected member firms in the same industry, an intra-industry information transfer. They used a sample of 1,418 firm quarter earnings announcements between 1984 and 1986 to test the hypothesis that the timeliness of a firm's earnings announcement has an effect on the stock price of other firms in the industry. Their research showed that there was information transfer between firms in the same industry. Firms that release information early have an effect on the share price of other firms in the industry that have not released earnings information. Subsequent industry earnings announcements have an effect on only industry firms that have not yet released earnings information. Both the sign and the magnitude of the reaction vary with the timing of the announcements.

### **Summary of Timeliness Literature**

Chai and Tung (2002) found earnings management present in companies making earnings announcements five days later than the prior year. Chambers and Penman (1984) found that earnings announcements are made at traditional time periods following the fiscal year. Chambers and Penman (1984) and Chai and Tung (2002) used earnings announcement dates. However, earnings announcements do not contain the information necessary to calculate the presence of abnormal accruals indicating earnings management.

While companies have discretion over the time to file, several attributes have been associated with the timeliness of filing. The company characteristics associated with variability in timeliness are:

- 1) company size (Dyer and McHugh 1975),
- 2) company year end (Dyer and McHugh 1975),
- 3) extremes in financial performance (Dyer and McHugh 1975),
- 4) change in auditors (Davies and Whittred 1980),
- 5) audit complexity (Givoly and Palmon 1982),
- 6) industry (Ashton et al. 1989),
- 7) net operating losses (Ashton et al. 1989),
- 8) the presence of extraordinary items (Bamber et al. 1993), and
- 9) qualified audit opinions (Bamber et al. 1993).

The early studies reviewed in this section examined timeliness of filing dates. The later studies examined the timeliness of company earnings announcements. While the current study focuses on company filing dates, factors that affect the timeliness of earnings announcements have the potential to affect the timeliness of the annual report filing.

Delays in receiving audit opinions could affect the timeliness of annual filings. Keller (1986) found audit delay associated with the annual report dates providing evidence that factors that affect audit delay need to be controlled in a study of the timeliness of annual report filings.

In summary this section has highlighted firm characteristics that are related to timeliness of company filings and earnings announcements in prior research (Dyer and McHugh 1975; Chambers and Penman 1984; Bamber et al. 1993). The current study is testing Trueman's theory that moving earnings from one period to another period (earnings management) requires time. The literature presented in this literature review indicates company characteristics which have been reported to have an affect on annual report timing and must be controlled for in the current study. The literature also indicates that management has discretion over the timing of earnings announcements and statutory filings (Chambers and Penman 1984).

### Earnings Management

Buckmaster (2001) presents a history of the extant literature on income smoothing dating from 1893. Income smoothing is the manipulation of earnings to even out reported earnings over time, and may be achieved by the discretionary use of accounting estimates, or changes in accounting estimates to affect a firm's net income. As data availability and statistical methods have improved, researchers may now examine earnings management.

Healy and Wahlen (1999) defined earnings management as managers using judgment in reporting and structuring transactions to mislead stakeholders or influence a particular outcome. Dechow and Skinner (2000) suggest that earnings management is intentional, deliberate misstatement or omission, otherwise known as fraud.

Trueman's (1990) theory suggests that earnings management is the results of firms releasing earnings reports later than expected. Trueman presents two explanations for his theory: 1) firms adjust their earnings to reduce an unfavorable result, or 2) firms observe the results from other firms in the industry and then adjust their results accordingly.

The body of literature on earnings management has grown in the past decade as indicated by the increase in the number of studies published in this area. Events of the past three years (Enron, Worldcom, etc.) have increased visibility of the topic. Lynn Turner, as chief accountant of the SEC, (Turner and Godwin 1999) called for more research in earnings management to help the SEC. Healy and Wahlen (1999) review earnings management literature and conclude that the earnings management literature has mostly focused on understanding if and why earnings management exists. They conclude that more studies are needed in the pervasiveness of earnings management and what weaknesses are being exploited by company management to manipulate earnings.

The research described in Healy and Wahlen (1999) tested for the existence of earnings management by examining firm or industry characteristics that may lead to earnings management. An example of this research is DeFond and Jiambalvo (1994). DeFond and Jiambalvo studied 94 firms between 1985 and 1988 that were approaching debt covenant violations. They hypothesized that firms close to debt covenant violations would be more likely to engage in earnings management to avoid the debt violation. This work was supported by the earlier work of Healy and Palepu (1990), in which they studied 126 firms with dividend covenant restrictions between the time period 1981 and

1985. They found these dividend covenant restrictions were effective in controlling management decisions.

Jaggi and Lee (2002) divided financially distressed firms into two groups, those with debt covenant waivers and those firms without such waivers. The results suggest that firms manage earnings upward if they have obtained waivers. Jaggi and Lee studied 135 firms that experienced either a violation of debt restrictions or a debt restructuring between the time period 1989 and 1996. They concluded that firms that have not obtained waivers manage earnings downward. This study offers support that management choices affect earnings management.

Agency theory indicates management would have an interest in attaining certain goals. Work in this area includes several studies researching management compensation. In one of the earliest earnings management studies Healy (1985) found that management has incentives to make accounting choices that increase management bonuses. Healy used a sample of 1,527 firm year observations<sup>2</sup> for 94 firms. Healy also noted that executives manipulate income downward when their bonuses are at the maximum payout. Holthausen et al. (1995) extended the Healy study using a confidential data set of 443 firm years of executive bonus plans, and found that managers manipulate earnings to obtain bonuses. Guidry, Leone, et al (1999) tested the results from Healy's study using unit level data from one company. The data used comprised bonus information from over 100 separate business units of a single company for the years 1993 to 1995. Guidry

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<sup>2</sup> A firm year observation is an observation for one firm for one year.

et al. found similar results; divisional managers manipulated the earnings of their respective divisions to reach bonus targets.

The relationship between management compensation and earnings management has been established and extended in additional studies. Using a sample of 3,439 firm years between 1980 and 1993, Balsam (1998) reported that managers use discretionary accruals to manipulate executive compensation; income increasing accruals were more significant when tested against executive cash compensation. Balsam found that executive cash compensation was related to discretionary accruals. He further found that discretionary accruals which assisted a company in avoiding or reducing a loss were significantly related to executive cash compensation.

Payne and Robb (2000) studied whether firms manage earnings to meet or exceed analysts forecasts using an industry abnormal accruals method. Using a sample of 13,532 firm year observations between 1986 and 1997, they hypothesized that firms manage earnings to meeting or beating analyst forecasts. Payne and Robb found evidence that management's incentives to meet or beat analyst's forecasts were associated with earnings management.

Abarbanell and Lehavy (2003) studied firms with sell or buy recommendations from analyst. Using a sample of 22,173 firm quarters between 1985 and 1998 the authors examined earnings management behavior differences between firms with high and low stock price sensitivity. They defined high stock price sensitivity as companies with a high price earnings ratio or a high market to book ratio. The authors found that firms with sell recommendations engaged, ex post, in income increasing earnings management,

while firms with buy recommendations engaged in income decreasing earnings management.

Other studies examine losses and earnings declines. For example, Burgstahler and Dichev (1997) used a sample of 64,466 firm year observations between 1977 and 1994 to study whether firms manage company earnings to avoid earnings decreases or losses. Their results suggest that firms do avoid losses and earnings declines by earnings management.

Dutta and Gigler (2002) extended this research by including management earnings forecasts. Dutta and Gigler's results suggest that, when management is asked to forecast earnings, there is less earnings management. Management forecasts were further studied by Jaggi and Sannella (1995) using a sample of 274 management forecasts from 1979 to 1988, these authors examine relationship between management forecasts and earnings management. Their results indicate that managers use discretionary accounting choices to meet management forecasts. These results were confirmed by Kasznik (1999), who used a sample of 499 firm years for 366 firms between 1987 and 1991. The 44 percent of the sample, management had overestimated earnings the authors also report a significant presence of abnormal accruals that were positively associated with overestimated forecasts.

Matsumoto (2002) found evidence that management was motivated to manage earnings to avoid negative earnings surprises. Using a sample of 29,460 firm years from 1985 to 1997, Matsumoto hypothesized that management is motivated to manage

earnings when the firm has high institutional investment, high growth prospects, and high litigation risks.

In an additional earnings management study, Degeorge et al. (1999) suggest that management has incentive to adjust earnings to exceed three thresholds. The three thresholds are to: (1) report positive earnings, (2) sustain recent performance, and (3) meet analysts' forecasts. For a sample of 5,387 firms for the years 1974 to 1984, the authors found support for each of the hypotheses.

Additional evidence is presented in research on initial public offerings (IPO) and their effect on earnings management. Researchers have hypothesized that company management has the incentive to manage earnings upward prior to initial public offerings. Aharony et al. (1993) examined earnings management prior to IPOs. Their results found little evidence of earnings management except in small and highly leveraged firms. The sample consisted of 229 industrial firms offering IPOs between 1985 and 1987. This evidence was extended by other researchers (Teoh, Welch, and Wong 1998a; DuCharme, Malatesta, and Sefcik 2001) finding similar results.

DuCharme et al. (2001) examined whether firms manipulate earnings upward prior to an IPO. Using a sample of 171 IPOs from 1982 to 1987, their findings indicate that company management is motivated to increase the pre-IPO earnings to realize larger offering proceeds. The authors further conclude that this manipulation could be responsible for subsequent firm under performance.

Teoh et al. (1998a) used 1,526 IPOs from 1975 to 1984 in their study and found earnings management present in company filings prior to IPO offerings supporting



Ducharme et al. (2001). However, Teoh et al. also segregated the IPO firms into quartiles based upon the quantity of the abnormal accruals. Firms in the first (fourth) quartile, representing the highest (lowest) abnormal accruals, had the worst (best) returns over the subsequent three years. Firms in the fourth quartile were also more likely to issue seasoned equity offering twenty percent more often than the first quartile firms.

Teoh et al. (1998b) found evidence of earnings management in firms prior to a seasoned public offering in their study of seasoned IPO firms. They used a sample of 6,386 equity offerings between 1970 and 1989. They also found that firms engaging in earnings management prior to the public offering experienced poor stock performance for the three years subsequent to the public offering date. Rangan (1998) used a sample of 230 seasoned public offerings from 1987 to 1990. Rangan hypothesized and found support firms that manage earnings prior to seasoned equity offerings experience poor performance subsequent to the offering and that managed earnings are not sustainable.

While the IPO research has shown evidence of income increasing earnings management, other studies have found incentive for earnings management that decreases earnings. Perry and Williams (1994) study management buyouts, using a sample of 175 firms between 1981 and 1988. Their results indicate that prior to a management buyout, company managers engaged in earnings management that decreases income. These findings were supported by Wu (1997), using a sample of 87 management buyouts between 1980 and 1987, Wu's study expands the prior research by testing third party takeover mergers. He found support for the hypothesis that no income decreasing earnings management would be found in non-management buyout firms. He concludes

that management has the incentive to manipulate earnings prior to a management takeover to reduce the price that management pays for the outstanding stock. In contrast, management does not have the incentive when the purchaser is a third party.

Erickson and Wang (1999) examined earnings management by acquiring firms in mergers and acquisitions. They used a sample of 78 that firms negotiated mergers between 1985 and 1990, and found that managers use earnings management to increase stock values prior to stock for stock mergers to reduce the acquisition price of target firms.

Another area of earnings management research examines the political cost hypothesis which has been defined as firms taking steps to reduce costs associated with legislative or legal actions. Cahan et al. (1997) examined chemical firms when the U.S. Congress was considering the superfund legislation, and found evidence that chemical companies used income-decreasing accruals to reduce company profitability prior to final legislative action. The authors used a sample of 43 firms that had potential exposure to the superfund legislation. The results of their research indicates that these firms used income reducing earnings management techniques in 1979, the year of the legislation, but not in 1978 or 1980. Additional income-decreasing accrual use timed to legislation was found by Key (1997), studied 24 publicly traded firms in the cable industry. Key hypothesized these firms used income decreasing earnings management during a period when the U.S. Congress was considering legislative action which would reduce the firm's financial appearance so they could claim to be an industry suffering a financial downturn and ask congress to take pity on the poor companies.

To support an industry argument of unfair trading practices, Rayburn and Lenway (1992) found income decreasing earnings management present in the semiconductor industry at a time when the industry was filing briefs with the Department of Commerce to argue unfair trade practices by overseas competitors. The industry and the Department of Commerce argued that the semiconductor industry was harmed by unfair practices of Japanese firms. The authors also compared the results to the computer industry to insure the results were not caused by a recessionary downturn.

In a similar study, Jones (1991) found earnings management among firms during import relief hearings before the International Trade Commission. The use of accounting information to determine if an industry is harmed provides great incentive for management to manipulate results. Using 23 firms from five industries that filed for trade relief between 1980 and 1985, Jones found evidence to support her hypothesis that these firms managed their earnings downward.

Hall and Stammerjohan (1997) found income decreasing earnings management for the oil industry when testing against periods when the individual firms faced litigation. Using 20 oil firms between the years 1974 and 1992, the authors tested six firms that faced individual litigation against the industry. The results found that these six firms used income decreasing earnings management in the year that the firms faced litigation.

Han and Wang (1998) also examined at the oil industry but used the Gulf War as the source of the political costs. In this study, the authors used 76 companies from the petroleum industry and the petroleum refining industry, and their results indicate that the

oil companies used income-decreasing accruals to reduce the political costs connected with profiteering from increases in oil prices connected with the war.

These previous studies all used one industry to test a relationship between earnings management and the political cost hypothesis. Cahan (1992), using the political cost hypothesis, tested across industries in a study of 48 companies subject to Federal Trade Commission (FTC) scrutiny regarding monopolistic practices. The political cost hypothesis was supported indicating that firms used income-decreasing accruals during the periods of review by the FTC.

This stream of literature supports the view that management engages in earnings management in the presence of an incentive. Incentives found to be significant for company management to manipulate earnings include: 1) management compensation, 2) company losses, 3) analyst forecasts, 4) management forecasts, 5) debt covenants, 6) initial public offerings, 7) management buyouts, 8) firm acquisitions, and 9) political costs avoidance.

Beneish (1999) provides some insight into consequences of managers engaging in earnings management. The Beneish study investigated firms subject to SEC enforcement actions or litigation. In a sample of 36 firms that were the subject of class action lawsuits regarding earnings overstatements, the results of the research suggest that manager employment losses (management turnover) were not larger for firms overstating income prior to SEC enforcement than for control firms. The SEC was also not likely to enforce monetary penalties unless the managers sold shares prior to the discovery of the income overstatement. Beneish suggests that neither employment loss potential or SEC penalties

are sufficient to keep managers from overstating company income when it benefits the managers.

### **Market Reaction to Earnings Management**

Several studies have examined the market reaction to earnings management. Sloan (1996), using a sample of 40,679 firm years from 1962 to 1991 found that the market did not recognize earnings management. Sloan hypothesized that the market fixates on earnings and not the underlying information from financial statements. His results indicate that the market misprices stocks as a result of the earnings management.

Subramanyam (1996) expanded the Sloan (1996) study results. The purpose of the expansion was to test whether the Sloan findings could be explained by income smoothing. Using a sample of 21,135 firm years from 1973 to 1993 Subramnayam concludes that the earnings management found by Sloan is not earnings manipulation but management's efforts to smooth earnings. Subramnayam admits that sensitivity tests fail to rule out the possibility the results could be from earnings manipulation.

