Summer 2009

Earnings management around mergers and acquisitions

Eugenie Ann Ardoin Goodwin
Louisiana Tech University

EARNINGS MANAGEMENT AROUND MERGERS AND ACQUISITIONS

by

Eugenie Ann Ardoin Goodwin, M.B.A.

A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Business Administration

COLLEGE OF BUSINESS
LOUISIANA TECH UNIVERSITY

August, 2009

LOUISIANA TECH UNIVERSITY

THE GRADUATE SCHOOL

July 1, 2009
Date

We hereby recommend that the dissertation prepared under our supervision by Eugenie Goodwin entitled "Earnings Management Around Mergers and Acquisitions" be accepted in partial fulfillment of the requirements for the Degree of Doctor of Business Administration - Finance

Supervisor of Dissertation Research

Head of Department
Economics and Finance
Department

Recommendation concurred in:

Advisory Committee

Approved:
Director of Graduate Studies

Dean of the College

Approved:
Dean of the Graduate School

GS Form 13a
(6/07)

ABSTRACT

Earnings management has become a topic of interest when trying to explain anomalies in company stock performance following corporate events such as equity offerings and mergers. If managers are trying to manipulate earnings upward to increase stock value before a merger to achieve a better exchange ratio at acquisition announcement, they may use discretion in accruals to inflate earnings and/or reduce spending in research and development prior to the announcement. Literature results are mixed as to whether firms engage in opportunistic earnings management using discretionary accruals before acquisition announcement and if this manipulation has an impact on stock performance post-announcement. I use three samples, one based on announced mergers involving stock in the payment method, a second based on completed mergers offering a stock swap or stock and cash as consideration, and a third involving cash only merger announcements. I examine these from 1989 to 2005. The announced sample has 697 merger announcements, the completed sample has 577 completed mergers, and the cash only sample has 179 announced mergers. I test opportunistic earnings management and managerial optimism for each of the samples. My review of adjusted discretionary total accruals using cash flow data does not show evidence of upward earnings management but rather downward earnings management before the announcement. Also, patterns in R&D expenses are not supportive of managerial

optimism but could lend support to downward earnings management before merger announcement.

Announcing firms have a higher occurrence of litigations and downward earnings restatements following announcement than industry- and performance-matched firms providing some support for opportunistic earnings management, but not supported by the review of accruals or R&D expenses.

A review of managerial optimism using an optimism proxy and R&D expenses does not provide support that the increase in R&D in the year of the announcement is the result of managerial optimism.

Long-run post-announcement stock performance is not significant for the completed mergers sample. The buy-and-hold abnormal returns for the cash only sample of announced mergers is negative and marginally significant 2-years post-announcement and the announced sample has a marginally significant positive abnormal return 12-months post-announcement. The results of this study do not find significant support for the opportunistic earnings management hypothesis; and only minimal support for the managerial optimism hypothesis. The study does provide some evidence of downward earnings management by these firms which could support other hypotheses not addressed in this study.

APPROVAL FOR SCHOLARLY DISSEMINATION

The author grants to the Prescott Memorial Library of Louisiana Tech University the right to reproduce, by appropriate methods, upon request, any or all portions of this Thesis/Dissertation. It is understood that "proper request" consists of the agreement, on the part of the requesting party, that said reproduction is for his personal use and that subsequent reproduction will not occur without written approval of the author of this Thesis/Dissertation. Further, any portions of the Thesis/Dissertation used in books, papers, and other works must be appropriately referenced to this Thesis/Dissertation.

Finally, the author of this Thesis/Dissertation reserves the right to publish freely, in the literature, at any time, any or all portions of this Thesis/Dissertation.

Author Eugene H. Goodwin

Date 7-1-09

TABLE OF CONTENTS

LIST OF TABLES

ACKNOWLEDGEMENTS

I would like to offer a special thank you to Dr. Dalia Marciukaityte and Dr. Otis Gilley, my dissertation committee chairs, and Jungshik Hur, my committee member, for their assistance, patience, guidance, and knowledge. They provided me with knowledge and wisdom, both as committee members and professors, which I will carry with me throughout my future endeavors.

I would like to thank my parents, Gene and Harriet Ardoin, for their unconditional love, support, and encouragement throughout my life. I would not be where I am today without them. Also I would like to offer an extra special thank you to my husband, Quinton Goodwin, for his patience and support during my time in the doctorial program. I know that he made several sacrifices over this five-year period so that I could pursue this degree and for that I am extremely grateful.

I would also like to thank Dr. Anderson for his guidance and support throughout my studies and two very special fellow doctorial students, Hui Di and Beth Hegab, for their friendship. We went through the program together and they were instrumental in keeping me focused and helped me get through the process.

I would also like to thank my coworkers and supporters at the University of Louisiana at Monroe. To Mooi Lee, thank you for listening and encouraging me, to Dr. Dunn for his guidance as a mentor and dear friend throughout my college career, and to all the other faculty and staff, like Dr. McConkey, who checked on my progress,

constantly pushed me, and always believed in me. All of these people played a special role in my accomplishment and I cannot thank them enough.

CHAPTER 1

INTRODUCTION

Importance of Studying Earnings Management around Mergers and Acquisitions

Firms looking for growth or expansion will often acquire other firms to achieve the desired growth. A firm can acquire another through a cash purchase (cash offer), whereby the acquirer pays for the outstanding shares of the target firm with cash. Another option is to purchase the target firm's shares by issuing stock of the acquirer as consideration. In this case, stockholders of the firm to be acquired (target) are given shares of the acquiring firm as payment. When stock is issued as the payment method, an exchange ratio is agreed to by the two firms. This exchange ratio is typically based on the value of the acquiring firm's stock compared to the value of the target firm's stock. This is usually referred to as a stock-for-stock transaction or a stock swap. The exchange ratio is typically announced when the bidding process begins and is based on the anticipated value of the two firms near the merger date. A last option for acquisition is a combination of cash and stock being offered to the target. The methods described above involve direct negotiation between the management of the two firms. A tender offer does not necessarily involve management of the target. In a tender offer, the acquirer offers cash directly to stockholders and purchases shares over time directly from the target stockholders.

When the merger is based on a stock swap or has stock included as consideration, then the value of the payment will be based on the market value of both company's stock at or near the anticipated merger date. Since value is based on anticipated cash flows, operating performance has an impact on the value of the stock and the ratio of shares to be exchanged. As such, the acquiring firm may have incentive to increase accounting earnings before beginning negotiations in an attempt to increase the value of the stock, thereby lowering the ratio of exchange and reducing existing stockholder and management share dilution.

So, what determines when an acquisition will be financed with a stock issue or paid for with cash? Following Myers and Majluf (1984, 575) managers have incentive to issue stock when their stock is overvalued. If this is the case, then stock-for-stock acquisitions would be based on the idea that the acquiring firm's management believes the stock of its firm to be overvalued. Cash acquisitions would occur when the stock is not considered overvalued or when management ownership of stock in the acquiring firm is high (Amihud, Lev, and Travlos 1990, 603)[1]. Another reason for a cash acquisition would be that the acquiring firm has available cash on hand or access to debt financing (Jensen 2005, 323 and Myers 1984, 575)[2]. If the firm has access to debt financing as the means of payment for an acquisition, this is considered a leverage buyout[3] which is a separate topic and beyond the scope of this study but a potential area for future research.

---

[1] Using cash as payment does not dilute share ownership of management.

[2] Jensen's Free Cash Flow Theory indicates that managers would use available cash to take on projects and Myers' Pecking Order Theory argues that managers would prefer using internal funds for projects.

[3] Leverage buyout occurs when a firm issues debt to acquire the equity of another whereby the assets of the target become security for the debt (Gaughan, P. , *Mergers, Acquisitions, and Corporate Restructurings*, 4th Ed., (New Jersey: John Wiley & Sons, Inc. 2007, page 604).

It is well documented in the literature that firms involved in mergers and acquisitions have stockholders who experience stock gains and stock losses. The stock gains are typically the stockholders of the acquired firm while the stock losses are usually found to be the stockholders of the acquiring firm (Moeller, Schlingemann, and Stulz 2005, 757). Several studies have looked at this based on the method of payment used and whether the target firms were publicly or privately traded at the time of acquisition (Shleifer and Vishny 2003, 295; Andrade, Mitchell and Stafford 2001, 103; and Loughran and Vijh 1997, 1765). For studies that breakout the method of payment they find that stockholders in an acquiring firm doing a stock swap see negative post-issue returns while those in a cash tender offer do not see the same decline after merger announcement.

If it can be consistently found that the acquiring firm's stock underperforms following an acquisition, then the market is inefficient in the semi-strong form. That is, the market does not incorporate the over-valuation of the acquirer at the time of the acquisition announcement. The information is not fully incorporated into the stock price at the time of the announcement of the acquisition.

One possible explanation for the acquirers' post-acquisition under performance may be that management of the acquiring firm has used discretion in accounting to inflate the value of the firm prior to the acquisition announcement. If this is the case, then the acquiring firm may make income increasing accruals to inflate the value of the firm's stock and acquire the target at a better rate of exchange. After acquisition, the earnings adjustment would vanish and the stock price would underperform as investors are disappointed by the post-acquisition operating performance of the combined firm (Louis

2004, 121). Obviously this would only be the case if the acquisition transaction includes some amount of the acquirers stock as consideration. This could be intentional earnings management or it could be that management is merely optimistic about the future of the combine firm and makes income increasing accruals based on this optimism. There would be no logical reason to suspect the target firm to engage in pre-announcement earnings management as they would be unaware of the acquisition until the announcement. Erickson and Wang (1999, 149) argue that the target does not have time to manage earnings before the bidder initiates the process.

Motivations of the Study

Earnings and the reporting thereof are critical in the assessment of a firm's value as it relates to stock price. This became most apparent with the collapse of Enron and World Com when it was revealed that management misrepresented accounting earnings and hence overall firm value. Earnings management has since moved to the front of research topics following the accounting scandal. Specifically, the bulk of the literature uses earnings management as a potential explanation for market anomalies around specific corporate events such as seasoned equity issues (Teoh, Welch, and Wong 1998, 63 and Rangan 1998, 101), initial public offerings (Teoh, Welch, and Wong 1998, 63), share repurchases (Gong, Louis, and Sun 2008,), and mergers and acquisitions (Louis 2004, 121 and Erickson and Wang 1999, 149). However, the results of the studies are mixed as to whether managers actively manage earnings and if earnings management is the reason for the poor post stock performance. If the market is slow to react to merger announcements then it may be possible that management has manipulated earnings in an attempt to create a high value prior to the mergers (opportunistic earnings management)

and the market does not account for this manipulation. Another argument has been made that managers use discretion in accruals to inflate earnings to match their optimism about the future outlook of the company (managerial optimism) (Di, Goodwin, and Marciukaityte 2009). Additionally, another argument is that the stock is overvalued and management is using this overvalued stock and the timing to acquire another firm (Ang and Cheng 2006, 199). This study will test the above reasons (opportunistic earnings management and managerial optimism) for poor post-performance of acquirers following an acquisition where the acquirer uses its own stock as partial or full payment.

Purpose and Objectives of the Study

The purpose of this study is to test if earnings management by acquiring firms can explain the prior research documentation of post-acquisition poor performance of acquiring firms in a stock-for-stock or mixed acquisition. Specifically, this study will look at discretionary accruals, operating performance, and post-issue stock performance around mergers and acquisition announcements for a sample of firms relative to performance-, size-, and industry-matched firms to test for opportunistic earnings management and managerial optimism. This study will also incorporate real earnings management using an analysis of research and development expenses (R&D) and review litigations surrounding the announcement. The purpose for reviewing litigations is that if stockholders feel as though management misrepresented earnings before a merger announcement, then the incident of stockholder lawsuits should be higher than similar firms that did not undertake an acquisition. In addition to litigation, this study will also look at the occurrence of restatements of financial performance by acquiring firms to see if any earnings management is outside the scope of GAAP reporting. Lastly, this study

will also incorporate the use of a leverage proxy (Di, Goodwin, and Marcuikaityte 2009 and Di and Marcuikaityte 2008) to test for managerial optimism as a potential explanation for poor post-merger operating performance of acquirers.

Contributions of the Study

First, this study further extends the research in the area of earnings management around mergers and acquisitions by incorporating a more current sample then previous studies, as well as utilizing the cash flow method of Hribar and Collins (2002, 105) for testing discretionary accruals. Hribar and Collins (2002, 105) recommend using cash flow data as opposed to balance sheet data when calculating discretionary accruals. The authors argue that foreign currency transactions, mergers and acquisitions, and discontinued operations can distort results when using balance sheet data. In addition, the study looks at adjusted discretionary accruals recommended by Kothari, Leone, and Wasley (2005, 163), where discretionary accruals are estimated based on industry- and performance-matched firms and the difference between acquiring firm discretionary accruals and matched firm discretionary accruals represents adjusted discretionary accruals. Second, the study will incorporate a review of litigations and earnings restatements by acquiring firms around the time of acquisition to see if earnings manipulation is driving the reported poor post-stock performance found in other studies. Third, specific tests for managerial optimism using a leverage proxy offered by Di, Goodwin, and Marcuikaityte (2009) and Di and Marcuikaityte (2008) will be incorporated into the study. There is currently no other study that looks at managerial optimism when analyzing earnings management around mergers and acquisitions.

Plan of the Study

Chapter 2 presents a review of prior literature in the area of earnings management around mergers and acquisitions and presents the hypotheses to be tested. Chapter 3 provides information related to the sampling procedures and methodology used in the study. Chapter 4 provides and analyses of the results of the hypotheses tests. Finally, Chapter 5 provides concluding remarks and potential implications of the study.

CHAPTER 2

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

A Review of Relevant Studies

The literature in the area of mergers and acquisitions relevant to this study can be divided into two separate categories. The first category is studies that focus on the stock performance of the acquirer following the acquisition and the second is studies that focus specifically on earnings management of the acquirer around the acquisition. Each category is discussed separately below.

Stock Performance Following Acquisitions

Several studies on mergers and acquisitions find that the target shareholders are usually winners while the acquirer shareholders are usually losers following an acquisition. Moeller, Schlingemann, and Stulz (2005, 757) look at mergers from 1980 to 2001 and find wealth losses for acquiring firm shareholders at the time of announcement and wealth gains for target shareholders. Andrade, Mitchell, and Stafford (2001, 103) find that on average, abnormal returns are positive suggesting that mergers do create value for the shareholders. They note that target shareholders are winners in the mergers with an average three-day return of 16%. However, contrary to Moeller, Schlingemann,

and Stulz (2005, 757), they find the three-day abnormal return for the acquirer is negative but not significant. The authors' further note that the negative return is isolated to those firms that finance the acquisition with stock. They also note that target shareholders fair better with no equity financing (13% with stock versus 20% without stock). Overall, they note that the combined average returns for stock financed mergers are zero indicating no increase in shareholder value, while mergers financed without stock have an average positive return of 3.6%.

Loughran and Vijh (1997, 1765) used data from 1970 to 1989 to test long-run stock performance following an acquisition by type of payment. The authors find a relationship between the method of acquisition (tender versus merger) and the form of payment (cash versus stock). The authors find that firms that complete mergers involving stock swaps earn significantly negative excess returns after acquisition, where cash tender offers yield significantly positive excess returns for stockholders in the acquirer.

Ben-David and Roulstone (2008) find underperformance of acquiring firms stock after acquisition, but argue that the underperformance is limited to small stock acquirer. The authors further argue that the stock underperformance may be due to "limits to arbitrage" for these small firms' stock.

Shleifer and Vishny (2003, 295), assuming rational managers in a market that is not fully rational, develop a model for mergers that can be used to predict the target, the medium of payment, the valuation consequences, as well as any merger waves through time. Overall, the authors find acquisitions are disproportionately for stock when industry valuations are high and for cash when they are low. They predict that the volume of stock acquisitions increases with the dispersion of value among firms. They also suggest that

acquirers in stock transactions show signs of overvaluation, such as earnings manipulation and insider selling. The authors' model predicts an incentive for firms to have their equity overvalued so that they can make acquisitions with stock. The authors did not empirically test the model but used findings from prior studies to support their model predictions.

Earnings Management and Mergers and Acquisitions

Several studies show that firms manage earnings upward before issuing equity to minimize the dilution effect of stockholders and/or to increase the funds generated from an issue (Rangan 1998, 101; and Teoh, Welch, and Wong 1998, 63), while other studies find no evidence of opportunistic earnings management (Shivakumar 2000, 339; Hribar and Collins 2002, 105; and Di, Goodwin, and Marciukaityte 2008). Andrade, Mitchell, and Stafford (2001, 103) argue that an acquisition using stock is similar to a new stock issue. In the literature related to mergers and acquisitions through stock swaps, three papers find the presence of earnings management (Baik, Kang, and Morton 2007, Louis 2004, 121; and Erickson and Wang 1999, 149) while three recent studies find no evidence of earnings management by acquirers prior to acquisition (Ben-David and Roulstone 2008, Pungaliya and Vijh 2008, and Heron and Lie 2002, 137).