Xie (2001) extended this research using a sample of 56,692 firm years between 1971 and 1992. Xie found that, not only did the market fail to recognize the earnings management, the market over priced the results. In additional testing, Xie further decomposed accruals into abnormal accruals and normal accruals. Subsequent analysis indicates that the market is pricing not only the normal accruals, but also the abnormal (discretionary) accrual components of income.

Collins and Hribar (2000) replicated the Sloan (1996) study using 41,237 firm quarters between 1988 and 1997. They extended Sloan's work to determine if the

overpricing was the result of post-earnings announcement drift. Their results indicate that their results are separate from post-earnings announcement drift.

Extending the research on market reaction to earnings management, Balsam et al. (2002) further researched quarterly 10-Q filing dates. Starting with 37,708 firm-quarter observations between 1996 and 1998, the authors restricted the firm-quarter observations used in the study to: 1) firms with a December year-end, 2) quarterly earnings exactly met or exceeded analyst forecast by one cent, 3) the absolute value of unexpected discretionary accruals was at least one percent of total assets, 4) the 10-Q was filed within 45 days of the quarter end, and 5) the 10-Q filing date was at least 12 trading days after the earnings announcement dates. These restrictions reduced their final sample to 613 firm quarters. The authors hypothesize that the use of earnings filing dates is the appropriate period to test for earnings management because the information required to recognize earnings management is not available until the financials are filed. Using event methodology with a long event window, Balsam et al. found that the market recognizes abnormal accruals and reacts negatively to their presence. The results were greater (more stock price movement) when using institutional investors as a proxy for sophisticated investors. A limitation of this study was the use of a sample that contained only firms suspected of engaging in earnings management. This limitation leaves open a question: if firms not suspected of managing earnings were included in the test, would the results still indicate market recognition?

Chai and Tung (2002), using a sample of 10,503 firm year observations between 1991 and 1994, found earnings management present in firms announcing earnings 5 days

later than the previous year. They speculated that late announcers wait to see the results announced by other firms in the industry, and then manipulate their earnings accordingly.

Additional evidence of the market mispricing accruals is supported by studies from Teoh et al (1998a and 1998b) and Rangan (1998). In Teoh et al. (1998b) the authors test for earnings management in seasoned equity offerings. After finding abnormal accruals present before the offering, they further test for a market reaction. They find that the market prices the offerings based on the manipulated results and the market fails to adjust for the overstated earnings. Teoh et al. (1998a) replicates the study using initial public offerings. In both studies the authors conclude that the abnormal accruals prior to the offering and the overpricing of these accruals lead to the under performance of these offerings in subsequent years after the offering. Rangan (1998) also used seasoned equity offerings to conclude that the market temporarily overprices stocks based upon earnings management present in the financial reports issued prior to the public offering.

### **Earnings Management Methodology**

The earnings management methodology continues to evolve. As shown by the research on IPOs, advances in methodology have produced additional results. Early research by Healy (1985) and DeAngelo (1986) focused earnings management research on observing abnormal accruals. The early methodology used to study earnings management measures total accruals and then decomposes the total accruals into two parts: normal accruals and discretionary accruals. Abnormal accruals are defined as

accrual amounts in excess of the industry average. DeChow et al. (1995) present evidence that a modified version of a model used by Jones (1991) provides the better results in a test for abnormal accruals. This Modified Jones Model uses balance sheet data to make the estimates of abnormal accruals. Hribar and Collins (2002) presented evidence that the Modified Jones Model is biased for firms with merger activity and presented a model that eliminates this bias using data from the cash flow statement.

Other researchers have employed methods other than the abnormal accrual models. However, the vast majority of the earnings management literature of the last decade focuses on the use of abnormal accruals methodology. Examples of research using accruals other than abnormal accruals from industry averages include Bauman et al. (2001) which studies deferred tax expense accrual for earnings management, a method also used by Phillips et al. (2003). Both of these studies found evidence that firms manage earnings in methods that do not increase income taxes, thus increasing the deferred tax expense amounts.

Additional authors have employed methodologies relating to characteristics specific to certain industries. Examples of research using industry characteristics include Mensah et al. (1994) who examined characteristics specific to the health care industry. Additional research by Ahmed et al. (1999), Bhat (1996), and Robb (1998) examined loan loss reserves in the banking industry.

### **Summary of Earnings Management Literature**

The vast majority of earnings management research has used methods to segregate abnormal accruals from total accruals. The model used in recent literature, the



cash flow variant of the Modified Jones Model (Hribar and Collins 2002) has evolved from earlier attempts to measure abnormal accruals.

Earnings management issues have existed in the literature for over a century (Buckmaster 2001). Research to date has found that earnings management occurs when management has an incentive to change reported earnings. Incentives that have been found associated with earnings management include management compensations, analyst forecasts, avoidance of losses and earnings declines, IPOs, and political costs.

Prior research has tested events where the authors have theorized that there is sufficient incentive for earnings management to be present. The research to date has found the presence of earnings management but not how to control earnings management (Healy and Wahlen 1999). Benish (1999) found that SEC enforcement actions fail to control earnings management. Trueman (1990) theorized that time is required to manage earnings. If earnings management requires time as theorized, then the SEC's reduction in the time to file annual and quarterly reports could reduce the amount of earnings management.

Several studies have examined the market reaction to earnings management. The study by Sloan (1996) found that the market did not recognize earnings management and mispriced stocks as a result of the earnings management. These results are also supported by Subramanyam (1996). Xie (2001) expanded this research and found that not only did the market fail to recognize the earnings management, the market overpriced the results. A study by Collins and Hribar (2000) expanded the research of Sloan by utilizing quarterly filing dates found similar results. However, Balsam et al. (2002)

found that the market reacted negatively to earnings management at 10-Q and 10K filing dates. They found higher significant when using a proxy for sophisticated investors. The results of Sloan, Xie, and Collins and Hribar indicates that the market over prices abnormal accruals in the long-term but the results of Balsam et al. indicates that the market recognizes earnings management in the short term.

The Balsam et al. (2002) study used a small sample of firms (613 firm quarters) that were suspected of engaging in earnings management. It is unknown if the results found by Balsam et al. could be indicated for a larger sample including firms not suspected of engaging in earnings management. If the results hold true, this adds additional evidence of the myopic nature of the market.

### **Literature Review Summary**

Trueman (1990) theorized that earnings management delayed firm reporting. The author proposed two scenarios for this possibility: 1) firms need time to adjust their results to cover unfavorable company results, or 2) firms wait until others in the industry have announced earnings and adjust their earnings accordingly. This second proposition is supported by Chai and Tung (2002) who found earnings management present in firms that announced results five days later than the prior year. Chai and Tung propose that the cause of these findings is that firms wait to see the results of other firms before adjusting (manipulating) their own results.

Givoly and Palmon (1982) conclude that companies file annual reports at traditional time periods. If earnings management delays reporting as theorized by

Trueman (1980), then controlling for other delay factors, late deviations from the traditional filing dates could be the result of management manipulating earnings.

Prior researchers have stated that, assuming the efficient market hypothesis holds, the market already has absorbed most of the information contained in earnings announcements prior to the release of the data. Ball and Kothari (1991) state that routine earnings announcements resolve some uncertainty and that this increase in information produces some volatility surrounding the announcement date. Bartov et al. (2002) found positive market returns for firms that meet or exceed analyst forecasts. Payne and Robb (2000) found firms manage earnings upward to meet analyst forecasts. These studies provide a theoretical basis for the concept that the market could over price abnormal accruals.

Contrary to studies by Sloan (1996) and Xie (2001), Balsam et al. (2002) found the market reacts negatively to earnings management at the 10-Q filings dates. Balsam et al. state that these results are limited because their sample consisted only of firms suspected of engaging in earnings management.

Previous research provides a foundation for the current study. As indicated in the prior literature, several issues are pertinent to this study. From the timeliness literature it has been shown that company management has discretion over the timing of the release of information and that companies release information at traditional time periods. Also indicated in the timeliness literature are items that have been found to be associated with delays in timing. These items: 1) company size, 2) company year end, 3) change in

auditors, 4) audit complexity, proxied by industry or inventory to asset ratio, 5) the presence of extraordinary items, 6) net operating losses, 7) qualified audit opinions, 8) industry, and 9) extremes in financial performance must be controlled for in research regarding timeliness.

The prior research on earnings management has found that company management is motivated to manage earnings to reach specific goals. Included in these goals is the expectation to meet or exceed analyst forecasts of company earnings. Researchers to date have not been able to identify methods to control or limit earnings management by firm management. Research has in fact shown that SEC enforcement actions are not sufficient to limit earnings management. The research has shown that additional research is needed to isolate methods to reduce earnings management.

The market recognition of earnings management literature has left contradictory evidence. Sloan, Xie and others have found that the market does not recognize earnings management while Balsam et al. found that the market does recognize earnings management.

The current study provides a foundation to test Trueman's theory that earnings management requires time. Companies have a limited time to make earnings announcements and statutory filings. If Trueman's theory of the timeliness of earnings management is supported, then the reduction of the allowed time to file annual and quarterly reports mandated by the SEC should reduce earnings management.

## **CHAPTER III**

### **THEORY AND RESEARCH METHODS**

#### **Annual Report Timeliness**

Trueman (1990) theorized that time is required to shift earnings from one period to another, earnings management. Trueman concludes by stating that the potential exists for this theory to be empirically tested. Trueman's theory presents a research question of: does earnings management require time? If earnings management requires time as theorized, then the SEC regulatory change regarding the reduction of time to file 10K reports should reduce firm ability to manage earnings.

Alford et al. (1994) found that most companies were able to file before the 90-day limit but many did not. The authors present no evidence regarding why companies delayed the 10K filing. The authors speculate that one possible reason is company tradition. Givoly and Palmon (1982) also state that one contributing factor to the timeliness of filing was company tradition. Because most firms were able to file before 90 days and choose not to, the authors speculate that firm tradition dictates the timeliness of filing. If companies engage in earnings management irregularly, then deviations from the company traditional filing date could indicate a deviation from normal earnings reporting and indicate earnings management, after controlling for other factors that have been found associated with filing delays in prior studies.

In a pre-EDGAR study, Easton and Zmijewski (1993) found that company filings were made close to the filing deadline and left little time for delay. Asthana and Balsam (2001) note that firms filing on EDGAR have reduced the time to file their annual reports. If the timeliness theory is correct then controlling for other delay factors, deviations from the company traditional filing time could indicate earnings management. To test Trueman's theory, the following hypothesis is proposed:

H1: Firms that file 10K reports later than the normal company traditional filing date have income increasing earnings management present.

Firms not engaging in earnings management should have consistent number of days to file; a company traditional filing date (Chambers and Penman 1984; Alford et al. 1994). Companies filing later than the traditional filing date, barring extraordinary events, should present evidence of earnings management, a significant relationship between abnormal accruals and deviations from the traditional filing date. A minimum of five years of company filing dates is used to establish the company mean/median filing date. This mean/median filing date is used as the company traditional filing date. The difference between the traditional filing date and the actual filing date are deviations from the traditional date. It is hypothesized that there will be a positive relationship between abnormal accruals (income increasing earnings management) and this timing difference.

Companies file annual reports at traditional time periods (Chambers and Penman 1984). Chambers and Penman (1984) found the standard deviation of annual earnings announcements to be one week. Firms that file their annual reports consistently should have a standard deviation of one to two days. Thus a firm with a standard deviation of 1

day that filed a report 3 days later than normal (a weekend delay) would be incorrectly included in the firms suspected of earnings management. After calculating the standard deviations for the entire sample and for individual industries, additional tests are run testing companies filing outside the sample standard deviation. This adds an additional segregation between firms suspected of using earnings management and firms not suspected of using earnings management.

Chai and Tung (2002) found earnings management present in firms that announced earnings 5 days later than prior years. They speculate that firms wait to hear other company announcements before manipulating their results. To test this, tests are run for firms filing five days later than the company's previous year's filing date.

Firth (1976) found an intra-industry effect in the market reaction to earnings . Ashton et al. (1989) found an intra-industry effect in market reaction to earnings announcements. Based on this intra-industry effect, a test is also run for companies filing later than the industry mean/median filing date of the current year to test the intra-industry effect.

Company characteristics which have been identified in prior research that significantly relate to timeliness of filing are used as control variables in this study. The control variables used are: (1) log of total assets (size), (2) a dummy variable for firms with a December or January year-end (busy season audits), (3) a dummy variable for firms that change auditors (audit delay factor), (4) a dummy variable for the presence of an extraordinary item (audit delay factor), (5) a dummy variable for negative net income (bad news), (6) a dummy variable for qualified audit opinion (bad news and audit delay),

(7) two digit SIC code (industry and audit complexity) and (8) a dummy variable for high distress (extreme financial performance).

A positive relationship between an annual report filed outside the firms traditional mean/median filing period and abnormal accruals provides support for the theory that earnings management requires time. Support for this theory provides support for the concept that the SEC reduction in time to file can help reduce earnings management.

Alford et al. (1994) examined firms that file SEC form 10K after the statutory filing period of 90 days. Using a sample of 38,775 10K filings from 7,887 firms between 1978 and 1985, the authors found that 20% of firms missed the statutory filing date. Further examination revealed common characteristics for late filers. In particular, late filers are not random but are generally small, have negative earnings changes, low liquidity, high leverage, and experience negative market reactions. The majority of these firms also have experienced some unfavorable economic event. Earnings management has been found to be associated with both preventing negative earnings changes and preventing negative market reactions in prior research.

The Alford et al. (1994) study found that the market reacted negatively to firms that filed later than the statutory deadline. The “big bath” theory (Healy 1985) suggests that firms that cannot manage earnings upward to reach the next target earnings number should “clean” the financial statement of earnings management. This removal of abnormal accruals from the financial statements allows future income increasing earnings management (abnormal accruals) to meet future financial goals. This would suggest that since these firms are going to be punished by the market (experience negative returns) for



filing subsequent to the statutory period, the firm should remove the earnings management recorded on the books to allow future reserves to be created. Therefore, firms filing later than 90 days should exhibit income decreasing abnormal accruals.

Thus, hypothesis two:

H2: Firms that file their annual report later than the statutory 90 days have income decreasing abnormal accruals.

Supporting this expectation of income decreasing abnormal accruals, Chai and Tung (2002) found income decreasing earnings management present in late announcers. Hence, firms filing subsequent to the statutory filing date should also have the presence of income decreasing abnormal accruals.

Firms selected as filing after the statutory filing dates are firms that file their 10K forms later than 93 days from the end of their fiscal yearend. Ninety-three days is used instead of 90 days to allow for weekend and holidays.

## **Market Reaction**

Beaver (1968) stated that while earnings convey information, there are other more timely sources of information that contain relatively the same information content. Therefore, controlling for information asymmetry, it is possible to test market reaction to information contained in earnings announcements or annual filings that is not available from other sources. One type of information not available at the earnings announcement date is abnormal accruals.

The availability of information prior to EDGAR was not a timely process, 10K's were available by visiting the SEC or by writing to request a copy to be mailed. This slow dissemination of information produced a dispersed market reaction. Easton and Zmijewski (1993) found little reaction to 10K filings and they attribute this to the slow dissemination of information. Astana and Balsam (2001) state that this dispersed reaction resulted in studies such as Easton and Zmijewski (1993) finding no reaction to 10K filings. Astana and Balsam (2001) tested market reaction to company first time 10K filings on EDGAR. They found market price and volume reaction at the EDGAR filing dates. With the advent of EDGAR, the information contained in the 10K is readily available to a large audience in a short period of time. Griffin (2003) examining market reaction to EDGAR report filings, reports evidence that the market reaction to EDGAR report filings has increased over time.

Investors tend to “fixate” on earnings and ignore the underlying financial information presented to them for analysis (Sloan 1996). By managing earnings, company management is able to deceive investors. Prior research has shown that analysts and investors are not interpreting the information content of accruals and the earnings management reflected in the accrual numbers (Sloan 1996; Bradshaw, Richardson, and Sloan 2001).

Balsam et al. (2002) found a negative market reaction to earnings announcements with earnings management present. If the market is efficient as theorized by financial researchers, there should be a negative market reaction to firms with income increasing earnings management. Firms which have manipulated their earnings upward to meet

projections have created earnings that are not sustainable. The market should recognize this limitation and react in a negative manner. However, Griffin (2003) found no market reaction to total accruals (not abnormal accruals/earnings management). To address these contradictory findings, hypothesis 3 is proposed:

H3: There is a negative market reaction to company filings that include high levels of income increasing earnings management.

The Balsam et al. (2002) study which found a negative market reaction to firms suspected of engaging in earnings management, used a small sample (613) of firm quarters. The firms selected for study were only firms suspected of earnings management. Based on their sample restrictions they state they are unable to eliminate possibilities that the results could be from another explanation. Griffin (2003) did not test market reaction to earnings management, only total accruals. The lack of results noted by Griffin could be from using total accruals and not testing earnings management (abnormal accruals). While total accruals could be highly correlated with discretionary accruals, individual firm year observations could provide a different result.

Event test methodology is used to test this hypothesis. The event used in the test is the date the company files the annual report on EDGAR. There should be a negative market reaction to firms engaging in income increasing earnings management. The results of the event tests for firms with earnings management should be the same for companies filing later than company mean/median and for companies filing at their traditional filing times. To control for the market reaction to the earnings announcement,

the market reaction will be calculated based on a base line of six months prior to the earnings announcement date.

Firms that cannot file the annual report within the statutory 90 days are required to file a NT 10K for a 15 day extension of time. Griffin (2003) reports a negative market reaction to firms filing a NT 10K report. The “big bath” theory would suggest that firms filing late may have greater income decreasing abnormal accruals. (The market is already going to punish these firms late and the attitude becomes one of let’s clean up the books.) Givoly and Palmon (1982) found less market reaction to later earnings announcements. Givoly and Palmon conclude that the market has already absorbed information from other sources as the cause of the lack of reaction. The market reacts negatively to a NT filing; at the subsequent (late) 10K filing date there should be little, if any, market reaction. However, when a company files a 10K subsequent to a NT filing there should be a market reaction to firms presenting evidence of earnings management. Therefore, Hypothesis 4 is presented:

H4: Firms that file later than the statutory period and have income decreasing abnormal accruals present will have a negative market reaction.

Since the market has already reacted negatively to the NT filing, there should be no additional market reaction to the subsequent 10K filing.

### Model design

The research community has tested various earnings management models; abnormal accruals (Dechow et al. 1995), changes in deferred taxes (Bauman et al. 2001),

and methods characteristic to certain industries. (Mensah et al (1994) reviewed incurred but not reported expenses in HMO's). However, the most widely used method is the Modified Jones Model. The Modified Jones Model is a method of measuring non-discretionary accruals in company financial statements. The theory of the model is that company management uses discretionary accruals to manipulate earnings.

### **Modified Jones Model**

Dechow et al. (1995) tested four models used in previous studies to measure earnings management plus a modification to one of the models. The resulting five models tested were: 1) The Healy (1985) model, 2) The De Angelo (1986) model, 3) The Jones (1991) model, 4) The Industry model (Dechow and Sloan 1991), and 5) an industry version of the Jones model. Dechow et al. tested these five models on sample data and the results of the study indicate that the best and most accurate findings are obtained from a modification of the Jones model (Jones 1991), which they proposed in the 1995 paper. The industry version of the Modified Jones Model estimates total accruals during the event period. Estimates obtained from the model are then used to calculate non-discretionary accruals. The difference between the total accruals and non-discretionary accruals equals the discretionary accruals.

### **Cash Flow Accruals**

Hribar and Collins (2002) present evidence that tests using accruals from the balance sheet (Modified Jones Model), have biased results due to the occurrence of

mergers and acquisitions. The Dechow et al. (1995) model (Modified Jones Model) uses changes in the balance sheet assets and liabilities to calculate total accruals. Mergers and acquisitions upwardly adjust the balance sheet numbers. These upward adjustments are not distinguishable from earnings management by the model. Hribar and Collins suggest using data from the cash flow statement as a substitute in the calculation for total accruals. This model also picks up additional accruals not considered by the Dechow et al. version. An example of these additional accruals is deferred taxes which have been found to be used in earnings management in studies such as Phillips et al. (2003). The Hribar and Collins modification calculates total accruals as the difference between earnings before extraordinary items and discontinued operations and cash flow from operations. This calculation is free from the bias of changes in the balance sheet caused by mergers or acquisitions. Discretionary accruals are calculated as the residuals in the same manner as (Becker, DeFond, Jiambalvo, and Subramanyam 1998; DeFond and Subramanyam 1998; Francis, Maydew, and Sparks 1999; Chung and Kallapur 2003). The discretionary accruals are calculated using the following model:

$$ACC/TA_{-1} = a_0/TA_{-1} + a_1 \Delta SALES/TA_{-1} + a_2 PPE/TA_{-1} + \varepsilon \quad (\text{Model 1})$$

Where:

ACC = Total accruals

TA<sub>-1</sub> = Total assets at the beginning of the year

ΔSALES = The change in sales adjusted by the change in accounts receivable

PPE = Property, plant, and equipment

This discretionary accrual amount is the dependent variable for the testing.

Prior research has shown several factors to be related to earnings management. These factors are financial health, size, and growth. Financial health is measured by three variables: leverage, financial distress, and cash flow. Financial distress is measured by the Altman z-score. Size is measured by the log of total assets and growth is proxied by the market to book ratio. Control variables are included to reduce the effect of these issues.

Prior studies have also found a relationship between abnormal accruals and loan covenant violations (DeFond and Jiambalvo 1994) and a relationship between loan covenant violations and earnings management (Press and Wientrop 1990). Since high leverage firms are more likely to manage earnings, leverage is included as a control variable. LEVERAGE is measured by the ratio of total debt to total assets. Financial distress has been shown to promote earnings management (DeAngelo, DeAngelo, and Skinner 1994). To control for financial distress a dummy variable is created for firms with an Altman z-score below 1.81; indicating financial distress (HIDIS). An additional dummy variable is created for low distress firms (LODIS), firms with an Altman z-score of above 3.0 in a similar manner to DeAngelo et al. (1994). The third financial health variable is cash flow. Cash flow is controlled for using log of operating cash flow.

Larger firms have more resources available to them and have greater capabilities to manage earnings. Size is controlled for using the log of total assets (LNTA). Accrual levels can vary with the growth characteristics of a firm (Jones 1991; Young 1999). To control for this variation the market-to-book ratio is used as a proxy for growth (Chung and Kallapur 2003).

## Hypothesis one

Hypothesis one is:

H1: Firms that file 10K reports later than the normal company traditional filing date have income increasing earnings management present.

The relationship between discretionary accruals and time in this hypothesis is tested using simultaneous equations analysis. The first model is defined as:

$$\text{DACC} = a_0 + a_1\text{TIME} + a_2\text{LEVERAGE} + a_3\text{LODIS} + a_4\text{HIDIS} + a_5\text{LNCASH} + a_6\text{LNTA} + a_7\text{PRICETOBOOK} + \varepsilon \quad (\text{Model 2})$$

Where:

DACC = absolute value of discretionary accruals calculated by model (1)

TIME = time variable of interest (detailed below)

LEVERAGE = leverage

LODIS = low distress firms

HIDIS = high distress firms

LNCASH = log of cash flow from operations

LNTA = size proxied by log of total assets

PRICETOBOOK = market to book ratio

The number of calendar days between the company fiscal year end and the day the annual report is filed with EDGAR is calculated for each firm year. The time variable of interest is the number of days to file an annual report for the observation less the company average filing days (evaluated nine different ways, described in the previous section). An average number of days is calculated for each company/industry. The time variable is then the difference between the company /industry average and the number of days for the individual firm year. The average is calculated as:

- 1) Firms filing later than the company mean
- 2) Firms filing later than the company median



- 3) Firms filing later than the industry mean
- 4) Firms filing later than the industry median
- 5) Firms filing later than the sample mean
- 6) Firms filing later than the sample median
- 7) Firms filing more than 5 days later than the prior year
- 8) Firms filing more than 5 days later than the industry mean
- 9) Firms filing more than 5 days later than the industry median

LEVERAGE is calculated as total debt divided by total assets for each firm year. To control for financial distress two variables are used to indicate high and low financially distressed firms. LODIS is a dummy variable with a value of one for firms with an Altman z-score greater than 3.0 and zero for all other firm years. HIDIS is a dummy variable with a value of one for firms with an Altman z-score less than 1.81 and a value of zero for all other firm years. It is hypothesized that there is a positive relationship between the time variable of interest and discretionary accruals.

The discretionary accruals testing used in earnings management research uses discretionary accruals as the dependent variable. This type of testing attempts to find causation of abnormal accruals. The current research also examines explanations of the timeliness of annual report filing, to determine the association, if any, between earnings management and in the filing time of annual reports. Additional testing is conducted using the timeliness of filing as the dependent variable. For this testing the timeliness is the dependent variable, discretionary accruals is an independent variable, and the control variables include the factors shown in previous research to cause delay in annual filings. Significant results indicate that the abnormal accruals (earnings management) explain some timeliness of annual reports.

The issues of delay (audit delay, and good news/bad news) are included as control variables in this testing. Proxies for audit delay include presence of extraordinary items, change in auditor, busy season audits and industry (Ashton et al. 1989). A qualified or adverse audit opinion is also be included as an audit delay control (Keller 1986).

Negative net income is used as a proxy for reporting bad news (Chambers and Penman 1984). The audit delay proxies, extraordinary items, change in auditor, busy season audits, presence of an adverse audit opinion, and a negative net income are represented by a dummy variable indicating the presence of the delay factor. Other characteristics found to be significant in studies of the timeliness of annual filings include size and company yearend (Dyer and McHugh 1975). Dyer and McHugh found extremes in profitability to be significant in reporting delays. Whittred and Zimmer (1984) and Lawrence (1983) found delays for firms approaching bankruptcy. A dummy variable is used to represent high financial distress, firms with a z-score of less than 1.81. The resulting model for testing the timeliness of abnormal accruals (and the second equation for the simultaneous equations model) is:

$$\text{TIME} = a_0 + a_1\text{DACC} + a_2\text{LNNTA} + a_3\text{EXTRA} + a_4\text{AUDCHG} + a_5\text{BUSY} + a_6\text{OPIN} + a_7\text{NEGNI} + a_8\text{HIDIS} + \varepsilon \quad (\text{Model 3})$$

Where:

DACC = absolute value of discretionary accruals calculated by model (1)  
 TIME = the timeliness variable of interest calculated by subtracting the number of days the annual report is filed with EDGAR from average filing number of days. (A positive value is a firm year filed later than the average.)  
 LNNTA = size proxied by the log of total assets  
 EXTRA = dummy variable for the presence of an extraordinary item  
 AUDCHG = dummy variable for a change in auditor from the prior year  
 BUSY = audits conducted during the busy season

OPIN = dummy variable representing a non-clean audit opinion  
NEGNI = a reported negative net income  
HIDIS = dummy variable for high distressed firms

A days-to-file number is calculated for each firm year as the number of days between the fiscal year end and the date the annual report is filed with EDGAR. The average days to file is calculated for each firm/industry. The time variable of interest (TIME) is calculated by subtracting the mean/median of the individual companies from the actual number of days to file the annual report. To control for time delays resulting from extraordinary items a dummy variable (EXTRA) is created with a value of one representing the presence of an extraordinary item in the firm year observation and a value of zero for other firm years. AUDCHG is included to control for a time delay caused by a change in firm auditors. A dummy variable is created with a value of one for firm years in which the auditor is different from the prior year. A value of zero is used for all other firm years. To control for audits conducted during the busy audit season a dummy variable BUSY is created with a value of one for companies with December and January yearends and a value of zero for all other firm years. Firms with an audit opinion other than a clean opinion experience filing delays. To control for this delay factor a dummy variable (OPIN) is included coded with a value of one for firms with an opinion other than a clean opinion and a value of zero for all other firm years. Firms with negative net incomes have been found to have delayed annual report filings. To control for filing delays associated with negative net income a dummy variable (NEGNI) is created coded with a value of one for firms years with a net income less than 0. To control for financial distress a dummy variable (HIDIS) is used. The dummy variable is

coded a value of one for firms with an Altman z-score of less than 1.81 and a value of zero for all other firm years. This testing for hypothesis one is also performed using sample mean/median.

The proposed model 2 theorizes that discretionary accruals are a function of time; a company that has delayed filing is managing earnings. Model 3 theorized that time is a function of discretionary accruals; time is required to manage earnings.

### **Hypothesis two**

Hypothesis 2 states:

H2: Firms that file their annual report later than the statutory 90 days have income decreasing abnormal accruals.

Firms that file late are punished by the market (Alford et al. 1994; Griffin 2003). The big bath theory would indicate that firms that file their annual report after the 90 days statutory filing time should display income decreasing abnormal accruals. To test this hypothesis, the sample is segregated into firms that file timely and firms that file after the 90 day statutory time period. A dummy variable is created for firms filing after the 90 day statutory time period. Logit is used to estimate the following model:

$$\text{TIME} = a_0 + a_1\text{DACC} + a_2\text{LNTA} + a_3\text{EXTRA} + a_4\text{AUDCHG} + a_5\text{BUSY} + a_6\text{OPIN} + a_7\text{NEGNI} + a_8\text{HIDIS} + \varepsilon \quad (\text{Model 4})$$

Where:

DACC = discretionary accruals calculated by model (1)

TIME = dummy variable for filing after 90 days

LNTA = size proxied by the log of total assets

EXTRA = dummy variable for the presence of an extraordinary item

AUDCHG = dummy variable for a change in auditor from the prior year

BUSY = audits conducted during the busy season  
OPIN = dummy variable representing a non-clean audit opinion  
NEGNI = a reported negative net income  
HIDIS = dummy variable for high distressed firms

TIME is a dummy variable coded with a value of one for firm years filed more than 93 days after the fiscal year end and zero for all other firm years. To control for time delays resulting from extraordinary items a dummy variable (EXTRA) is created with a value of one representing the presence of an extraordinary item in the firm year observation and a value of zero for other firm years. AUDCHG is included to control for a time delay caused by a change in firm auditors. A dummy variable is created with a value of one for firm years in which the auditor is different from the prior year. A value of zero is used for all other firm years. To control for audits conducted during the busy audit season a dummy variable BUSY is created with a value of one for companies with December and January yearends and a value of zero for all other firm years. Firms with an audit opinion other than a clean opinion experience filing delays. To control for this delay factor a dummy variable (OPIN) is included coded with a value of one for firms with an opinion other than a clean opinion and a value of zero for all other firm years. Firms with negative net incomes have been found to have delayed annual report filings. To control for filing delays associated with negative net income a dummy variable (NEGNI) is created coded with a value of one for firms years with a net income less than 0. To control for financial distress a dummy variable (HIDIS) is used. The dummy variable is coded a value of one for firms with an Altman z-score of less than 1.81 and a value of zero for all other firm years. It is expected that a negative relationship exists between the

time variable and the signed values of the discretionary accruals indicating income decreasing abnormal accruals present in firms filing later than the 90 day statutory period.