Studies Finding Evidence of Earnings Management

Baik, Kang, and Morton (2007) look at earnings management by acquiring firms in a merger using both cash and stock methods of payment from 1990 to 1998. The authors also look at whether the target is privately or publicly held. They find earnings management by acquires when purchasing privately held firms using a stock swap as the

payment method. They find that stock returns around merger announcements when acquiring privately held firms is negatively related to the abnormal accruals, but show no long term relationship to the abnormal accruals. The authors argue that this suggests that investors' price earnings management at the time of acquisition with no delay in market reaction. The authors further argue that the earnings management is to avoid overpayment due to information asymmetries inherent in privately held firms. The authors do find that acquiring firms in a stock swap tend to report significantly positive abnormal accruals prior to the merger announcement when compared to cash acquisitions. The authors note income increasing abnormal accruals when the target is privately held but not publicly held. They find that average abnormal returns for acquirers of public firms to be negative while positive for acquirers of private firms. The study notes the use of ROA adjusted discretionary accruals, but the study only uses changes in accounts receivable as the measure of current discretionary accruals.

Louis (2004, 121), using a sample of pure stock swaps or pure cash purchases from 1992 to 2000, finds evidence suggesting that acquirers overstate earnings in the quarter before acquisition announcement in a stock-for-stock merger. He notes the price adjustments are only partial before the merger and reversals continue after the merger. Louis (2004, 121) further notes that post-merger underperformance by acquiring firms is partly attributable to the reversal of the price effects of earnings management. He reports that reversals are totally reflected by the quarter subsequent to the merger. The author calculates ROA adjusted discretionary accruals, but does not report the use of cash flow statements for data on discretionary accruals.

Erickson and Wang (1999, 149) test for earnings increasing management by acquirers the quarter before the announcement of the acquisition in a stock based purchase. The authors look at acquisitions from 1985 to 1990, resulting in a very small sample of 55 events. The authors find evidence of upward earnings management in the periods prior to the merger and the degree of income increasing earnings management is positively related to the size of the merger. The authors use balance sheet data before 1988 and cash flow data after 1988 for the calculation of discretionary accruals.

Studies Finding No Evidence of Earnings Management

Ben-David and Roulstone (2008) find that the underperformance of acquirers is isolated to small firm acquirers and more notable in small firm acquirers that use stock as the payment method. The authors argue that the underperformance of the stock of these small firm acquirers is due to the limits of arbitrage and not the result of earnings management. The authors use a sample from 1980 to June 2007 but do not go into detail about data source for the estimate of discretionary accruals.

Pungaliya and Vijh (2008) find no evidence of earnings management when controlling for growth in the various models of discretionary accruals and adjusted discretionary accruals. The authors argue that prior studies suffer from an omitted variable bias, namely sales growth, and that when this variable is taken into consideration, the evidence of earnings management through discretionary accruals disappears. The authors sample only pure cash and stock-for-stock mergers from 1989 to 2005. The authors use both the balance sheet adjusted- and cash flow statement adjusted-discretionary accruals. The authors do not remove overlapping mergers (multiple

mergers by the same firm) in their analysis and only include larger mergers based on deal size.

Heron and Lie (2002, 137) look at the method of payment in an acquisition, the firms' operating performance before and after acquisition, and earnings management. The authors use data from 1985 to 1997. They find that acquirers have higher operating performance levels than industry peers prior to the acquisition and no evidence of earnings management by acquirers prior to acquisition. Additionally, the authors note that the acquirers show better operating performance after the acquisition compared to industry peers.

Hypothesis Development

Myers and Majluf (1984, 187) argue that managers have incentive to issue stock when their stock is overvalued. Andrade and Stafford (2001, 103) argue that a stock-for-stock merger is the same as a new stock issue. Given these two studies, are stock-for-stock mergers driven by overvalued stock on the part of the acquirer? The following hypotheses exist to assess whether management engages in earnings management before a corporate event such as a merger.

Opportunistic Earnings Management Hypothesis

When a merger involves a stock swap, the value of the acquirers' stock has an impact on the exchange ratio and hence the amount paid for the target firm. Management may have incentive to manipulate earnings upward to increase the value of the firm's shares and hence reduce the amount paid for the target in a stock-for-stock acquisition. One method managers can use to increase earnings is through income increasing discretionary accruals prior to the merger announcement.

Another method to manage earnings is through the timing of business decisions that result in changes in expenses. Managers may withhold investments in research and development (R&D) to increase income. Baber, Fairfield, and Haggard (1991, 818) explore the possible use of investments in research and development as a means of earnings management. Specifically, the idea they convey in their article is that if a firm is anticipating not reaching its net income goals, it may decide to cut back on some expenditures, specifically advertising, employee training, and R&D. The cut in R&D is critical because it is believed that the cuts will jeopardize future cash flows by bypassing profitable projects. The authors use a sample of 438 US firms from 1977 to 1987 to assess the use of changes in R&D expenditures by firms for which these changes would benefit net income relative to projected goals. The authors find that R&D spending is less "when spending jeopardizes the ability to report positive or increasing income in the current period" (Baber, Fairfield, and Haggard 1991, 818). In addition, Perry and Grinaker (1994, 43), using firms from 1984 to 1990, look at R&D expenses and earnings expectations and find a nearly linear relationship between "unexpected" R&D expenditures and "unexpected" earnings.

For this hypothesis of opportunistic earnings management to be supported, I would expect to see income increasing discretionary accruals in the fiscal year before the announcement of a merger so that the increased earnings can be observed by the market before the announcement. There should be a negative relationship between the level of discretionary accruals before the announcement and stock performance after the announcement. Also, I would expect to see a decrease in research and development expenses from the year before the announcement to the year of the announcement.

Managerial Optimism Hypothesis

In Adam Smith's The Wealth of Nations he states "The chance of gain is by every man more or less over-valued, and the chance of loss is by most men under-valued..." (Smith 1904, 107). This was further documented by Weinstein (1980, 806) in his study of college students. Weinstein finds people tend to be overly optimistic about future events. Students rated themselves as having above average chance for positive occurrences and below average chance for negative ones. Russo and Schoemaker (1992, 7) find 99% of managers are overconfident in that they believe they have superior knowledge about their industry and company than they actually do. Graham's (1999) survey of CFOs finds most CFOs believe their firms are undervalued. However, given the time of his study we now know that the market overall was overvalued. Based on these studies, if managers are overoptimistic about the future of the firm, they may reflect this in their reporting of discretionary accruals. This may also be noted in capital expenditures and research and development spending. Teoh, Welch, and Wong , 631998) note increases in discretionary accruals in the year of a seasoned equity offering that may be indicative of managerial optimism and not earnings management. Loughran and Ritter (1997, 1765) find that managers continue to spend in research and development despite the deterioration of the firm's financial position. The authors find seasoned equity offering firms have high capital expenses and research and development expenses both before and after a stock issue. The authors argue that this may indicate that managers may be optimistic as this is contrary to what might be expected to increase earnings to obtain a better stock price at issue. Neither authors test the optimism theory any further.

Malmendier and Tate (2008, 20) look at managerial overconfidence and the merger decision. They find that CEOs who are considered overconfident, based on proxies related to press releases and option holdings, take on mergers that do not create value but rather may destroy value. They find that the overconfident managers are more likely to take on mergers that are outside of their industry and that do not require external financing.

To test for managerial optimism, Malmendier and Tate (2008, 20) developed a press proxy whereby they search articles related to the company and the CEO around the event to see if the CEO is described as optimistic or conservative. They also look at CEO option holdings to see how many are exercised before expiration when they are 67% *in-the-money* and the relationship between exercising options and merger activities.

An additional test for managerial optimism is offered by Di, Goodwin, and Marcuikaityte (2009) and Di and Marcuikaityte (2008) as a leverage proxy. Heaton (2002, 33) argues that managers who are optimistic prefer debt financing to equity financing. Equity financing tends to reduce or dilute holdings of existing stockholders and management. With this said, Heaton posits that optimistic managers would be more likely to use internal sources of funds and debt before issuing equity. This argument is further supported by Malmendier and Tate (2008, 20) who show that overconfident managers are more likely to merge if no external financing is needed.

For this hypothesis of managerial optimism to hold I would expect to see increases in research and development up to and including the year of acquisition announcement coupled with poor post operating performance of the firm following the announcement of acquisition. I would also expect to see an increase in discretionary

accruals in the year of the merger announcement. As to the leverage proxy, I would expect it to be positive and significantly related to changes in discretionary accruals and R&D expenses.