### **Market Reaction**

The market reaction hypotheses are tested using an event methodology. Balsam et al. (2002) tested market reaction to earnings management contained in quarterly 10-Q statements. The period used for the testing in Balsam et al. was 17 days (-1, +15). They used this long event window subsequent to the event date because analyzing of the information included in the quarterly reports takes time. The testing for H3, the market recognition of earnings management, uses the same 17 day event window for testing.

To remove possible seasonality from the results, only firms with December year ends are used in the sample for the event testing (Beaver 1968; Balsam et al. 2002). This limitation removed 4,758 observations from the sample. To estimate the stock return response to the annual report filings, this study uses the market model originally posited by Sharpe (1963):

$$R_i = a_0 + a_1 R_m + \varepsilon \quad (\text{Model 5})$$

Where:

$R_i$  = market return for stock I

$R_m$  = market return for index

This model is estimated by ordinary least squares regression. The value weighted index return for the S&P500 is used for the index market return in this testing. The parameters are estimated using daily returns for 180 business days prior to the announcement day (days-181 to -1) and a minimum of 12 days is required between the announcement date and the subsequent annual report filing date similar to (Balsam et al

2002). The results of this testing provide the expected return for individual stocks. The residual  $\varepsilon$  is computed for each stock for the event period using:

$$\varepsilon = R_i - (a_0 + a_1R_m) \quad (\text{Model 6})$$

where  $a_0$  and  $a_1$  are obtained from the regressions of the non-event period. A positive residual implies a positive response and a negative residual implies a negative response.

There is research that indicates that the market reacts to earnings announcements more than one day prior to the announcement date, the market reacts in anticipation of the earnings announcement. An additional test of this hypothesis was performed using parameters calculated using -181 to -10 days prior to the announcement date in an effort to further reduce the market reaction to the announcement date.

### **Hypothesis three**

To test the association between discretionary accruals and abnormal stock returns, hypothesis three:

H3: There is a negative market reaction to company filings that include high levels of income increasing earnings management.

the following model is used (Balsam et al. 2002):

$$CAR_i = a_0 + a_1DACC + a_2LNNTA + a_3UNEXP + \varepsilon \quad (\text{Model 7})$$

Where:

$CAR_i$  = the cumulative abnormal return for stock  $i$  over the 17 day event window obtained from model (Model 6)

$DACC$  = the abnormal accruals for stock  $i$  obtained from the cash flow variant of the modified Jones model. (Model 2)

$LNNTA$  = size proxied by the log of total assets

$UNEXP$  = unexpected earnings

To control for market reaction to unexpected earnings a control variable UNEXP is included. UNEXP is a proxy for the unexpected earnings calculated as the difference between the earnings per share in the prior year and the earnings per share in the current year. The earnings per share is the earnings before extraordinary items and discontinued operations. Hypothesis 3 predicts a negative reaction to discretionary accruals; therefore a negative sign is predicted for  $a_1$  (an inverse market reaction from discretionary accruals); the larger the quantity of abnormal accruals the larger the negative market reaction.

Balsam et al. (2002) used what they called unexpected abnormal accruals. They defined unexpected abnormal accruals as the difference between the abnormal accruals in the current quarter and the abnormal accruals in the same quarter from the previous year. Following this method the study also uses the difference in abnormal accruals from the prior year as an additional test.

#### **Hypothesis four**

Hypothesis 4 investigates market reaction to earnings management included in financial statement filings filed subsequent to the 90 day statutory filing date. The event window for the annual filing is the 17 day window (-1, +15) used by Balsam et al. (2002). Sloan (1996) and Xie (2001) used total accruals in their analysis. The results of the Sloan (1996) and Xie (2001) research indicate that the market does not react to earnings management. These two papers tested whether or not the market reacted to total accruals. The findings of both studies were that the market does not react to total accruals. Balsam et al. (2002) used discretionary accruals in their analysis. They tested



for a market reaction to a change in discretionary accruals from one year to the next. The conflicting results from these studies could be explained by this difference. Using the method described above for models 5 and 6, the market reaction is determined for each firm. In the current study the market reaction is tested against discretionary accruals and unexpected discretionary accruals (change from prior year).

Hypothesis 4 states:

H4: Firms that file later than the statutory period and have earnings management present will have a negative market reaction.

To test this hypothesis, the sample firms are divided into firms filing after the 90 day statutory period and firms that file timely. The group of firms that filed after the 90 day period is used in this testing. The resulting sample is tested using model 7. Griffin (2003) tested market reaction to late filings. Griffin used total accruals (net income before extraordinary items and discontinued operations less cash flow from operations) as used by Sloan (1996) and Xie (2001). The current study uses discretionary accruals to test for different market reactions between firms.

#### Data collection

Annual 10K filing dates are available in Edgar starting in 1993. Financial information to calculate the abnormal accruals using the cash flow version of the Modified Jones Model is collected from Compustat. Financial firms and public utilities are removed from the sample. The unique financial reporting of the financial firms make them unsuitable for testing when combined with other industries (Becker et al. 1998).

Public utility firms are removed because they have motivations that differ from other commercial firms due to the regulatory environment in which they operate. Foreign domiciled companies are also removed from the sample because foreign firms do not have the same GAAP requirements as do US domiciled firms. Foreign firms traded in the US must reconcile net income and retained earnings to US GAAP or they can restate the financial statements to comply with US GAAP. Compustat does not reveal which of these options these firms choose, and variations in GAAP could affect the results. The companies selected for the data sample are limited to firms with over \$75 million in total assets. Smaller firms have been found to have greater variability in the timeliness of firm filings. Most firms that filed after the SEC mandated due date were small and financially troubled (Alford et al. 1994). The \$75 million number is chosen because the new SEC regulation of 10K and 10Q filings, when fully implemented, is limited to firms with over \$75 million in assets.

To determine the company traditional filing period five years of filing data in EDGAR matched with corresponding Compustat data is required. To eliminate differences caused by companies using 52-53 week years, actual fiscal year ending dates are used. The fiscal year-end dates are obtained from Compact Disclosure when available. The remaining year-end dates are obtained from Edgar. The resulting sample is 23,846 firm year observations.

Market reaction data for the event studies are obtained from the CRSP database. The annual earnings announcement dates are taken from the Compustat database. This period is used to eliminate the market reaction to the earnings announcement date from

the beta calculation (Balsam et al 2002). Following Balsam et al (2002) the data is further restricted by requiring that the annual report filing date be at least 12 days subsequent to the earnings announcement date to eliminate cross contamination of events (Balsam et al 2002).

## **CHAPTER IV**

### **PRESENTATION OF ANALYSIS AND RESULTS**

This chapter describes the data and presents the results of the hypothesis testing. The first section presents descriptive statistics of the sample data used followed by the empirical results.

#### **Data Description and Discussion**

##### **Hypothesis One and Two**

Hypothesis one and two test for a relationship between time to file annual reports and earnings management calculated as abnormal accruals. The data for Hypotheses 1 and 2 came from Compustat, SEC's EDGAR website, and Compact Disclosure. The annual report filing dates were collected from the SEC's EDGAR website. A total of 108,037 10K filing dates were collected from the EDGAR filed between 1994 and 2004. Financial data for a total of 104,317 firm years was collected from Compustat after eliminating financial firms, public utilities, and foreign firms. The days to file the annual report is calculated in the study as the number of days between the fiscal year end and the filing date. The fiscal year data included in Compustat does not include 52-53 week year ends. Company fiscal year end data was collected from Compact Disclosure where available and the missing year ends were collected from EDGAR. Combining financial data from Compustat with the annual report filing dates from EDGAR produced a

potential sample size of 52,109 firm years with a minimum of three firm years of observations. However, restricting the sample to firms with a minimum of five firm year observations further reduced the size to 48,786. Additionally, limiting the firm size to a minimum of \$75 million in total assets eliminated an additional 20,753 firm year observations.

The number of days to file (DAYSTOFILE) was calculated for each firm year as the number of days between the company fiscal yearend and the date the annual report was filed with EDGAR. Detail summary statistics for this sample indicated a non-normal distribution of the DAYSTOFILE variable. The sample skewness was 5.27 and kurtosis was 54.91. DAYSTOFILE had a minimum of 14 days and a maximum of 943 days. Removing outliers, firms filing their annual report within 20 days of earnings announcement and firms filing their annual report more than 175 days after the earnings announcement reduced the skewness to .43 and the kurtosis to 8.73. This reduced the sample size to 23,846 firm year observations. A univariate t test of the DAYSTOFILE variable produced a t statistic of 932.72 with a P value of 0.000.

Observations where operating cash flows, discretionary accruals, and other variables were more than three standard deviations from the sample means were eliminated as outliers following Subramanyam (1996). This resulted in a final sample size of 18,552 firm years representing 7,934 different firms. Table 1 describes the sample selection process.

Table 2 provides sample distribution information by industry and year. SIC codes 6000-6999 are financial firms and are eliminated due to the difficulty in estimating the

discretionary accruals for these firms. The number of observations for SIC codes 4000-4999 is low due to the elimination of public utility firms which are also eliminated due to estimation difficulties. A total of 58 two digit SIC codes are represented in the sample. The number of observations by year increases after 1996 due to the SEC full implementation of required use of EDGAR for filing years 1997 and later. The limited number of observations for the year 2004 is due to the timing of the sample collection. The Compustat data was collected from the June 2004 disk. Only a limited number of firms had reported 2004 year end data at the time the CD was released.

Descriptive statistics are presented in Table 3. As expected, a large dispersion is present in the total assets variable with a skewness and kurtosis of 6.92 and 87.27 respectively. The log of assets (LNTA) is used as the size proxy to reduce this dispersion. The use of the log of assets variable reduces the skewness and kurtosis to .69 and 2.91 respectively.

The discretionary accruals variable (DACC) has a mean of 0.001 and a standard deviation of 0.105. The discretionary accruals average less than one percent of total assets in this sample, and are not widely dispersed. A univariate t test of the DACC variable produced a t statistic of  $-.003$  with a P value of 0.000. A t test of the mean of DACC for firms filed timely vs. the mean of DACC for firms filing late (using the companies mean definition of filing late) produced a t test value of 43.0781 with a P value of 0.000.

One assumption of linear regression models is that there is no linear relationship between the independent variables. A linear relationship between two independent

variables (multicollinearity) can result in inefficient estimators in the regressions. Table 4 presents correlation matrixes for the variables used in the models for testing Hypotheses 1 and 2. The results indicate an inverse relationship between the low distress and the high distress dummy variables. This is expected as a firm in high distress should not be represented in the low distress variable. The other relationship indicated in Table 4 is between the log of assets and the log of cash flow. The log of assets variable is the proxy for firm size. The cash flow variable is also affected by company size and the relationship is probably a result of firm size

### **Hypothesis Three and Four**

The data for Hypothesis 3 and 4 use the dataset described above and then adds market data obtained from CRSP. The final sample of 18,552 firm year observations used in Hypotheses 1 and 2 was matched to data available from the CRSP database. This removed 4,701 firm year observations from the database. Limiting the observations to companies with December year-ends removed a further 4,758 observations from the database. Year 2003 data was also dropped because CRSP data was not available (2,225 observations). A further 626 observations were removed as outliers. Observations where cash flow, discretionary accruals and price to book ratio that were greater than three standard deviations from the mean were dropped as outliers. These restrictions reduced the dataset available for Hypotheses 3 and 4 to 6,242 firm year observations. Table 5 provides sample distribution statistics for the market reaction data.

The calculation of the cumulated abnormal returns (CAR) resulted in a mean value of 1.2556 and a standard deviation of .0980 for CAR. A univariate t test of the

CAR's was performed testing the mean of CAR for firms with discretionary accruals greater than the mean vs. the mean of CAR for firms filing with discretionary accruals less than the mean. This test produced a t value of 4.9633 with a P value of 0.000.

### **Empirical Results**

It is theorized that time to file annual reports has an effect on discretionary accruals. It is also theorized discretionary accruals have an effect on time to file annual reports. Therefore, Hypothesis 1 is tested using simultaneous equations of models 2 and 3.

#### **Hypothesis One Results**

Hypothesis 1 states that firms filing later than average will have income increasing discretionary accruals. Filing later than average, the time variable of interest in the simultaneous equations, is measured in the nine different methods as stated earlier. A simultaneous equations model was used to test for the various definitions of the timeliness of annual report filing. The discretionary accruals used in these results were residuals calculated by model 1. The absolute value testing provides information regarding the magnitude of discretionary accruals in relation to the time of annual report filing. However, the hypothesis states that income increasing discretionary accruals will be present in later filing firms. The absolute value of discretionary accruals will indicate the magnitude but not the direction of the discretionary accruals. The signed value of the discretionary accruals will be used to test hypothesis one.

The Hausman (1978) specification test for endogeneity indicates that the number of days to file annual reports and discretionary accruals are endogenous ( $\chi^2$  statistic =



1178.98 significant at the .000 level). Further, the Durbin Wu Hausman test finds a simultaneity bias between the two models (models 2 and 3) used to test hypothesis one ( $F$  value = 1542.13 significant at the .000 level). This indicates that days to file and discretionary accruals are jointly determined and requires the use of simultaneous equations estimation to provide consistent and unbiased estimators.

Table 6 provides variable definitions used in the remaining tables.

Hypothesis 1 theorizes that a relationship exists between earnings management and the time to file annual reports. An initial analysis of the relationship was conducted using simultaneous equations for models 2 and 3. The number of days between the company year end and the annual report filing date with EDGAR was used for this initial testing. The results of this initial testing are presented in Table 7. The table presents the results of testing the absolute value of discretionary accruals, a measure of the magnitude of earnings management, and the signed value of discretionary accruals, a measure of the direction of earnings management. The results of this testing indicate a positive relationship exists between the company filing date and the absolute value of discretionary accruals significant at the .01 level with a  $t$  value of 7.17 for the days to file variable and 6.6378 for DACC (discretionary accruals). The positive relationship means that more earnings management is occurring with later filings, as predicted. The signed values of discretionary accruals have a negative relationship between the time variable (TIME) and discretionary accruals (DACC) significant at the .01 level with a  $t$  value of 8.75 for TIME and is not significant for DACC. This indicates that the earnings

management that is occurring later is income decreasing in direction contrary to prediction in hypothesis one.

The  $r^2$  goodness of fit used in ordinary least squares regressions (OLS) has no statistical meaning in the context of two staged least squares regressions. The model does provide a F statistic of 80.27 and a corresponding P value of 0.000 indicating the model is significant in explaining some of the variation present in the variables. Using OLS regressions for the individual component equations produced an adjusted  $r^2$  of 0.1490 for a model using discretionary accruals as the dependent variable (model 2). An OLS regression of model 3, using TIME as the dependent variable, produced an adjusted  $r^2$  of 0.0905.

The analytic testing of late filers for Hypothesis 1 is presented in Tables 8 to Table 16. Hypothesis 1 states that companies filing late have income increasing earnings management present. Filing late is defined for this research in nine different methods. The tables present the results of the following tests:

- 1: Later than company mean
- 2: Later than company median
- 3: Later than industry mean
- 4: Later than industry median
- 5: Later then the sample mean
- 6: Later then the sample median
- 7: 5 days later than prior year
- 8: 5 days later than industry mean

9: 5 days later than industry median

The results present consistent relationships in magnitude and direction of the discretionary accruals. For all tests, firms filing later than average have income decreasing abnormal accruals but at a greater magnitude (greater manipulation). Time is required to manipulate earnings as hypothesized. The results further indicate that decreasing earnings management is associated with later filings contradictory to the hypothesis.

In six of nine cases the signed value of DACC is not significantly related to the TIME variable. However, the TIME variable is consistently negatively associated with the signed values of DACC.

The results using the absolute value of DACC indicate a consistent, significant, and positive relationship between DACC and TIME.

The coefficient of the DACC variable indicates that firms are not manipulating earnings to a great degree. For example, the coefficient for filing later than the company median is 765.4044 (table 9). This indicates that in order for a firm to change the discretionary accruals by 1% of total assets a firm would need to file the annual report 765 days (over 2 years) later than the company median. The median for TIME is 1.54 indicating that the average firm files only 1.5 days later than the company median. This 1.5 days is probably explained by weekend differences.

In contrast to the hypothesized results, the direction of the discretionary accruals is negative for firms filing later than average for firms filing later than the various measures of company average.

These results indicate that firms filing later than average are decreasing abnormal accruals. A possible explanation of these results is that firms know how they are going to manipulate the results and minor manipulation occurs consistently over time. This is supported by the positive relationship between the absolute value of DACC and filing late. However, the occurrences where large manipulations appear, the manipulation is in the negative. This would be consistent with the big bath theory of cleaning the books when the increases are no longer possible.

LEVERAGE is significant in all measures of late. For all occurrences the coefficient is negative for the absolute value of DACC and positive for the signed value of DACC. A positive relationship was predicted. The positive relationship present in the signed values of DACC indicate that more highly levered firms have income increasing abnormal accruals, as predicted. The negative relationship between the absolute value of DACC and LEVERAGE indicates that the higher levered firms have lower magnitudes of discretionary accruals.

The high distress variable (HIDIS) is consistent in all tests where the high distress is significant. A positive relationship between high distressed firms and higher levels of abnormal accruals as theorized in the literature. Consistent with this, the signed values of DACC have a positive relationship and indicate that highly distress firms are increasing income through the use of discretionary accruals. However, the absolute value of DACC

variable has a negative relationship indicating that the manipulation that is being used by these firms is small in quantity.

The low distress variable (LODIS) has a negative coefficient in all tests. This negative coefficient for the low distress variable (LODIS) is negative as predicted indicating lower levels of earnings management for stronger firms.

The sign of the coefficient of the cash flow variable (LNCASH) is consistent when significance. No prediction is made in the literature regarding the sign of the cash flow variable. For the signed values of DACC the LNCASH variable has a negative coefficient indicating income decreasing discretionary accruals associated with higher cash flows. In the absolute value DACC regression, the LNCASH coefficient has a positive sign indicating greater magnitude of discretionary accruals associated with higher cash flow.

The size control variable log of total assets (LNTA) is significant in most cases. The coefficient is negative as expected in all the significant cases indicating that smaller firms have higher discretionary accrual percentages as predicted.

The growth firm proxy variable, the price to book ratio is significant in only two cases; filing later than company mean and filing later than company median. The positive coefficient indicates that lower growth firms, firms with a higher price to book ratio, have lower discretionary accruals. No prediction was made with respect to this variable.

## Sensitivity Analysis

There is concern that one year, or group of years could provide significantly different results. Year dummy variables were created in the dataset. Table 17 provides the results of the analysis including year dummy variables. In this analysis days to file was used as the time variable of interest and a late variable was not included. The results of this testing, are consistent with the results of the prior testing of the late filers presented above. For the signed values of discretionary accruals, the sign of the coefficient of days to file is negative indicating a income decreasing discretionary accruals are associated with later filings. The coefficient of the absolute value of the discretionary accruals variable has a positive sign indicating later filers have greater magnitude of discretionary accruals.

The year 2001 brought corporate scandals and greater regulatory scrutiny to financial reporting. Indicated in the year results is a significant difference between years in the years subsequent to 2000. The results presented in the earlier tables could be a result of only the most recent years. To test for this change a dummy variable was created for fiscal years subsequent to 2000. The results of this testing are included in Table 18. While a significant relationship exists (t values of 5.52 for pre 2000 filers and 6.37 for post 2000 filers for the discretionary accruals variable), the affect of time to file on discretionary accruals is significant (t values of 7.39 and 9.07 for the time to file variable for pre 2000 and post 2000 filers respectively) and consistent with the prior findings.

The coefficient of the TIME variable is smaller for post 2000 and the DACC coefficient is larger for post 2000. Contrary to expectations, these results indicate greater manipulation subsequent to 2000. A possible explanation for these results could be that the post 2000 period was also a recessionary period and companies had more incentive to manipulate earnings during this period. Further the testing presented in the prior tables indicated that the later filers presented evidence of income decreasing earnings management. These results are consistent with the big bath theory and could indicate balance sheet cleaning.

#### **Hypothesis One Summary**

The findings provide support for the hypothesis that there is a relationship between discretionary accruals and time to file annual reports. The results suggest that firms filing later than average are manipulating earnings downward. The results would suggest that firms manipulate earnings on a consistent ongoing basis. Deviations from this appear to be income decreasing in nature. Therefore, Hypothesis 1, companies filing later than average have income increasing earnings management present, is not supported. While a relationship exists between discretionary accruals and time to file annual reports, the relationship is contrary to the hypothesis.

#### **Hypothesis Two Results**

Hypothesis 2 states that firms filing later than the SEC mandated 90 day filing period would have income decreasing earnings management present. The testing for this hypothesis was performed by creating a dummy variable for late filers, firms filing later than 93 days. The 93 day number is used to control for weekend variations. This dummy

variable was then used as the dependent variable in a logit model that includes discretionary accruals and delay control variables as dependent variables.

Table 19 presents the results of testing Hypothesis 2. Both the magnitude of discretionary accruals and the direction of discretionary accruals are significant in determining companies filing after the statutory period. The t values are 5.05 and 3.72 for the unsigned and the signed values of discretionary accruals respectively. The control variables used in the model are all significant at the .01 level except the variable for non clean audit opinion which was dropped (The opinion variable was 100% associated with late filing). Support is found for Hypothesis 2 that firms filing subsequent to the statutory filing period (90 days) have income decreasing discretionary accruals.

### **Hypothesis Three Results**

Hypothesis 3 states that the market recognizes and reacts negatively to income increasing abnormal accruals present in the annual report filings. To test this hypothesis the cumulative abnormal returns were calculated for each firm year for a 17 day event window surrounding the annual report filing date using model 6. The cumulative abnormal return was then regressed on the discretionary accruals variable. The results of the testing of Hypothesis 3 are presented in Table 20. Four separate tests were conducted for market reaction. Two tests were run for discretionary accruals, and two tests were run for the absolute value of discretionary accruals. A significant t value for the discretionary accruals variable would indicate that the market is reacting to the presence of discretionary accruals. Using the methodology of Balsam et al. (2002) unexpected discretionary accruals are calculated and the cumulative abnormal return regressed upon



this unexpected accruals variable. The second set of tests was run using unexpected discretionary accruals, and absolute value of unexpected discretionary accruals.

The four tests for Hypothesis 3 failed to produce significant results indicating a market reaction to discretionary accruals. The test for market reaction to discretionary accruals produced a t value of .52 for both the absolute value and the signed values of discretionary accruals respectively. The tests using the unexpected discretionary accruals variables produce t values of .66 and .67 for the signed and unsigned discretionary accruals variables respectively.

Sloan (1996) and Xie (2001) found no reaction to accruals in market tests. Balsam et al. (2002) found a market reaction to unexpected abnormal accruals in a market reaction test around quarterly filing dates. The Balsam et al. study used very restrictive constraints in their data selection process. These restrictions resulted in a sample size of 613 firm quarters. In their sensitivity analysis Balsam et al. state that they could not eliminate the possibility that their results were from sample selection bias. The current research extended the Balsam et al. study by using a larger data set that included firms suspected of earnings management and firms not suspected of earnings management.

One of the selection criteria used in the Balsam et al. study was firms that meet analyst forecast or exceeded the analyst forecast by one cent. Prior research has found that the market reacts to firm results that vary from analyst forecasts. Analyst forecast data is unavailable to use in the current study. A proxy for unexpected earnings was used in this testing. If analyst forecast dispersion and/or firm reported income variance from

analyst forecast was used as a control variable, significant results could be found for this hypothesis.

### Sensitivity Analysis

The testing for Hypothesis 3 failed to produce significant in one of the two tests for indicating a market reaction to discretionary accruals. Additional testing was performed to confirm the results. Balsam et al. (2002) used unexpected abnormal accruals (change in abnormal accruals from the prior period). Unexpected accruals were included in the testing of the current research. There is the possibility that the market only recognizes extreme changes in accruals and this is what Balsam et al found. The sample used in the current study includes firms not suspected of managing earnings. An additional test was performed using extremes in abnormal accruals. Extreme abnormal accruals were selected as the top and bottom decile of abnormal accruals. The results (Table 22) of this test were the same, no market reaction (recognition).

At the time of the earnings announcement the information needed to observe the presence of earnings management is not available. If the market reacted significantly to the earnings announcement and then found the announcement included managed earnings, there could be a negative market reaction to the annual filing. The cumulative abnormal return was calculated for the earnings announcement period (day -1 to day +2). The results were used in several different tests of the cumulative abnormal return around the filing date. The first test was to control for the announcement reaction. As expected a significant relationship exists between the returns for the announcement period and the returns for the filing period. However, no relationship exists between the filing date

cumulative abnormal return and the discretionary accruals when controlling for the announcement period abnormal returns.

The market reaction to earnings announcements has been documented to begin several days before the actual announcement; the market reacts in anticipation. The betas for the testing of hypothesis three were calculated using -181 to -1 days prior to the earnings announcement date. A additional test was performed using -181 to -10 days prior to the earnings announcement date to eliminate the market reaction to the earnings announcement from the beta calculation. The results of this testing are presented in table 21. The results indicate that the market does not recognize discretionary accruals, column 1 and 2 of the table. However, the market does react to unexpected discretionary accruals, the difference between the discretionary accruals from the prior year and the discretionary accruals in the current year. Column three of table 21 presents the results of testing the absolute value of the change in discretionary accruals. The results are significant at the .01 level with a t statistic of 2.59. The positive sign of the coefficient indicates that the market is reacting positively to an increase in discretionary accruals. Column four of the table presents the results of testing the signed values of discretionary accruals. The negative coefficient of the discretionary accruals variable indicates that the market reacts negatively to income increasing discretionary accruals. The t statistic (2.37) is significant at the .05 level.

The Balsam et al. (2002) results appear to be a result of sample selection and not a market reaction as concluded in their paper. This would contribute to the lack of significant results for this hypothesis. Balsam et al. selected firms that met analyst

forecast or exceeded the forecast by one cent. The market reaction documented in their study could be a market reaction to the results instead of the suspected earnings management.

#### **Hypothesis Four Results**

Hypothesis 4 is testing for market reaction to abnormal accruals in companies that file their annual reports subsequent to the statutory 90 filing period. Of the 6,242 firm years included in the market reaction data set, 88 of these firms filed their annual reports subsequent to the 90 day period. This dataset of 88 firm years is used for testing Hypothesis 4. The testing of Hypothesis 4 was performed in the same manner as Hypothesis 3. The cumulative abnormal returns were calculated for each firm year for the 17 day event window. These returns were then regressed on the discretionary accruals to test for a market reaction (market recognition). The results of the testing for market reaction are presented in Table 23. The testing produced insignificant results (t values of 1.34 and 1.30 for discretionary accruals) which indicate the market does not react to abnormal accruals (earnings management) present in filers subsequent to the 90 day period. This finding is consistent with the finding of Hypothesis 3 that found no market reaction to abnormal accruals. The market reaction was tested for absolute value of abnormal accruals (magnitude), signed values of abnormal accruals (direction).

The unexpected abnormal accruals used by Balsam et al. (2002) were also tested for Hypothesis 4. Consistent with Hypothesis 3 and the findings from discretionary accruals above no significant reaction was indicated (t values of 1.05 and 1.09 for unsigned and signed discretionary accruals respectively).

The hypothesis also predicted that the sign of the abnormal accruals would be income decreasing. The companies would be removing the earnings management consistent with the big bath theory. Consistent with the results of Hypothesis 2, the abnormal accruals for all 88 of the late filers had a negative direction indicating income decreasing earnings management. This provides support for the theory that companies filing later than the statutory period are going to “clean” the books and remove earnings manipulation to use in subsequent years.

## CHAPTER V

### SUMMARY AND CONCLUSION

This chapter summarizes the study, the conclusions are discussed, identifies limitations of the study, and suggests future research.

#### **Summary**

The SEC has reduced the time for companies to file their annual and quarterly financial reports. The announcement of this change in The Wall Street Journal states that this is a response to the accounting scandals of Enron and other companies. The official SEC release states that providing information to the stakeholders sooner would be beneficial. Prior accounting literature theorizes that earnings management requires time to physically move earnings from one period to another. If the theory is true then the SEC reduction of time to file should reduce company ability to manage earnings. If the market recognizes earnings management then providing the information to the stakeholders sooner would be beneficial for stakeholders to adjust their portfolios based upon the new information.

This study tests the theory that earnings management requires time by examining abnormal accruals in relation to the quantity of time between company year ends and the statutory annual report filing. More specifically, the study examines abnormal accruals present in firms that file later than company average. Prior accounting literature finds

that companies file at traditional filing dates. Deviations from these traditional filing dates indicate time series shocks. If companies are manipulating earnings inconsistently and time is required to move earnings from one period to another, then abnormal accruals (earnings management) should be present in firm years filed later than company average.

The SEC announcement stated that reducing the filing time would provide information to stakeholders sooner. If the market recognizes earnings management then providing the information to the stakeholders sooner would be beneficial. The prior accounting literature is inconsistent in the conclusion regarding the market recognition of earnings management. Studies such as Sloan (1996) and Xie (2001) found the market does not recognize the accruals portion of earnings. Balsam et al. (2002) found that the market does recognize earnings management. The present study uses the methodology of the Balsam et al. study and the larger sample sizes of Sloan and Xie to mitigate this inconsistency.

Simultaneous equations are used to answer the question of the effect of timeliness of report filing on abnormal accruals. The Hausman specification test finds that there is endogeneity between the timeliness of filing and abnormal accruals. Prior studies in this area have ignored the endogeneity and as a result, have presented biased results.

This study draws upon prior accounting research to develop four research hypotheses. It is hypothesized that there is a relationship between abnormal accruals and the time companies file their annual reports. It is hypothesized that there is abnormal accruals present in annual report filings filed after the statutory 90 day filing period. It is hypothesized that the market does recognize earnings management in company annual

report filings. Finally, it is hypothesized that the market recognizes earnings management present in companies filing after the statutory 90 day filing period.

To test these hypotheses a sample size of 18,552 firm years for Hypotheses 1 and 2 and a sample size of 6,242 firm years for Hypotheses 3 and 4 was collected. To test Hypothesis 1 two models were developed from the prior literature. The first model included variables found to affect the abnormal accruals and the second model included variables found to affect the timeliness of report filing. These two models were then used to test the simultaneous equations model for Hypothesis 1. Hypothesis 2 was tested using a logit model to test for significance relationship between discretionary accruals and firms that file after the statutory 90 day filing period. The model used to test Hypotheses 3 and 4 was developed by Balsam et al. (2002).