Summary

The literature surrounding mergers and acquisitions indicates that, on average, firms involved in a stock-for-stock merger have target shareholders that realize abnormal positive returns after announcement while acquirer shareholders see abnormal negative returns. Several studies try to explain the phenomena using earnings management as the driving force behind the poor post- performance of acquirer stock returns. Some argue that managers manipulate earnings through discretionary accruals to inflate stock prices before a corporate event that involves the firm's stock, such as a merger involving a stock swap. Other literature suggests managers may chose to time mergers based on the firms' current stock price. And still others argue that managers may be optimistic about the future of the firm and reflect this optimism in their discretionary accruals.

CHAPTER 3

RESEARCH METHODOLOGY

Sample Data

The sample used in this study includes announcements of pure stock-for-stock mergers and mixed stock and cash mergers of publicly traded companies in the United States with announcement dates beginning in January 1989 and continuing through December 2005. Pure cash mergers are excluded from the main sample and retained as a control sample based on similar studies that suggest firms paying cash have no incentive to manipulate earnings (Erickson and Wang 1999, 149). The sample is taken from the Securities Data Corporation (SDC) database. The sample begins in 1989 to allow for the calculation of adjusted discretionary total accruals using cash flow data from COMPUSTAT the year before the announcement. Cash flow data is not available in COMPUSTAT to compute discretionary accruals until 1988[4]. Similar to Louis (2004, 121) I exclude financial companies (CRSP Standard Industrial Classification (SIC) codes 6700-6999) but I also exclude regulated utilities (SIC codes 4910-4949) as this industry also has unique regulatory guidelines. Also, similar to Louis (2004, 121), information on

[4] Hribar and Collins (2002, 105) show that if firms were involved in discontinued operations, foreign currency transactions and mergers then computing discretionary accruals from the balance sheet information would yield bad results.

the acquirer must be available in CRSP in the month of announcement and COMPUSTAT the year before the announcement fiscal year. Unlike Louis (2004, 121), I do not limit the merger sample to only completed mergers as this would induce survivorship bias in the analysis of discretionary accruals prior to the merger announcement. However, for consistency, I also calculate the results using only completed mergers. For all three samples (announced, completed and cash only) I remove firms that intend to account for the acquisition as a pooling of interest[5]. Also, unlike Pungaliya and Vijh (2008) I include mixed mergers which involve a portion of the acquisition financed with stocks and a portion financed with cash. I retain mixed mergers because if stock is a part of the transaction then the incentive to manage earnings to inflate stock price remains even if a portion of the merger is financed with cash. Mergers which are pure cash deals are held as a control sample for analysis similar to Erickson and Wang (1999, 149).

Since I am testing for earnings management before the merger, I include mergers where adjusted discretionary total accruals can be calculated in the year before the merger announcement. Since firms that engage in small acquisitions may not have incentive to manager earnings, I follow Ben-David and Roulstone (2008) by further limiting the samples to mergers in which the acquirer is seeking to purchase more than 50% of the target and the value of the transaction is greater than one million dollars. I also require that mergers by the same firm be at least three years apart. As such, if a firm has acquired more than one firm in a three-year period I select the first acquisition then

[5] Erickson and Wang (1999, 149) argue that using the pooling of interest account method by acquiring firms can impact discretionary accruals through the deferred tax asset account.

the next provided it occurred at least 4 years later to avoid overlap since my analysis will cover the three years before and the three years after each merger announcement.

Table 3.1 provides descriptive statistics on the sample of all announced mergers and acquisition as well as the sample of completed mergers. Panel A shows the number of sample mergers by year. Sample merger announcements peak in 2000 with 10.62% of the announced sample mergers occurring in this year. Panel B shows announced sample mergers by industry. The industries are spread fairly well with a little less than 19% of the sample merger firms falling in the business services industry. Panel C gives brief financial information on the announced sample firms compared to industry- and performance- matched firms. Matching is based on two-digit SIC code and return on assets the year before the announcement. The announced sample firms are larger in market value of equity ($508 million versus $97 million for matched firms) and asset size ($370 million versus $112 million) than matched firm. The announced sample firms have slightly lower book leverage with a mean of 46.74% and median of 42.97% than the matched firms with a mean book leverage of 48.52% and median of 44.79%.

The same observations hold for the sample of completed mergers included in Panel D, E, and F of Table 3.1. They too are larger than industry- and performance-matched with median market value of equity of $646 million versus $114 million for matched. Completed merger sample firms also experience much higher growth with just over 20% change in total assets versus 5.79% for matched, and slightly lower book leverage which ranges from 44.71% in mean to 41.31% in median versus matched which ranges from 47.41% mean to 44.08% in median. million and $5 million for industry- and performance-matched firms.

Table 3.1. Descriptive Statistics of Merger Announcement Sample

Panel A: Calendar Distribution Announced Mergers

Year	Number of Events	Percent of Events	Year	Number of Events	Percent of Events
1989	16	2.30	1998	51	7.32
1990	16	2.30	1999	73	10.47
1991	27	3.87	2000	74	10.62
1992	30	4.30	2001	59	8.46
1993	39	5.60	2002	42	6.03
1994	39	5.60	2003	34	4.88
1995	46	6.60	2004	23	3.30
1996	56	8.03	2005	25	3.59
1997	47	6.74	Total	697	100

Panel B: Industry Distribution Announced Mergers

Industry	SIC Code	Number of Events	Percent of Events
Business services	73	131	18.79
Electronic and other electric equipment	36	88	12.63
Chemical and allied products	28	65	9.33
Instruments and related products	38	59	8.46
Industrial machinery and equipment	35	49	7.03
Communications	48	42	6.03
Oil and gas extraction	13	36	5.16
Admin & waste management services	49	26	3.73
Health services	80	19	2.73
Wholesale trade – durable goods	50	16	2.30
Other		166	23.82
Total		697	100

Panel C: Select Characteristics of Merger Sample Firms and Matched Firms

	Announced Sample Firms		Industry- and Performance-Matched Firms	
	Mean	Median	Mean	Median
Market value of equity, $M	5,997	508	1,577	97
Total assets, $M	3,405	370	1,919	112
Percentage change in total assets	15.05	15.29	-0.67	5.75
Tobin's *q*	2.50	1.67	2.35	1.48
Book leverage, percent	46.74	42.97	48.52	44.79
Cash flow from operations, $M	371	20	215	5

Panel D: Calendar Distribution for Sample of Completed Mergers

Year	Number of Events	Percent of Events	Year	Number of Events	Percent of Events
1989	12	2.08	1998	43	7.45
1990	13	2.25	1999	58	10.05

Table 3.1 (Continued)

Year	Number of Events	Percent of Events	Year	Number of Events	Percent of Events
1991	20	3.47	2000	65	11.27
1992	27	4.68	2001	49	8.49
1993	31	5.37	2002	40	6.93
1994	30	5.20	2003	32	5.55
1995	31	5.37	2004	19	3.29
1996	51	8.84	2005	19	3.29
1997	37	6.41	Total	577	100

Panel E: Industry Distribution for Sample of Completed Mergers

Industry	SIC Code	Number of Events	Percent of Events
Business services	73	117	20.28
Electronic and other electric equipment	36	77	13.34
Chemical and allied products	28	57	9.88
Instruments and related products	38	47	8.15
Industrial machinery and equipment	35	42	7.28
Communications	48	35	6.07
Oil and gas extraction	13	29	5.03
Admin & waste management services	49	19	3.29
Health services	80	14	2.43
Wholesale trade – durable goods	50	11	1.91
Other		129	22.36
Total		577	100

Panel F: Select Characteristics for Sample of Completed Mergers and Matched Firms

	Completed Sample Firms		Industry- and Performance-Matched Firms	
	Mean	Median	Mean	Median
Market value of equity, $M	7,003	646	1,730	114
Total assets, $M	3,862	493	1,927	126
Percentage change in total assets	20.27	20.25	-0.09	5.79
Tobin's *q*	2.59	1.73	2.45	1.52
Book leverage, percent	44.71	41.31	47.41	44.08
Cash flow from operations, $M	428	27	241	5

The operating performance of the completed merger sample firms is also stronger than matched firms as measured by cash flow from operations. The median cash flow from operations for sample firms is $27 The sample includes announcements of mergers where the accounting method for acquisition is not to be a pooling of interest. The mergers involve consideration using stock and any mix of stock and cash during the fiscal

years 1989 to 2005 and reported in the Securities Data Corporation (SDC) database. The sample excludes regulated utilities (SIC codes 4910-4949) and financial firms (SIC codes 6700-6999). When the same firm is included in the sample more than once in any four-year period, I include only the earliest firm-year. Panels A, B, and C are for the sample of announced mergers while Panels D, E, and F are for the sample of completed mergers. Panels A and D show the distribution of events by fiscal year, Panels B and E give the distribution of events across two-digit Standard Industrial Classification (SIC) codes, and Panels C and F present select characteristics of sample firms and performance and industry matched firms. The market value of equity (from CRSP) and accounting variables (from Compustat) are estimated during or at the end of the announcement year. Tobin's q is the ratio of total assets minus the book value of common equity plus the market value of common equity to total assets. Book leverage is estimated as total liabilities plus liquidating value of preferred stock minus deferred taxes minus convertible debt, all divided by total assets.