### **Conclusions**

Hypothesis one states that firms that file 10K reports later than the normal company traditional filing date have income increasing earnings management present. This study fails to find support for Hypothesis 1 as written. However, a relationship is found to exist between time to file annual reports and earnings management but not in the direction hypothesized. Support is found for Hypothesis 2, a relationship exists between earnings management and firms filing annual reports subsequent to the 90 day statutory filing date. Hypotheses 3 and 4 theorize that the market recognizes earnings management. Partial support was found for Hypotheses 3. And no support was found for Hypothesis 4.



The result of Hypothesis 1 testing presents evidence supporting the theory that physically moving earnings from one period to another requires time. In testing the simultaneous equations model for all firms regardless of filing late or on time, the model finds support for the theory. However, support is not found for the theory that income increasing discretionary accruals are associated with firms filing later than average.

Support was found for Hypothesis 2, that there would be earnings management present in companies filing subsequent to the statutory 90 day filing period. The logit model found a significant difference between the two groups providing support for the hypothesis. The theory is that companies filing subsequent to the statutory filing period are going to be punished by the market providing less motivation for the manipulation of earnings. With less motivation to move earnings upward, there should be income decreasing abnormal accruals present in these firm years. The test of the model using the signed values of DACC found income decreasing accruals present in the late filers consistent with the big bath theory.

Hypothesis 3 states that the market recognizes earnings management. The models used for testing this hypothesis were developed by Balsam et al. (2002). In the Balsam et al. study the authors found the market does react negatively to earnings management. However, they used numerous restrictions and were unable to present evidence that the conclusion was not the results of the sample selection. By restricting the calculation of the betas to ending 10 days prior to the earnings announcement date a market reaction was found to unexpected discretionary accruals.

The accounting literature documents lower market reaction to later filings. The relationship found in the testing of Hypothesis 1 between earnings management and the timeliness of reporting would support the lack of market reaction to earnings management. Firms that are engaging in earnings management are filing reports later than other firms. The market reaction to the later filing is reduced, therefore, a reaction, if any, to earnings management may not be detectable.

No support was found for Hypothesis 4 regarding market reaction to earnings management in companies filing subsequent to the statutory filing period. All but 2 firm years included in this subsample possessed income decreasing abnormal accruals. While there was income decreasing abnormal accruals present in this group, the market failed to recognize and adjust the market price for the presence of earnings management.

The overall conclusion to be generated from this study is that time is required to physically move earnings from one time period to another. This is important because it provides support for the SEC's move to reduce the time to file annual and quarterly reports by suggesting that this reduction of statutory filing time helps reduce earnings management. The study contributes to the literature by providing evidence that the steps being taken by the SEC can help reduce future earnings management.

The study further contributes to the literature by helping to resolve some of the inconsistent research results regarding the market recognition of earnings management. The prior literature on market recognition of earnings management presents two diverse conclusions regarding the subject. The results of this study help provide support that the

market does recognize changes in discretionary accruals from the prior year. The market does not recognize discretionary accruals that are higher than industry averages.

### **Limitations**

The tests and conclusions presented in this study should be viewed in context. While this study used as many industries as possible, utilities and financial institutions were omitted because of the difference in the nature of their financial specifics. The conclusions of this study cannot be extended to those industries. This study covers a specific period of time. Financial standards and ethics change over time, the results of this study should apply to years beyond the years included in the study but caution must be used to generalize these results to other years.

The current study may have ignored other variables that could explain some of the variation in the dependent variables. The study attempts to mitigate some of the potential omitted variable bias by using a cross-sectional panel study design. This does not guarantee that all possible omitted variables have been controlled for in this manner.

Limitations on data chosen for the study could have eliminated the possibility of other conclusions. Another set of data with a different set of restrictions could find different conclusions using the same model.

The market reaction data is limited to firms with annual earnings announcement dates available. This restriction is placed upon the data in order to have the corresponding annual report filing date.

### **Recommendations for Future Research**

This study used only annual report filings. The study needs to be extended to include quarterly filings. The timeliness of quarterly reports could show different results. The market reaction results of Balsam et al. used quarterly reports. It is possible that using quarterly data, a market reaction to earnings management could be detected instead of only a reaction to changes in discretionary accruals from the prior period.

The present study found that the market does not recognize earnings management only changes from prior years. Future research needs to be performed to understand why the market does not recognize and react to earnings management. This research could lead to increase disclosure requirements to improve the transparency of financial results.

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**Tables**

TABLE 1  
Sample Selection

	Timeliness Sample (firm years)	Market Reaction Sample (firm years)
Initial dataset	52,109	18,552
Removed for less than 5 firm year observations	-3,323	
Removed for total assets <\$75 million	-20,753	
Removed for days to file > 175	-542	
Removed for days to file < 20	-19	
Lost for initial year*	-3,626	
Lost for missing data points	-3,471	
Removed for outliers	-1,823	-626
Data available in CRSP		-4,701
Year 2003 observations		-2,225
Limited to December year ends		-4,758
Final sample size for H1 and H2	18,552	6,242

\* The calculation of abnormal accruals uses a beginning lag year of total assets, 3,626 firms years did not have a prior lag year of data available.

TABLE 2  
Distribution of Days to File

SIC Codes*	Observations	Minimum File Days	Maximum File Days	Percentage of Total Sample
10-19	1,162	33	170	6.3%
20-29	3,561	22	174	19.2%
30-39	6,011	23	169	32.4%
40-49	1,494	21	173	8.1%
50-59	3,090	24	175	16.7%
70-79	2,402	24	166	12.9%
80-89	742	33	167	4.0%
90-99	90	36	143	0.5%
	18,552			

Year	Observations	Minimum File Days	Maximum File Days	Percentage of Total Sample
1994	924	33	165	5.0%
1995	905	26	163	4.9%
1996	1,237	35	166	6.7%
1997	1,954	23	170	10.5%
1998	2,269	22	170	12.2%
1999	2,368	25	166	12.8%
2000	2,296	26	173	12.4%
2001	2,245	24	175	12.1%
2002	2,128	25	174	11.5%
2003	1,997	22	167	10.8%
2004	229	21	117	1.2%
	18,552			

\* SIC codes 6000-6999 are financial firms and were eliminated from the sample.



TABLE 3  
Descriptive Statistics of Variables in the Analysis

	Units	Minimum	Maximum	Mean	Median	Std.Dev.
Sales	\$ Millions	10.20	69,506.10	1,956.41	522.22	4,472.67
Assets	\$ Millions	75.02	113,105.00	1,953.99	495.96	4,747.56
Log of Assets		4.32	11.64	6.42	6.21	1.38
Net Income	\$ Millions	-11,826.00	6,296.80	61.92	16.16	358.44
Negative Net Income		0.00	1.00	0.25	0.00	0.43
Cash Flow (Operations)	\$ Millions	-1,413.30	3,900.00	170.45	38.20	421.51
Log of Cash Flow		-3.91	8.27	4.02	3.95	1.64
LEVERAGE	Percent	0.00	3.74	0.27	0.24	0.24
Days to File	Days	21.00	174.00	82.82	87.00	12.09
Discretionary accruals	Percent	-.924	.953	.001	.009	.105
ABS DAC		0.00	.953	.067	.044	.080
Z-score		-36.94	311.41	4.56	3.22	7.14
Price to Book Ratio		-77.21	90.27	2.72	1.85	5.37
Extraordinary Items	\$ Millions	-16,778.52	6,923.87	-4.17	0.00	150.72
Extra		0.00	1.00	0.16	0.00	0.37
Low Distress		0.00	1.00	0.56	1.00	0.50
High Distress		0.00	1.00	0.20	0.00	0.40
Auditor Change		0.00	1.00	0.10	0.00	0.30
Busy		0.00	1.00	0.68	1.00	0.46
Opinion		0.00	1.00	0.00	0.00	0.02

The sample size is 18,552 firm years representing 7,934 separate firms.

TABLE 4  
Correlation Matrix

	DAYST OFILE	leverage	LODIS	HIDIS	LNCASH	LNTA	PRICETO BOOK	EXTRA	AUDCHG	BUSY	OPIN	NEGNI
DAYSTOFILE	1.0000											
LEVERAGE	0.1212	1.0000										
LODIS	-0.0701	-0.5531	1.0000									
HIDIS	0.0929	0.4967	-0.5407	1.0000								
LNCASH	-0.2724	-0.0131	-0.0540	-0.0540	1.0000							
LNTA	-0.0247	0.1160	-0.1233	0.0901	0.8498	1.0000						
PRICETOBOK	-0.0656	-0.1290	0.2047	-0.1440	0.1649	0.1022	1.0000					
EXTRA	0.0014	0.2045	-0.2025	0.1891	0.0937	0.1568	-0.0542	1.0000				
AUDCHG	0.0524	0.0032	-0.0071	0.0127	-0.0492	-0.0558	-0.0220	0.0582	1.0000			
BUSY	-0.0510	0.0742	-0.1112	0.1268	0.1136	0.1294	0.0102	0.0472	-0.0297	1.0000		
OPIN	0.0118	0.0075	0.0013	-0.0085	-0.0069	-0.0002	-0.0056	0.0020	0.0058	-0.0189	1.0000	
NEGNI	0.1394	0.2427	-0.2947	0.3680	-0.2223	-0.0836	-0.1247	0.0837	0.0083	0.0383	0.0279	1.0000

DAYSTOFILE     Number of days between the firm year end and the 10-K filing on EDGAR  
LEVERAGE       Financial leverage of firm in the current year  
LODIS            Low distress - z-score of above 3.0  
HIDIS            High distress - z-score of less than 1.81  
LNCASH          Log of cash flow from  
                    operations  
LNTA             Log of total assets  
PRICETOBOK    Price to book ratio  
EXTRA            Presence of an extraordinary item  
AUDCHG         Change in auditor from prior year  
BUSY             Busy season audit (Dec or Jan year end)  
OPIN             Audit opinion other than clean  
NEGNI            Presence of a negative net income

**TABLE 5**  
**Distribution of Days to File for Sample Used in the Event Study**

SIC Codes*	Observations	Minimum File Days	Maximum File Days	Percentage
10-19	447	38	105	7.16%
20-29	1,325	36	166	21.23%
30-39	2,043	31	158	32.73%
40-49	610	35	106	9.77%
50-59	594	50	158	9.52%
70-79	928	33	116	14.87%
80-89	259	44	138	4.15%
90-99	36	61	92	0.58%
	6,242			

Year	Observations	Minimum File Days	Maximum File Days	Percentage
1994	267	39	165	4.3%
1995	261	39	163	4.2%
1996	358	38	166	5.7%
1997	446	35	166	7.1%
1998	781	32	166	12.5%
1999	859	35	119	13.8%
2000	979	31	158	15.7%
2001	1,114	35	106	17.8%
2002	1,177	36	158	18.9%
	6,242			

\* SIC codes 6000-6999 are financial firms and were eliminated from the sample.

**TABLE 6**  
**Variable Definitions**

DAYSTOFILE	The number of days between the company fiscal year end and the annual report is filed on the SEC EDGAR website.
DACC	The discretionary accruals calculated as the residuals from the cash flow industry variant of the modified Jones model.
ABSDACC	The absolute value of discretionary accruals calculated as the residuals from the cash flow variant of the modified Jones model.
TIME	The number of days the current year observation varies from the average calculated by subtracting the company average from the days to file.
LEVERAGE	The company's financial leverage (total debt / total assets) at the current fiscal year end.
LODIS	Low distressed firms. A dummy variable with a value of one for firms with an Altman Z-score above 3.0
HIDIS	High distressed firms. A dummy variable with a value of one for firms with an Altman Z-score below 1.81.
LNCASH	The log of cash flow from operations.
LNTA	The log of total assets. The proxy variable for size.
PRICETOBOK	The price to book ratio as a proxy for growth firms at the end of the current fiscal year.
EXTRA	A dummy variable with a value of one indicating the presence of an extraordinary item in the current year.
AUDCHG	A dummy variable with a value of one if the auditor for the current year is different from the prior year.
BUSY	Audits conducted during the "busy" season. A dummy variable with a value of one for firms with a December or January year end.
OPIN	A dummy variable with a value of one for firms with other than clean audit opinion for the current fiscal year end.
NEGNI	A dummy variable with a value of one for firms with a negative net income in the current year.

TABLE 7  
Hypothesis One Initial Testing – Filing date and DACC

Testing Days to File as the time variable of interest. Testing for a relationship between the DAYSTOFILE and DACC.

$$DACC = a_0 + a_1TIME + a_2LEVERAGE + a_3LODIS + a_4HIDIS + a_5LNCASH + a_6LNTA + a_7PRICETOBOK + \varepsilon$$

$$TIME = a_0 + a_1DACC + a_2LNTA + a_3EXTRA + a_4AUDCHG + a_5BUSY + a_6OPIN + a_7NEGNI + a_8HIDIS + \varepsilon$$

Endogenous Variables	Absolute Value of DACC		Signed Value of DACC	
	Estimate	t-statistic	Estimate	t-statistic
DAYSTOFILE	0.0003	(7.17) ***	-0.0005	(8.75) ***
DACC		6.6378 (6.27) ***		-0.5384 (.64)
Common Explanatory Variables				
LNTA	-0.0057	(7.45) ***	-0.0441	(46.73) ***
HIDIS	0.0251	(14.31) ***	-0.0325	(15.08) ***
Variables for Earnings Management				
LEVERAGE	-0.0028	(0.96)	-0.0133	(3.73) ***
LODIS	-0.0051	(3.65) ***	-0.0148	(8.58) ***
LNCASH	0.0002	(0.37)	-0.0385	(48.38) ***
PRICETOBOK	0.0001	(5.10) ***	0.0001	(2.93) ***
Variables for Time to File				
EXTRA		0.6650 (2.89) ***		0.6738 (2.93) ***
AUDCHG		2.0095 (6.62) ***		2.0209 (6.65) ***
BUSY		-0.7461 (4.07) ***		-0.7478 (4.08) ***
OPIN		5.8315 (1.52)		5.8322 (1.52)
NEGNI		2.4375 (11.44) ***		2.5897 (11.67) ***
CONSTANT	0.0593	(10.66)	-0.0949	(13.91)
		94.4142 (219.69)		95.0956 (227.66)
F test	80.27	245.41	393.11	240.08
F test probability	0.000	0.000	0.000	0.000

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectfully.  
Variables defined in table 6. t statistics in parentheses.

TABLE 8

## Hypothesis One Testing – Filing Late vs. Company Mean

Testing TIME as the time variable of interest. TIME defined as the difference between the company mean days to file and the firm year observation days to file.

$$DACC = a_0 + a_1TIME + a_2LEVERAGE + a_3LODIS + a_4HIDIS + a_5LNCASH + a_6LNTA + a_7PRICETOBOK + \varepsilon$$

$$TIME = a_0 + a_1DACC + a_2LNTA + a_3EXTRA + a_4AUDCHG + a_5BUSY + a_6OPIN + a_7NEGNI + a_8HIDIS + \varepsilon$$

	Absolute Value of DACC		Signed Value of DACC	
<b>Endogenous Variables</b>				
TIME	0.0061 (2.56) *		-0.0061 (2.41) **	
DACC		3720.699 (2.46) *		-72.3598 (1.65) *
<b>Common Explanatory Variables</b>				
LNTA	-0.0206 (2.12) *	-15.2872 (2.09) *	-0.0181 (1.86) *	-3.6691 (6.15) ***
HIDIS	0.0109 (0.29)	-30.6665 (1.99) *	-0.0185 (0.49)	-5.5692 (1.05)
<b>Variables for Earnings Management</b>				
LEVERAGE	0.0774 (1.43)		-0.0942 (1.69) *	
LODIS	-0.0121 (1.00)		-0.0319 (2.68) ***	
LNCASH	-0.0068 (0.84)		-0.0313 (3.90) ***	
PRICETOBOK	0.0001 (2.74) ***		0.0001 (2.02) **	
<b>Variables for Time to File</b>				
EXTRA		3.7806 (0.56)		2.9761 (0.93)
AUDCHG		-7.1083 (0.79)		1.1170 (0.39)
BUSY		-0.7821 (0.17)		8.3022 (2.24) **
OPIN		14.8639 (0.17)		9.3044 (1.11)
NEGNI		-141.1867 (2.44) **		-4.5627 (1.05)
CONSTANT	-0.1288 (1.82)	-272.9017 (2.23)	0.0765 (1.01)	29.7093 (15.60)
F test	23.24	1.15	26.43	35.45
F test probability	0.000	.329	0.000	0.000

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectively.  
Variables defined in table 6. t statistics in parentheses.

TABLE 9

## Hypothesis One Testing – Filing Late vs. Company Median

Testing TIME as the time variable of interest. TIME defined as the difference between the company median days to file and the firm year observation days to file.

$$DACC = a_0 + a_1TIME + a_2LEVERAGE + a_3LODIST + a_4HIDIST + a_5LNCASH + a_6SIZE + a_7PRICETOBOK + \varepsilon$$

$$TIME = a_0 + a_1DACC + a_2size + a_3EXTRA + a_4AUDCHG + a_5BUSY + a_6OPIN + a_7NEGNI + a_8HIDIST + \varepsilon$$

	Absolute Value of DACC		Signed Value of DACC	
<b>Endogenous Variables</b>				
TIME	0.0440 (8.73) ***		-0.0675 (9.08) ***	
DACC		765.4044 (7.55) ***		-24.1635 (8.08) ***
<b>Common Explanatory Variables</b>				
LNTA	-0.0184 (2.65) ***	-3.3423 (5.71) **	0.0071 (0.67)	-0.5328 (7.29) ***
HIDIS	-0.0283 (1.70) *	-3.5594 (2.16) ***	0.0496 (1.96) *	1.6756 (5.26) ***
<b>Variables for Earnings Management</b>				
LEVERAGE	-0.1703 (4.82) ***		0.2440 (4.56) ***	
LODIS	-0.0147 (1.31) ***		0.0001 (0.00)	
LNCASH	.0074 (1.35)		-0.0495 (5.92) ***	
PRICETOBOK	0.0002 (1.73) *		-0.0001 (0.65)	
<b>Variables for Time to File</b>				
EXTRA		0.2902 (0.23)		0.1910 (0.65)
AUDCHG		-0.7404 (0.43)		0.9530 (2.45) ***
BUSY		-1.5883 (1.74) *		0.2199 (1.07)
OPIN		6.9027 (0.39)		6.0422 (0.94)
NEGNI		-26.9717 (6.61) ***		0.2676 (0.67)
CONSTANT	-0.1085 (3.21)	-58.1729 (6.96)	0.1640 (3.21)	4.0513 (8.13)
F test	11.35	7.82	14.54	29.11
F test probability	0.000	0.000	0.000	0.000

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectively.

Variables defined in table 6. t statistics in parentheses.

TABLE 10

## Hypothesis One Testing – Filing Late vs. Industry Mean

Testing TIME as the time variable of interest. TIME defined as the difference between the industry mean days to file and the firm year observation days to file.

$$DACC = a_0 + a_1TIME + a_2LEVERAGE + a_3LODIS + a_4HIDIS + a_5LNCASH + a_6LNTA +$$

$$a_7PRICETOBOK + \varepsilon$$

$$TIME = a_0 + a_1DACC + a_2size + a_3EXTRA + a_4AUDCHG + a_5BUSY + a_6OPIN + a_7NEGNI + a_8HIDIS +$$

$$\varepsilon$$

	Absolute Value of DACC		Signed Value of DACC	
<b>Endogenous Variables</b>				
TIME	0.0514 (5.47) ***		-0.0626 (4.86) ***	
DACC		944.0594 (7.52) ***		-4.0532 (1.01)
<b>Common Explanatory Variables</b>				
LNTA	-0.0364 (2.58) ***	-3.5491 (4.84) ***	-0.0070 (0.40)	-1.2984 (10.79) ***
HIDIS	-0.1036 (3.01) ***	-2.7618 (1.35)	0.1242 (2.80) ***	3.4951 (7.51) ***
<b>Variables for Earnings Management</b>				
LEVERAGE	-0.2577 (3.66) ***		0.2965 (3.29) ***	
LODIS	0.0120 (0.56)		0.0064 (0.25)	
LNCASH	0.0308 (2.77) ***		-0.0756 (5.37) ***	
PRICETOBOK	0.0001 (0.41)		0.0001 (0.70)	
<b>Variables for Time to File</b>				
EXTRA		1.3506 (0.87)		1.0443 (2.35) **
AUDCHG		-0.2881 (0.13)		1.7970 (2.98) ***
BUSY		-2.8230 (2.42) **		-0.4246 (1.20)
opin		9.0171 (0.37)		7.1698 (2.36) **
NEGNI		-34.6293 (6.83) ***		1.3725 (2.38) **
CONSTANT	-0.4931 (4.16)	-64.0335 (6.16)	0.5689 (3.60)	12.7909 (16.38)
F test	4.56	9.24	5.03	29.19
F test probability	0.000	0.000	0.000	0.000

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectively.  
Variables defined in table 6. t statistics in parentheses.



TABLE 11

## Hypothesis One Testing – Filing Late vs. Industry Median

Testing TIME as the time variable of interest. TIME defined as the difference between the industry median days to file and the firm year observation days to file.

$$DACC = a_0 + a_1TIME + a_2LEVERAGE + a_3LODIST + a_4HIDIST + a_5LNCASH + a_6LNTA + a_7PRICETOBOK + \varepsilon$$

$$TIME = a_0 + a_1DACC + a_2size + a_3EXTRA + a_4AUDCHG + a_5BUSY + a_6OPIN + a_7NEGNI + a_8HIDIST + \varepsilon$$

	Absolute Value of DACC		Signed Value of DACC	
<b>Endogenous Variables</b>				
TIME	0.0505 (9.00) ***		-0.0727 (8.84) ***	
DACC		637.0776 (8.12) ***		-0.5194 (0.22)
<b>Common Explanatory Variables</b>				
LNTA	-0.0467 (5.28) ***	-1.3519 (2.93) ***	-0.0314 (2.39) **	-1.9252 (27.28) ***
HIDIS	-0.0344 (2.15) **	-1.7850 (1.33)	0.0533 (2.30) **	2.4200 (8.90) ***
<b>Variables for Earnings Management</b>				
LEVERAGE	-0.2913 (7.03) ***		0.4022 (6.68) ***	
LODIS	0.0086 (0.74)		0.0098 (0.59)	
LNCASH	0.0529 (6.40) ***		-0.1143 (9.69) ***	
PRICETOBOK	0.0002 (1.48)		-0.0001 (0.33)	
<b>Variables for Time to File</b>				
EXTRA		0.6257 (0.60)		0.4032 (1.50)
AUDCHG		0.0487 (0.03)		1.4555 (4.29) ***
BUSY		-2.2025 (2.87) ***		-0.5696 (2.86) ***
OPIN		5.9237 (0.39)		4.6095 (4.77) ***
NEGNI		-22.0991 (6.95) ***		2.4028 (7.02) ***
CONSTANT	-0.1624 (4.09)	-44.3240 (6.84)	0.2227 (3.79)	7.5259 (16.61) ***
F test	12.07	17.49	14.75	132.91
F test probability	0.000	0.000	0.000	0.000

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectfully.

Variables defined in table 6. t statistics in parentheses.

TABLE 12

## Hypothesis One Testing – Filing Late vs. Sample Mean

Testing TIME as the time variable of interest. TIME defined as the difference between the sample mean days to file and the firm year observation days to file.

$$DACC = a_0 + a_1TIME + a_2LEVERAGE + a_3LODIST + a_4HIDIST + a_5LNCASH + a_6LNTA +$$

$$a_7PRICETOBOK + \varepsilon$$

$$TIME = a_0 + a_1DACC + a_2size + a_3EXTRA + a_4AUDCHG + a_5BUSY + a_6OPIN + a_7NEGNI + a_8HIDIST +$$

$$\varepsilon$$

	Absolute Value of DACC		Signed Value of DACC	
<b>Endogenous Variables</b>				
TIME	0.0427 (9.93) ***		-0.0627 (10.21) ***	
DACC		670.9204 (8.29) ***		-3.6653 (1.52)
<b>Common Explanatory Variables</b>				
LNTA	-0.0407 (5.49) ***	-1.3713 (2.87) ***	-0.0241 (2.19) **	-2.0717 (29.10) ***
HIDIS	-0.0311 (2.28) **	-1.9414 (1.37)	0.0501 (2.50) **	2.5113 (9.16) ***
<b>Variables for Earnings Management</b>				
LEVERAGE	-0.2749 (7.74) ***		0.3864 (7.56) ***	
LODIS	-0.0076 (0.77)		-0.0335 (2.33) **	
LNCASH	0.0499 (7.03) ***		-0.1115 (11.05) ***	
PRICETOBOK	0.0001 (1.11)		0.0000 (0.25)	
<b>Variables for Time to File</b>				
EXTRA		0.7171 (0.65)		0.5051 (1.87) *
AUDCHG		0.0431 (0.03)		1.5251 (4.51) ***
BUSY		-2.5958 (3.23) ***		-0.8965 (4.49) ***
OPIN		6.4430 (0.40)		5.1542 (3.89)
NEGNI		-23.1695 (7.05) ***		2.3429 (6.83) ***
CONSTANT	-0.2971 (6.50)	-42.2593 (6.31)	0.4279 (6.41)	12.3356 (26.93)
F test	14.82	18.62	19.58	153.93
F test probability	0.000	0.000	0.000	0.000

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectfully.  
Variables defined in table 6. t statistics in parentheses.

TABLE 13

## Hypothesis One Testing – Filing Late vs. Sample Median

Testing TIME as the time variable of interest. TIME defined as the difference between the sample median days to file and the firm year observation days to file.

$$DACC = a_0 + a_1TIME + a_2LEVERAGE + a_3LODIST + a_4HIDIST + a_5LNCASH + a_6SIZE + a_7PRICETOBOK + \varepsilon$$

$$TIME = a_0 + a_1DACC + a_2size + a_3EXTRA + a_4AUDCHG + a_5BUSY + a_6OPIN + a_7NEGNI + a_8HIDIST + \varepsilon$$

Endogenous Variables	Absolute Value of DACC		Signed Value of DACC	
	Estimate	t-statistic	Estimate	t-statistic
TIME	0.0427 (9.93) ***		-0.0627 (10.21) ***	
DACC		670.9204 (8.29) ***		-3.6653 (1.52)
Common Explanatory Variables				
LNTA	-0.0407 (5.49) ***	-1.3713 (2.87) ***	-0.0241 (2.19) **	-2.0717 (29.10) ***
HIDIS	-0.0311 (2.28) **	-1.9414 (1.37)	0.0501 (2.50) **	2.5113 (9.16) ***
Variables for Earnings Management				
LEVERAGE	-0.2749 (7.74) ***		0.3864 (7.56) ***	
LODIS	-0.0076 (0.77)		-0.0335 (2.33) **	
LNCASH	0.0499 (7.03) ***		-0.1115 (11.05) ***	
PRICETOBOK	0.0001 (1.11)		0.0000 (0.25)	
Variables for Time to File				
EXTRA		0.7171 (0.65)		0.5051 (1.87) *
AUDCHG		0.0431 (0.03)		1.5251 (4.51) ***
BUSY		-2.5958 (3.23) ***		-0.8965 (4.49)
OPIN		6.4430 (0.40)		5.1542 (3.89) ***
NEGNI		-23.1695 (7.05) ***		2.3429 (6.83) ***
CONSTANT	-0.1221 (3.78)	-46.3593 (6.92)	0.1708 (3.58)	8.2356 (17.98)
F test	14.82	18.62	19.58	153.93
F test probability	0.000	0.000	0.000	0.000

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectfully.  
Variables defined in table 6. t statistics in parentheses.

TABLE 14

Hypothesis One Testing – Filing Late vs. Five Days Later Than Prior Year

Testing TIME as the time variable of interest. TIME defined as the difference between the company prior year filing date plus 5 days and the current firm year observation days to file.

$$DACC = a_0 + a_1TIME + a_2LEVERAGE + a_3LODIST + a_4HIDIST + a_5LNCASH + a_6LNTA + a_7PRICETOBOK + \varepsilon$$

$$TIME = a_0 + a_1DACC + a_2size + a_3EXTRA + a_4AUDCHG + a_5BUSY + a_6OPIN + a_7NEGNI + a_8HIDIST + \varepsilon$$

	Absolute Value of DACC		Signed Value of DACC	
<b>Endogenous Variables</b>				
TIME	0.0521 (6.07) ***		-0.685 (6.12) ***	
DACC		566.7895 (6.21) ***		-7.7854 (3.26) ***
<b>Common Explanatory Variables</b>				
LNTA	-0.0108 (1.49)	-2.7223 (5.33) ***	-0.0523 (5.51) ***	-0.1310 (1.91) *
HIDIS	0.0174 (1.08)	-2.7039 (2.11) **	-0.0247 (1.17)	0.4936 (1.77) *
<b>Variables for Earnings Management</b>				
LEVERAGE	-0.1013 (3.00) ***		0.1213 (2.75) ***	
LODIS	-0.0048 (0.39)		-0.0291 (1.81) *	
LNCASH	0.0177 (2.64) ***		-0.0626 (7.20) ***	
PRICETOBOK	0.0003 (1.30)		-0.0002 (0.70)	
<b>Variables for Time to File</b>				
EXTRA		0.0713 (0.07)		0.1629 (0.59)
AUDCHG		-0.8845 (0.62)		1.2304 (3.44) ***
BUSY		-1.5691 (2.20) **		-0.9789 (4.91) ***
opin		-7.1217 (0.55)		1.6972 (1.80) *
NEGNI		-18.8293 (5.76) ***		0.1889 (0.53)
CONSTANT	-0.1143 (2.59)	-40.7699 (5.48)	0.1215 (2.07)	4.9896 (10.89)
F test	5.79	5.40	9.36	8.91
F test probability	0.000	0.000	0.000	0.000

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectively.

Variables defined in table 6. t statistics in parentheses.