Table 3.2 provides similar information related to the sample of mergers that used only cash as consideration. Panel A highlights the number of cash only announced deals by year while Panel B shows these cash deals by industry. Panel C provides basic financial information on the cash only sample and the industry- and performance-matched firm. The cash only sample peaks in 2000 and is also spread similar to the other two samples by industry with business services being the highest. Panel C shows that the cash only sample firms are much larger than matched firms and also larger than the other two sample firm groups as measured by market value of equity and total assets. Cash only firms are experiencing higher growth with a 24% change in assets using mean and

23.34% using median values than the matched firms with 6.33% using mean and 7.13% using median, and the other two samples as measured by the percentage change in total assets. The cash only sample also has lower book leverage (41.42% in median versus 45.58% for matched firms), and higher cash flow from operations ($30 million versus $11 million in the median) than the other groups.

All three samples peak in year 2000 with the bulk of the firms being in business services and technology. Given the well documented "tech bubble" from 1999 to 2001; this may have an impact on the results. Future research could consider the impact of this time period has on the overall results.

The sample includes announcements of mergers using cash only compensation during the fiscal years 1989 to 2005 and reported in the Securities Data Corporation (SDC) database. The sample excludes regulated utilities (SIC codes 4910-4949) and financial firms (SIC codes 6700-6999). When the same firm is included in the sample more than once in any four-year period, I include only the earliest firm-year. Panel A reports the distribution of events by fiscal year, Panel B reports the distribution of events across two-digit Standard Industrial Classification (SIC) codes, and Panel C presents select characteristics of issuing firms and issues. The market value of equity (from CRSP) and accounting variables (from Compustat) are estimated during or at the end of the year before announcement. Tobin's q is the ratio of total assets minus the book value of common equity plus the market value of common equity to total assets. Book leverage is estimated as total liabilities plus liquidating value of preferred stock minus deferred taxes minus convertible debt, all divided by total assets.

Table 3.2. Descriptive Statistics of Cash Only Merger Announcement Sample

Panel A: Calendar Distribution for Cash Only Sample

Year	Number of Events	Percent of Events	Year	Number of Events	Percent of Events
1989	1	0.56	1998	18	10.06
1990	0	0.00	1999	13	7.26
1991	7	3.91	2000	21	11.73
1992	8	4.47	2001	15	8.38
1993	6	3.35	2002	5	2.79
1994	10	5.59	2003	13	7.26
1995	11	6.15	2004	20	11.17
1996	13	7.26	2005	10	5.59
1997	8	4.47	Total	179	100

Panel B: Industry Distribution for Cash Only Sample

Industry	SIC Code	Number of Events	Percent of Events
Business services	73	36	20.11
Electronic and other electric equipment	36	19	10.61
Instruments and related products	38	16	8.94
Chemical and allied products	28	16	8.94
Oil and gas extraction	13	13	7.26
Industrial machinery and equipment	35	11	6.15
Communications	48	10	5.59
Manufacturing-food and related	20	7	3.91
Other		51	28.49
Total		179	100

Panel C: Select Characteristics of Cash Only Sample Firms and Matched Firms

	Cash Only Sample Firms		Industry- and Performance-Matched Firms	
	Mean	Median	Mean	Median
Market value of equity, $M	7,124	664	3,613	137
Total assets, $M	5,681	700	3,047	189
Percentage change in total assets	24.08	23.34	6.33	7.13
Tobin's *q*	2.16	1.54	1.93	1.38
Book leverage, percent	42.90	41.42	45.53	45.58
Cash flow from operations, $M	577	30	313	11

Methodology

Discretionary Accruals

Discretionary accruals for this study are calculated using the cash flow information from COMPUSTAT following the recommendations of Hribar and Collins (2002, 105) who indicate that using balance sheet numbers to compute discretionary accruals can lead to bad findings if the firm has undergone a merger or acquisition ,

foreign currency transaction, or discontinued operations. I follow the calculations of Hribar and Collins (2002, 105) to estimate discretionary accruals for each sample and matched firm. Total accruals for each firm j in year t ($TOTACC_{j,t}$) is calculated as:

$$TOTACC_{j,t} = EXBI_{j,t} - CFO_{j,t}, \qquad (3.1)$$

where $EXBI_{j,t}$ is earnings before extraordinary items and discontinued operations (item 123[6]), and $CFO_{j,t}$ is operating cash from continuing operations (item 308 minus item 24). Observations, where the absolute value of total accruals is larger than total assets, are excluded based on Kothari, Leone, and Wasley (2005, 163) who indicate that these could be due to recording errors.

Industry and performance adjustments to the discretionary total accruals calculations recommended in Kothari, Leone, and Wasley (2005, 163) were used. To do the adjustment I match on two-digit SIC code and returns on assets in Year -1. The matched portfolio is required to have at least 10 firms in each SIC group or the group is excluded. Matched firms are required to meet the same sample selection criteria described above and merging firms are excluded from the matching group three years before to three years after the announcement year.

I use Dechow, Sloan, and Sweeney's (1995, 193) modified Jones (1991, 193) model to estimate discretionary total accruals. For each year during 1988 to 2006 period, for each two-digit SIC code I estimate the ordinary least-squares regression:

$$TOTACC_{j,t}/TASSETS_{j,t-1} = \alpha_0(1/TASSETS_{j,t-1}) + \alpha_1(\Delta SALES_{j,t}/TASSETS_{j,t-1}) + \alpha_2(PPE_{j,t}/TASSETS_{j,t-1}) + \varepsilon_{j,t}, \qquad (3.2)$$

[6] Item numbers are from COMPUSTAT annual data.

where $TOTACC_{j,t}$ is formula (1) and is earnings before extraordinary items and discontinued operations (item 123) less operating cash flow from continued operations (item 308 less item 124), $TASSETS_{j,t-1}$ is total assets at the beginning of year t, $\Delta SALES_{j,t}$ is the change in sales (item 12) during year t, and $PPE_{j,t}$ is the gross property, plant, and equipment (item 7) for year t. I then use the coefficient estimates from equation (2) to calculated nondiscretionary total accruals for each sample and matched firm i in year t:

$$NONDTAC_{i,t} = b_0(1/TASSETS_{i,t-1}) + b_1((\Delta SALES_{i,t} - \Delta REC_{i,t})/TASSETS_{i,t-1}) + b_2(PPE_{i,t}/TASSETS_{i,t-1}), \quad (3.3)$$

where $\Delta REC_{i,t}$ is the change in receivables (item 2). From here I can now estimate discretionary total accruals for each sample and matched firm as formula (2) less formula (3):

$$ADTAC_{i,t} = TOTACC_{i,t}/TASSETS_{i,t-1} - NONDTAC_{i,t}. \quad (3.4)$$

Adjusted discretionary total accruals are estimated as the difference between the sample firm's and the matched firm's discretionary total accruals. Adjusted discretionary total accruals are winsorized at the top and bottom 1% similar to Di, Goodwin, and Marciukaityte (2009). Winsorizing involves replacing extreme values with the value of the 1st percentile and the 99th percentile. Results are also reported without winsorizing.

According to Erickson and Wang (1999, 149) merger costs could impact accruals if the merger is accounted for as a pooling of interest which requires immediate expensing of merger costs for tax purposes which could create a deferred tax asset. As such, all firms indicating the use of pooling of interest as the accounting method for the acquisition are removed to ensure that these firms are not impacting the discretionary accrual calculations.

Buy-and-Hold Abnormal Returns

I estimate buy-and-hold abnormal returns for sample firms relative to size-, prior return-, and book-to-market- matched firms as a means of estimating investor experience related to post-announcement long-run abnormal returns. To create the matched sample, for each month I form ten sized- (market value of equity) portfolios from CRSP firms with the same number of firms in each portfolio. I then divide each size portfolio into five prior-return portfolios, then I assign each sample firm to its corresponding size- and prior return-portfolio, and from the assigned portfolio I select, as my matched firm, the firm with a book-to-market ratio closest to that of the sample firm. This procedure is the same describe and recommended in Barber and Lyon (1996, 341) and Lyon, Barber, and Tsai (1999, 165).