TABLE 15

Hypothesis One Testing – Filing Late vs. Five Days Later Than Industry Mean  
Testing TIME as the time variable of interest. TIME defined as the difference between the industry mean days to file plus five days and the firm year observation days to file.

$$DACC = a_0 + a_1TIME + a_2LEVERAGE + a_3LODIS + a_4HIDIS + a_5LNCASH + a_6LNTA + a_7PRICETOBOK + \varepsilon$$

$$TIME = a_0 + a_1DACC + a_2size + a_3EXTRA + a_4AUDCHG + a_5BUSY + a_6OPIN + a_7NEGNI + a_8HIDIS + \varepsilon$$

	Absolute Value of DACC		Signed Value of DACC	
<b>Endogenous Variables</b>				
TIME	0.0514 (5.47) ***		-0.0626 (4.86) ***	
DACC		944.0594 (7.52) ***		-4.0532 (1.01)
<b>Common Explanatory Variables</b>				
LNTA	-0.0364 (2.58) ***	-3.5491 (4.84) ***	-0.0070 (0.40)	-1.2984 (10.79) ***
HIDIS	-0.1036 (3.01) ***	-2.7618 (1.35)	0.1242 (2.80) ***	3.4951 (7.51) ***
<b>Variables for Earnings Management</b>				
LEVERAGE	-0.2577 (3.66) ***		0.2965 (3.29) ***	
LODIS	0.0120 (0.56)		0.0064 (0.25)	
LNCASH	0.0308 (2.77) ***		-0.0756 (5.37) ***	
PRICETOBOK	0.0001 (0.41)		0.0001 (0.70)	
<b>Variables for Time to File</b>				
EXTRA		1.3506 (0.87)		1.0443 (2.35) **
AUDCHG		-0.2881 (0.13)		1.7969 (2.98) ***
BUSY		-2.8229 (2.42) **		-0.4246 (1.20)
OPIN		9.0171 (0.37)		7.1698 (2.36) **
NEGNI		-34.6293 (6.83) ***		1.3725 (2.38) **
CONSTANT	-0.7501 (4.62)	-59.0335 (5.68)	0.8818 (4.03)	17.7909 (22.78)
F test	4.56	9.24	5.03	29.19
F test probability	0.000	0.000	0.000	0.000

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectively.  
Variables defined in table 6. t statistics in parentheses.

TABLE 16

Hypothesis One Testing – Filing Late vs. Five Days Later Than Industry Median  
Testing TIME as the time variable of interest. TIME defined as the difference between the industry median days to file plus five days and the firm year observation days to file.

$$DACC = a_0 + a_1TIME + a_2LEVERAGE + a_3LODIST + a_4HIDIST + a_5LNCASH + a_6LNTA + a_7PRICETOBOK + \varepsilon$$

$$TIME = a_0 + a_1DACC + a_2size + a_3EXTRA + a_4AUDCHG + a_5BUSY + a_6OPIN + a_7NEGNI + a_8HIDIST + \varepsilon$$

Endogenous Variables	Absolute Value of DACC		Signed Value of DACC	
	Coef.	t-stat	Coef.	t-stat
TIME	0.0505 (9.00) ***		-0.0727 (8.84) ***	
DACC		637.0776 (8.12) ***		-0.5194 (0.22)
Common Explanatory Variables				
LNTA	-0.0467 (5.28) ***	-1.3519 (2.93) ***	-0.0314 (2.39) **	-1.9252 (27.28) ***
HIDIS	-0.0344 (2.15) **	-1.7850 (1.33)	0.0533 (2.30) **	2.4200 (8.90) ***
Variables for Earnings Management				
LEVERAGE	-0.2913 (7.03) ***		0.4022 (6.68) ***	
LODIS	0.0086 (0.74)		0.0098 (0.59)	
LNCASH	0.0529 (6.40) ***		-0.1143 (9.69) ***	
PRICETOBOK	0.0002 (1.48)		-0.0001 (0.33)	
Variables for Time to File				
EXTRA		0.6257 (0.60)		0.4032 (1.50)
AUDCHG		0.0487 (0.03)		1.4555 (4.29) ***
BUSY		-2.2025 (2.87) ***		-0.5696 (2.86) ***
OPIN		5.9237 (0.39)		4.6095 (4.77) ***
NEGNI		-22.0991 (6.95) ***		2.4028 (7.02) ***
CONSTANT	-0.4147 (6.65)	-39.3240 (6.06)	0.5863 (6.35)	12.5259 (27.64)
F test	12.07	17.49	14.75	132.91
F test probability	0.000	0.000	0.000	0.000

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectively.

Variables defined in table 6. t statistics in parentheses.

TABLE 17  
Hypothesis One Testing – Year Sensitivity Testing

Testing Days to File as the time variable of interest. Dummy variables are included to represent the years included in the sample. The year 2003 is used as the zero year.

Endogenous Variables	Absolute Value of DACC		Signed Value of DACC	
DAYSTOFILE	0.0301 (10.84) ***		-0.0511 (11.37) ***	
DACC		471.3765 (7.77) ***		-0.7653 (0.33)
LNTA	-0.0260 (5.18) ***	0.3454 (0.99)	-0.0092 (1.08)	-1.9973 (28.50) ***
HIDIS	-0.0212 (2.20) **	-0.4927 (0.49)	0.0446 (2.75) ***	2.3962 (8.88) ***
1994	-0.2323 (7.78) ***	-1.1354 (0.54)	0.3719 (7.61) ***	8.9220 (14.57) ***
1995	-0.2261 (8.81) ***	8.6839 (8.04) ***	0.3737 (8.90) ***	7.7689 (15.57) ***
1996	-0.2111 (8.86) ***	5.7562 (5.28) ***	0.3570 (9.15) ***	7.3838 (17.54) ***
1997	-0.1971 (8.69) ***	2.2690 (1.82) *	0.3466 (9.34) ***	7.2114 (18.71) ***
1998	-0.2147 (8.99) ***	2.7947 (2.28) **	0.3761 (9.65) ***	7.6944 (20.57) ***
1999	-0.2275 (9.27) ***	5.0955 (4.64) ***	0.3929 (9.82) ***	8.1413 (21.95) ***
2000	-0.2041 (8.64) ***	-0.3967 (0.26)	0.3954 (10.25) ***	7.7374 (19.76) ***
2001	-0.1769 (8.26) ***	0.8089 (0.62)	0.3346 (9.53) ***	6.2893 (16.15) ***
2002	-0.1606 (8.16) ***	3.6626 (3.29) ***	0.2819 (8.68) ***	5.0158 (12.02) ***
2004	0.0887 (3.88) ***	-1.7663 (0.96)	-0.1608 (4.20) ***	-3.4766 (4.93) ***
LEVERAGE	-0.1671 (7.47) ***		0.2622 (7.23) ***	
LODIS	-0.0005 (0.07)		-0.0241 (2.10) **	
LNCASH	0.0339 (7.22) ***		-0.0955 (12.51) ***	
PRICETOBOOK	0.0001 (1.59) ***		0.0000 (0.11)	
EXTRA		0.7811 (0.98)		0.6139 (2.35) **
AUDCHG		0.3074 (0.27)		1.8715 (5.48) ***
BUSY		-1.9886 (3.43) ***		-1.0127 (5.15) ***
OPIN		5.9132 (0.52)		4.5427 (2.97) ***
NEGNI		-15.2568 (6.18) ***		2.9648 (8.75) ***
CONSTANT	-2.500 (10.48)	54.1881 (11.75)	4.2370 (10.95)	88.4833 (162.88)

TABLE 18

## Hypothesis One Testing – Post 2000 Sensitivity Testing

Test using days to file as the time variable of interest. The sample is segregated into firm year prior to 2001 and firm years subsequent to 2000.

$$DACC = a_0 + a_1TIME + a_2LEVERAGE + a_3LODIST + a_4HIDIST + a_5LNCASH + a_6LNTA + a_7PRICETOBOK + \varepsilon$$

$$TIME = a_0 + a_1DACC + a_2LNTA + a_3EXTRA + a_4AUDCHG + a_5BUSY + a_6OPIN + a_7NEGNI + a_8HIDIST + \varepsilon$$

	Absolute Value of DACC, years 1994 - 2000		Absolute Value of DACC, years 2001 - 2004	
Endogenous Variables				
DAYSTOFILE	0.0462 (7.39) ***		0.0167 (9.07) ***	
DACC		323.6134 (5.52) ***		943.4004 (6.37) ***
Common Explanatory Variables				
LNTA	-0.0283 (3.27) ***	0.1462 (0.40)	-0.0229 (4.36) ***	1.1236 (1.37)
HIDIS	-0.0489 (2.55) **	0.8107 (0.95)	0.0000 (0.00)	-6.8329 (2.07) **
Variables for Earnings Management				
LEVERAGE	-0.1984 (5.46) ***		-0.1377 (5.20) ***	
LODIS	-0.0172 (1.36)		-0.0139 (1.86) *	
LNCASH	0.0486 (5.34) ***		0.0213 (4.67) ***	
PRICETOBOK	0.0002 (1.12)		0.0001 (1.13)	
Variables for Time to File				
EXTRA		0.4149 (0.56)		2.3631 (0.99)
AUDCHG		-0.1549 (0.14)		2.0021 (0.66)
BUSY		-1.1573 (2.15) **		-3.9406 (2.20) *
OPIN		24.1433 (3.02) ***		-38.5664 (4.05) ***
NEGNI		-12.4550 (4.34) ***		-24.1417 (5.14) ***
CONSTANT	-4.1123 (7.21)	66.2247 (13.08)	-1.4862 (8.59)	27.8060 (2.51)
F test	8.48	19.33	12.76	8.85
F test probability	0.000	0.000	0.000	0.000

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectfully.  
Variables defined in table 6. t statistics in parentheses.



TABLE 19  
Hypothesis Two Testing

Logit test using a dummy variable of firms filing subsequent to 93 days after the firm year end. Firms filing subsequent to the 93 days are given a value of one for the dependent dummy variable.

$$\text{LATEFILE} = a_0 + a_1\text{DACC} + a_2\text{LNTA} + a_3\text{EXTRA} + a_4\text{AUDCHG} + a_5\text{BUSY} + a_6\text{OPIN} + a_7\text{NEGNI} + a_8\text{HIDIST} + \varepsilon$$

	Logit Test of Late Filers	
	Absolute Value of DACC	Signed Value of DACC
ABSDACC	1.6255 (5.05) ***	-1.0882 (3.72) ***
LNTA	-0.5274 (13.91) ***	-0.5363 (14.18) ***
EXTRA	0.2979 (3.13) ***	0.3061 (3.22) ***
AUDCHG	0.6173 (5.69) ***	0.6170 (5.69) ***
BUSY	-0.4549 (5.62) ***	-0.4539 (5.61) ***
OPIN	dropped	dropped
NEGNI	1.4518 (15.82) ***	1.4035 (14.73) ***
HIDIS	1.1026 (12.77) ***	1.1140 (12.90) ***
CONSTANT	-1.0653 (4.59)	-0.88220 (3.85)

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectfully.  
Variables defined in table 6. t statistics in parentheses.

TABLE 20  
Hypothesis Three Testing

Results of testing for a relationship between market reaction and DACC. Testing hypothesis three using CARs based upon -181 to -1 days prior to the earnings announcement date.

$$CAR_i = a_0 + a_1DACC + a_2TA + a_3UNEXP + \varepsilon$$

	Discretionary Accruals		Unexpected Discretionary Accruals	
	Absolute Value of DACC	Signed Value of DACC	Absolute Value of DACC	Signed Value of DACC
ABSDACC	11.3341 (0.52)		15.6389 (0.66)	
DACC		-11.0725 (0.52)		-16.1891 (0.67)
LNTASS	0.7679 (1.80) *	0.7666 (1.80) *	0.5388 (1.11)	0.5395 (1.11)
UNEXP	0.0181 (1.00)	0.0181 (1.00)	0.0099 (0.45)	0.0099 (0.45)
CONSTANT	-4.1774 (1.28)	-4.1473 (1.28)	-1.9536 (0.57)	-1.9551 (0.57)

Adj R2                    0.0003                    0.0003                    0.0002                    0.0002

Absdacc                The absolute value of discretionary accruals calculated as the residuals from the cash flow variant of the modified Jones model.

Dacc                    The discretionary accruals calculated as the residuals from the cash flow variant of the modified Jones model.

Lntass                  The log of total assets. The proxy variable for size.

Unexp                  Earnings surprise proxied by the difference between the prior year earnings per share and the current year earnings per share.

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectfully. t statistics in parentheses.

TABLE 21  
Hypothesis Three Testing

Results of testing for a relationship between market reaction and DACC. Testing hypothesis three using CARs based upon -181 to -10 days prior to the earnings announcement date.

$$CAR_i = a_0 + a_1DACC + a_2TA + a_3UNEXP + \varepsilon$$

	Discretionary Accruals		Unexpected Discretionary Accruals	
	Absolute Value of DACC	Signed Value of DACC	Absolute Value of DACC	Signed Value of DACC
ABSDACC	6.8607 (0.06)		0.8814 (2.59) ***	
DACC		-6.8607 (0.06)		-0.7332 (2.37) **
LNTASS	3.3779 (2.13) **	3.3779 (2.13) **	-0.0025 (0.39)	-0.0039 (0.61)
UNEXP	0.1670 (0.34)	0.1670 (0.34)	0.0006 (0.23)	0.0006 (0.25)
CONSTANT	-18.4884 (1.24)	-18.4884 (1.24)	0.0200 (0.41)	0.0312 (0.65)

Adj R2                    0.0022                    0.0022                    0.0188                    0.0174

Absdacc                The absolute value of discretionary accruals calculated as the residuals from the cash flow variant of the modified Jones model.

Dacc                    The discretionary accruals calculated as the residuals from the cash flow variant of the modified Jones model.

Lntass                  The log of total assets. The proxy variable for size.

Unexp                  Earnings surprise proxied by the difference between the prior year earnings per share and the current year earnings per share.

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectively. t statistics in parentheses.

TABLE 22

## Hypothesis Three Sensitivity Testing

Testing hypothesis three using CARs based upon -181 to -1 days prior to the earnings announcement date. Testing only the extreme abnormal accruals, the top and bottom deciles of abnormal accruals.

$$CAR_i = a_0 + a_1DACC + a_2TA + a_3UNEXP + \varepsilon$$

	Absolute Value of DACC
ABSDACC	.0212
	1.77
LNTASS	.2893
	.29
UNEXP	-.0098
	(0.64)
CONSTANT	-7.3282
	(1.65)

Adj R2            0.0032

ABSDACC    The absolute value of discretionary accruals calculated as the residuals from the cash flow variant of the modified Jones model.

LNTASS      The log of total assets. The proxy variable for size.

UNEXP       Earnings surprise proxied by the difference between the prior year earnings per share and the current year earnings per share.

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectively. t statistics in parentheses.

TABLE 23  
Hypothesis Four Testing

Testing hypothesis four, market reaction to abnormal accruals for firms filing subsequent to 93 days later than the firm year end.

$$CAR_i = a_0 + a_1DACC + a_2TA + a_3UNEXP + \varepsilon$$

	Discretionary Accruals		Unexpected Discretionary Accruals	
	Absolute Value of DACC	Signed Value of DACC	Absolute Value of DACC	Signed Value of DACC
ABSDACC	508.1747 (1.34)		-611.3128 (1.05)	
DACC		-468.4083 (1.30)		665.0149 (1.09)
LNTASS	14.1839 (1.75) *	14.2147 (1.75) *	20.3126 (1.72) *	20.6643 (1.75) *
UNEXP	-0.0442 (0.05)	-0.0809 (0.09)	0.5329 (0.22)	0.7244 (0.29)
CONSTANT	-109.5741 (1.90)	-106.7627 (1.87)	-111.9359 (1.49)	-113.9690 (1.51)

Adj R2                      0.0197                      0.0186                      0.0052                      0.0067

ABSDACC      The absolute value of discretionary accruals calculated as the residuals from the cash flow variant of the modified Jones model.

DACC            The discretionary accruals calculated as the residuals from the cash flow variant of the modified Jones model.

LNTA            The log of total assets. The proxy variable for size.

UNEXP          Earnings surprise proxied by the difference between the prior year earnings per share and the current year earnings per share.

\*, \*\*, \*\*\* Significant at the 0.10, 0.05, and 0.01 level respectively. t statistics in parentheses.