I follow Barber and Lyon's (1996, 341) recommendation that firms be matched before the event to estimate abnormal performance following the event. As such I estimate, at the beginning of the announcement year, the book-to-market ratio following Fama and French (1993, 3) and obtain the market value of equity. Prior returns are raw returns estimated six months before the announcement month. The buy-and-hold abnormal returns are calculated for each sample and matched firm as follows:

$$BHR_{l,a,b} = \left[\prod_{t=a}^{b}(1+R_{l,t})\right]-1, \qquad (3.5)$$

where $BHR_{i,a,b}$ is the buy-and-hold return for firm i over the time period from month a to b and $R_{i,t}$ is the monthly stock return for firm i in month t. According to Barber and Lyon (1996, 341) this procedure yields "well specified" test statistics. Following the methodology outlined in Hetzel, Lemmon, Linck, and Rees (2002, 2595), if a firm does not have returns for the entire buy-and-hold period available I use the buy-and-hold

returns for the longest available period. To avoid delisting bias, I follow Shumway (1997, 327) and Shumway and Warther (1999, 2361) for delisted firms and add the CRSP delisting return after the last available return, and if no delisting return is available and the firm was delisted due to performance reasons -30% is used as the last return for NYSE and AMEX listed firms and -55% is used for Nasdaq listed firms.

Research and Development Expenses (R&D)

I take R&D expenses as reported in COMPUSTAT normalized by beginning total assets and annual changes for the three years before and three years after the merger announcement where the merger announcement year is the fiscal year in which the announcement occurred.

Discretionary Total Accruals and Post-Announcement Stock Performance

To determine if discretionary total accruals are related to post-announcement stock performance I use the buy-and-hold abnormal returns described above as the dependent variable in an ordinary least-squares regression analyses with adjusted discretionary total accruals in the year before the announcement as an independent variable. Other independent variables are used in both regressions to control for valuation difficulties stemming from small firm size (log of market value of equity) and future growth opportunities (Tobin's q), as well as access to debt markets (leverage) similar to Di, Goodwin and Marciukaityte (2009) and Shivakumar (2000, 339), and the size of the deal relative to the acquirer's total assets (log of value/total assets). The control variables are estimated at the end of or during the fiscal year prior to announcement (year-1).

Litigation

If a firm intentionally misstates earnings, I would expect to see a higher level of sample firms experiencing litigation cases versus industry- and performance-matched firms. Gong, Louis, and Sun (2008) look at a small sample of completed stock-for-stock mergers in the US to test the impact of mergers on the likelihood of the firm being sued. The authors note that post-merger lawsuits are associated with pre-merger abnormal accruals. The authors argue that the long-run poor market performance post-acquisition announcement is due to high legal costs, as they are primarily isolated to firms involved in post-announcement litigations. I use information taken from the University of Stanford's website[7] to determine if a sample firm and matched firm were listed as a defendant in a lawsuit involving federal security fraud.

Earnings Restatements

If firms knowingly misstate earnings then it is highly probable that the firm would need to make a formal restatement of earnings. I used the Financial Restatement Database provided by the Government Accounting Office (GAO). This database is used to identify sample and industry- and performance-matched firms that reported a downward restatement of earnings. If opportunistic earnings management inflates earnings, then restatements to correct would reduce originally reported earnings.

Managerial Optimism

Heaton (2002, 33) suggests that optimistic managers perceive their stock to be undervalued and would prefer debt financing over equity financing. If this is the case then firms controlled by optimistic managers should have higher debt levels than others.

[7] The website used is http://www.securities.stanford.edu\index.html.

Baker and Wurgler (2002, 1) develop a model to estimate the predicted change in leverage in the following year. To use the predicted change in leverage as a measure of optimism, firms with excess leverage are considered to be more optimistic than those without excess leverage. The optimism proxy I use was developed and tested in Di, Goodwin, and Marciukaityte (2009).

To estimate the change in book leverage in the next year I followed the procedure of Baker and Wurgler (2002, 1) who regress the annual change in the debt-to-asset ratio before and after an IPO against market-to-book[8], asset tangibility[9], profitability[10], a proxy for size (log of net sales) and lag leverage (debt-to-assets at year-1) due to the bond nature of leverage. Following this procedure and the procedures outlined in Di, Goodwin, and Marciukaityte (2009) I estimate a proxy for managerial optimism which takes into account the excess leverage at the end of the year before the announcement year. I then run a regression using the announcement year R&D expenses normalized by total assets the year before the announcement, and the change in R&D expenses in announcement year as my dependent variables and the calculated values for the optimism proxy as an independent variable with the log of market value of equity, Tobin's Q, and book leverage as control variables.

Summary

This chapter discusses the sampling procedure and the data sources used in the study. The study includes three samples: a sample of announced mergers where the

[8] The authors define market-to-book as assets less book equity plus market equity all divided by assets.

[9] The authors define market tangibility as net fixed assets divided by total assets.

[10] Profitability is defined in the article as EBITDA divided by total assets.

method of payment is stock or a combination of stock and cash, a sample of completed mergers where the method of payment is stock or a combination of stock and cash, and a sample of announced mergers for which the consideration offered is cash only. This chapter also provides descriptions of the methodology to be used to test the opportunistic management and managerial optimism hypotheses. The samples cover the period from 1989 to 2005 and adjusted discretionary total accruals are calculated using cash flow data. Long-run abnormal stock returns are calculated using the buy-and-hold abnormal returns so as to replicate investor experience. Litigations and restatements are included in the analyses, as well as real earnings management tests using R&D.

CHAPTER 4

RESULTS

Earnings and Cash Flows

The opportunistic earnings management hypothesis suggest that management uses discretion in accruals to temporarily inflate earnings to increase stock price thereby reducing the number of shares to be offered in exchange during a merger involving stock as consideration. I look at net income to total assets three years prior to the merger announcement and three years after the merger announcement. I also look at the differences from year-to-year to assess changes. Cash flow from operations, normalized by total assets three years before and three years after the announcement, as well as the changes in these variables are considered. Tables 4.1, 4.2, 4.3 and 4.4 report both winsorized and non-winsorized results. I use a two-tailed t-test to check for significance in the means and Wilcox sign rank test for the medians. Tables 4.1 and 4.3 report the results of net income for all three samples without winsorizing and Tables 4.2 and 4.4 report the results winsorized. Since the differences between raw results and winsorized results are not significant, I only discuss the winsorized results.

Table 4.1. Net Income

Panel A: Announced														
Fiscal year	-3		-2		-1		0		1		2		3	
Mean, percent	-2.30	**	-6.64	***	-3.66	***	-11.49	***	-9.84	***	-7.27	***	-5.70	***
Median, percent	3.36	***	4.32	***	3.95	**	3.40		2.43		2.46		2.87	
N	547		615		697		675		605		541		488	
Panel B: Announced														
Changes														
Mean, percent			-2.43		4.19	**	-8.13	***	0.28		0.13		1.29	
Median, percent			0.20		0.17		-0.43	***	-0.19		-0.13		0.22	
N			542		615		675		597		529		483	
Panel C: Completed														
Fiscal year	-3		-2		-1		0		1		2		3	
Mean, percent	-2.25	*	-6.54	**	-3.41	**	-11.40	***	-9.87	***	-8.00	***	-5.73	***
Median, percent	3.54	***	4.86	***	4.38	***	3.75		2.44		2.55		3.05	
N	453		508		577		563		514		464		421	
Panel D: Completed														
Changes														
Mean, percent			-3.28		4.30	*	-8.21	***	0.96		-0.83		2.04	
Median, percent			0.19		0.17		-0.32	***	-0.09		-0.13		0.18	
N			449		508		563		509		452		417	

Table 4.1 – (Continued)

Panel E: Cash Only														
Fiscal year	-3		-2		-1		0		1		2		3	
Net Income														
Mean, percent	1.36		1.92		2.12	*	-3.17		-1.59		-3.09	**	0.33	
Median, percent	5.31	***	5.76	***	4.28	***	4.46	**	2.76		2.44		3.12	*
N	146		156		179		175		163		137		106	
Panel F: Cash Only														
Changes														
Mean, percent			0.67		0.68		-5.52	**	0.66		-1.54		1.35	
Median, percent			0.30		0.02		-0.2		-0.95		0.21		0.70	
N			146		156		175		160		136		106	

Two-tailed t-test is used for the means and Wilcox sign rank test for the medians. ***, **, and *, indicates significance at the 1%, 5%, and 10% levels, respectively.

Table 4.2. Net Income (Winsorized)

Panel A: Announced														
Fiscal year	-3		-2		-1		0		1		2		3	
Net Income														
Mean, percent	-2.12	**	-4.68	***	-3.16	***	-10.6	***	-7.99	***	-5.43	***	-4.40	***
Median, percent	3.36	***	4.32	***	3.95	**	3.40		2.43		2.46		2.87	
N	547		615		697		675		605		541		488	
Panel B: Announced														
Changes in net income														
Mean, percent			-1.05		2.05	**	-7.29	***	0.87		0.00		0.38	
Median, percent			0.20		0.17		-0.43	***	-0.19		-0.13		0.22	
N			542		615		675		597		529		483	
Panel C: Completed														
Fiscal year	-3		-2		-1		0		1		2		3	
Net Income														
Mean, percent	-2.07	*	-4.21	***	-3.00	**	-10.33	***	-7.74	***	-5.85	***	-4.17	***
Median, percent	3.54	***	4.86	***	4.38	***	3.75		2.44		2.55		3.05	
N	453		508		577		563		514		464		421	
Panel D: Completed														
Changes in net income														
Mean, percent			-1.60		1.79	*	-7.22	***	1.67		-0.88		1.01	
Median, percent			0.19		0.17		-0.32	***	-0.09		-0.13		0.18	
N			449		508		563		509		452		417	

Table 4.2 (Continued)

Panel E: Cash Only														
Fiscal year	-3		-2		-1		0		1		2		3	
Net Income														
Mean, percent	1.36		1.92		2.12	*	-3.17		-1.59		-3.09	**	0.33	
Median, percent	5.31	***	5.76	***	4.28	***	4.46	**	2.76		2.44		3.12	*
N	146		156		179		175		163		137		106	
Panel F: Cash Only														
Changes in net income														
Mean, percent			0.67		0.68		-5.52	**	0.66		-1.54		1.35	
Median, percent			0.30		0.02		-0.2		-0.95		0.21		0.70	
N			146		156		175		160		136		106	

Two-tailed t-test is used for the means and Wilcox sign rank test for the medians. ***, **, and *, indicates significance at the 1%, 5%, and 10% levels, respectively.

Table 4.1 reports net income normalized by total assets for three fiscal years before the announcement year and three fiscal years after the announcement year. It also shows differences in the variable for each of the years. Panels A and B are based on the sample of announced mergers, Panels C and D are based on the sample of completed mergers and Panels E and F report the results from the cash only sample.

Table 4.2 reports net income normalized by total assets for three fiscal years before the announcement year and three fiscal years after the announcement year. It also shows differences in the variable for each of the years. Panels A and B are based on the sample of announced mergers, Panels C and D are based on the sample of completed mergers and Panels E and F report the results from the cash only sample. All results in this table are winsorized at the top and bottom 1%.

Table 4.2 Panels A and B reports the results of net income for the announced merger sample, Panel C and D reports the results of the completed merger sample and Panel E and F reports the results of the cash only sample. Based on the results in Panel A, announced merging firms show significantly negative mean income performance relative to total assets while the median results are positive but only significant in the three years before the merger announcement. Panel B shows that net income relative to total assets declines significantly in both the means (-7.29) and medians (-0.43) in the fiscal year of the announcement. These results are contrary to what you would expect for upward earnings management. Net income does increase significantly (2.05) in the means the year before the announcement, which could indicate some earnings management, but the median is not significantly positive.

The sample of completed mergers reported in Panels C and D of Table 4.2 shows results similar to the announced merger sample. The median net income to total assets is significantly positive three years before the announcement, but the mean is significantly negative both three years before and three years after the announcement. Both mean and median results are significantly negative in the changes in the year of the announcement (year 0). Again this finding is not supportive of the opportunistic management hypothesis. Also, similar to the announced merger sample, the completed merge sample shows marginally significant positive increases in net income relative to total assets only in the means the year before the announcement. This could be indicative of some earnings management to inflate income; however, it is not replicated in the medians.

The results for the cash only sample are included in Panels E and F of Table 4.2. The results are somewhat similar to the other two samples in that these firms also report positive net income relative to total assets for the three years before the announcement in the medians. The announcement year is negative but not significant using the mean while the median is positive and significant. As to the changes in net income to total assets, this sample reports no significant changes except for -5.52 in the means in the announcement year, but the median is not significantly negative. This sample does not show any signs of upward earnings management.

Operating performance as measured by cash flow from operations normalized by total assets is presented in raw form in Table 4.3 and in winsorized form in Table 4.4. Panels A and B report the results from the announcement sample. The winsorized results show that these firms have positive and significant cash flows from operations throughout the three years before and three years after announcement in both the mean and the

median. Changes in this variable are positive and significant the year prior to the announcement in both the mean and median, but negative and significant from the fiscal year before the announcement to the fiscal year of the announcement. The significant positives in the mean (2.29) and the median (0.95) could be indicative of opportunistic earnings management, but the significantly negative changes during the fiscal year of the announcement of -2 and -0.51 in the mean and median respectively are contrary to a strategy of upward earnings management and may be supportive of a downward earnings management strategy.

The completed merger sample, presented in Table 4.4 Panels C and D, reports similar findings as the announced sample in winsorized form. This sample also shows positive and significant cash flow from operations from three years before through three years after the announcement in both the mean and the median.

Table 4.3 reports cash flow from operations normalized by total assets for three fiscal years before the announcement year and three fiscal years after the announcement year. It also shows differences in the variable for each of the years. Panels A and B are based on the sample of announced mergers, Panels C and D are based on the sample of completed mergers, and Panels E and F report the results from the cash only sample.

Table 4.4 reports cash flow from operations normalized by total assets for three fiscal years before the announcement year and three fiscal years after the announcement year. It also shows differences in the variable for each of the years. Panels A and B are for the sample of announced mergers, Panels C and D are for the sample of completed mergers, and Panels E and F report results for the cash only sample. All results are winsorized at the top and bottom 1%.

Table 4.3. Cash Flow from Operations

Panel A: Announced														
Fiscal year	-3		-2		-1		0		1		2		3	
Cash flow from operations														
Mean, percent	5.01	***	1.25		4.00	***	2.52	***	3.32	***	2.21		4.08	***
Median, percent	8.47	***	8.01	***	8.19	***	7.50	***	6.96	***	6.96	***	8.02	***
N	518		600		697		673		604		540		487	
Panel B: Announced	Changes													
Mean, percent			-2.03		3.79	**	-1.55	**	0.05		-2.04		-1.63	
Median, percent			0.49		0.95	***	-0.51	**	-0.20		-0.38	*	0.10	
N			513		600		673		596		528		482	
Panel C: Completed														
Fiscal year	-3		-2		-1		0		1		2		3	
Cash flow from operations														
Mean, percent	4.58	***	1.41		4.22	***	3.14	***	3.45	***	2.13		4.18	***
Median, percent	8.53	***	8.24	***	8.26	***	8.53	***	6.89	***	7.10	***	8.02	***
N	431		496		577		561		513		463		420	
Panel D: Completed	Changes													
Mean, percent			-2.13		3.72	*	-1.02		-0.20		-2.41		1.87	
Median, percent			0.46		0.94	**	-0.35		-0.31	*	-0.07		-0.07	
N			427		496		561		508		451		416	

Table 4.3 (Continued)

Panel E: Cash only														
Fiscal year	-3		-2		-1		0		1		2		3	
Cash flow from operations														
Mean, percent	9.78	***	8.55	***	8.54	***	9.06	***	8.76	***	6.59	***	7.66	***
Median, percent	9.48	***	10.08	***	9.56	***	8.81	***	8.27	***	7.28	***	8.02	***
N	144		155		179		175		163		137		106	
Panel F: Cash only														
Changes in cash flow from operations														
Mean, percent			-0.52		1.17		0.56		0.19		-2.51	***	0.25	
Median, percent			0.84		-0.43		-0.05		0.68		-0.93	***	0.66	
N			144		155		175		160		136		106	

Two-tailed t-test is used for the means and Wilcox sign rank test for the medians. ***, **, and *, indicates significance at the 1%, 5%, and 10% levels, respectively.

Table 4.4. Cash Flow from Operations (Winsorized)

Panel A: Announced														
Fiscal year	-3		-2		-1		0		1		2		3	
Mean, percent	5.29	***	3.06	***	4.49	***	2.68	***	4.00	***	4.11	***	4.64	***
Median, percent	8.47	***	8.01	***	8.19	***	7.50	***	6.96	***	6.96	***	8.02	***
N	518		600		697		673		604		540		487	
Panel B: Announced														
Changes in cash flow from operations														
Mean, percent			-0.37		2.29	***	-2.00	***	0.32		-0.71		-0.01	
Median, percent			0.49		0.95	***	-0.51	**	-0.20		-0.38	*	0.10	
N			513		600		673		596		528		482	
Panel C: Completed														
Fiscal year	-3		-2		-1		0		1		2		3	
Mean, percent	5.05	***	3.50	***	4.71	***	3.30	***	4.03	***	4.32	***	4.93	***
Median, percent	8.53	***	8.24	***	8.26	***	8.53	***	6.89	***	7.10	***	8.02	***
N	431		496		577		561		513		463		420	
Panel D: Completed														
Changes in cash flow from operations														
Mean, percent			-0.18		2.05	***	-1.58	**	0.11		-0.78		-0.09	
Median, percent			0.46		0.94	**	-0.35		-0.31	*	-0.07		-0.07	
N			427		496		561		508		451		416	

Table 4.4 (Continued)

Panel E: Cash Only														
Fiscal year	-3		-2		-1		0		1		2		3	
Cash flow from operations														
Mean, percent	10.34	***	8.92	***	8.53	***	9.28	***	8.63	***	6.78	***	7.68	***
Median, percent	9.48	***	10.08	***	9.56	***	8.81	***	8.27	***	7.28	***	8.02	***
N	144		155		179		175		163		137		106	
Panel F: Cash Only														
Changes in cash flow from operations														
Mean, percent			-1.01		1.07		0.47		0.01		-2.22	***	0.18	
Median, percent			0.84		-0.43		-0.05		0.68		-0.93	***	0.66	
N			144		155		175		160		136		106	

Two-tailed t-test is used for the means and Wilcox sign rank test for the medians. ***, **, and *, indicates significance at the 1%, 5%, and 10% levels, respectively.

The changes in cash flow are also similar to the announced sample with significant positive changes from year two to year one in both mean and median, supportive of upwards earnings management. The negative change from the year before the announcement to the year of the announcement is only significant in the means and is not significant in the raw data. The positive changes in the year prior to the announcement do show the possibility of less negative earnings management, but the negative changes in the announcement year in the winsorized results are contrary to the opportunistic earnings management hypothesis. The cash only sample, reported in Table 4.4 Panels E and F, also reports positive and significant cash flow from operations throughout the pre- and post-three year period around the announcement, but does not report the significant increases or decreases seen in the other two samples as it relates to changes in cash flows. This sample shows no signs of earnings management.

The results given by looking at net income and cash from operating performance may indicate upward opportunistic earnings management in the sample of firms that announced mergers and those that completed mergers, but not in the cash only sample. The cash only sample shows no signs of earnings management in either direction. The results from the three samples could provide some support for the managerial optimism hypothesis as the firms in all sample categories in the means show positive and significant net income and cash flow from operations relative to total assets in all years, as well as positive and significant results three years before announcement. This good performance could induce managerial optimism as to the future of the firm.

Adjusted Discretionary Total Accruals

If management of a firm anticipating a merger uses discretion in accruals to manipulate earnings, then the expectation would be that he/she would do so prior to the merger announcement so that stockholders can see the change in operating performance before the merger is announced. For the opportunistic earnings management hypothesis to be supported industry- and performance-adjusted discretionary total accruals should be positive and significant before the merger announcement with significant changes occurring the year before the announcement. Tables 4.5 and 4.6 report industry- and performance- adjusted discretionary total accruals for the three years before the merger announcement to the three years after the merger announcement. Table 4.5 presents the findings in raw form for all three samples, announced, completed and cash only, while Table 4.6 presents the winsorized findings at the top and bottom 1%. Since the significance of the results remains unchanged, I will focus my discussion on the winsorized results in Table 4.6.

Panel A of Table 4.6 reports the industry- and performance-adjusted discretionary total accruals estimated from cash flow statements for the sample of announced mergers. The results show significantly negative results in both the means and the medians for all years in the sample period except two years before the merger announcement. Panel B reports the changes in these total discretionary accruals by year. The changes the year before the merger are negative in both the mean and median, but not significant. This does not provide support for upwards earnings management or the opportunistic earnings management hypothesis.

Table 4.5 Industry- and Performance- Adjusted Discretionary Total Accruals

Panel A: Announced														
Fiscal year	-3		-2		-1		0		1		2		3	
Mean, percent	-2.73	***	-0.26		-1.48	**	-3.40	***	-4.28	***	-2.22	**	-2.36	***
Median, percent	-1.35	***	-1.19		-1.39	***	-2.54	***	-1.82	***	-1.95	***	-2.13	***
N	384		514		697		649		525		432		344	
Panel B: Announced														
Changes in adjusted discretionary total accruals from previous year														
Mean, percent			2.83	*	-1.15		-1.68		-0.98		1.89		-0.38	
Median, percent			0.06		-0.73		-1.85	**	-1.26		-0.41		-0.93	
N			376		514		649		502		412		335	
Panel C: Completed														
Fiscal year	-3		-2		-1		0		1		2		3	
Mean, percent	-2.90	***	-0.35		-1.90	**	-2.98	***	-4.03	***	-2.82	**	-2.04	**
Median, percent	-1.02	**	-1.49		-1.76	***	-2.37	***	-1.95	***	-2.53	***	-1.75	***
N	322		428		577		540		449		369		296	
Panel D: Completed														
Changes in adjusted discretionary total accruals from previous year														
Mean, percent			2.41	*	-1.09		-0.55		-0.90		0.92		0.89	
Median, percent			-0.37		-0.88		-1.56		-1.36		-0.64		0.49	
N			315		428		540		431		351		288	

Table 4.5 (Continued)

Panel E: Cash only													
Fiscal year	-3		-2	-1	0		1		2		3		
Adjusted discretionary total accruals													
Mean, percent	-3.23	*	-0.95	-1.03	-2.70	*	-4.45	***	-2.89	*	-1.65		
Median, percent	-0.72		0.34	-0.24	-2.76	***	-3.4	***	-2.04		-1.77		
N	122		139	179	170		147		108		73		
Panel F: Cash only													
Changes in adjusted discretionary total accruals from previous year													
Mean, percent			1.58	0.60	-1.82		-0.91		2.88		0.64		
Median, percent			0.44	-0.42	-0.06		-2.37		4.92	**	1.13		
N			120	139	170		143		106		72		

Two-tailed t-test is used for the means and Wilcox sign rank test for the medians. ***, **, and *, indicates significance at the 1%, 5%, and 10% levels, respectively.

Table 4.6 Industry- and Performance- Adjusted Discretionary Total Accruals (Winsorized)

Panel A: Announced														
Fiscal year	-3		-2		-1		0		1		2		3	
Mean, percent	-2.68	***	-0.71		-1.37	***	-3.65	***	-4.33	***	-2.35	***	-2.46	***
Median, percent	-1.35	***	-1.19		-1.39	***	-2.54	***	-1.82	***	-1.95	***	-2.13	***
N	384		514		697		649		525		432		344	
Panel B: Announced														
Changes in adjusted discretionary total accruals from previous year														
Mean, percent			2.32	**	-1.07		-1.53		-0.82		1.73		-0.20	
Median, percent			0.06		-0.73		-1.85	**	-1.26		-0.41		-0.93	
N			376		514		649		502		412		335	
Panel C: Completed														
Fiscal year	-3		-2		-1		0		1		2		3	
Mean, percent	-2.90	***	-0.92		-1.78	**	-3.32	***	-4.08	***	-3.05	***	-2.07	**
Median, percent	-1.02	**	-1.49		-1.76	***	-2.37	***	-1.95	***	-2.53	***	-1.75	***
N	322		428		577		540		449		369		296	
Panel C: Completed														
Changes in adjusted discretionary total accruals from previous year														
Mean, percent			2.41	*	-1.09		-0.55		-0.90		0.92		0.89	
Median, percent			-0.37		-0.88		-1.56		-1.36		-0.64		0.49	
N			315		428		540		431		351		288	

Table 4.6 (Continued)

Panel E: Cash only													
Fiscal year	-3		-2	-1	0		1		2		3		
Adjusted discretionary total accruals													
Mean, percent	-3.17	**	-0.79	-1.04	-2.70	*	-4.58	***	-2.57	*	-1.65		
Median, percent	-0.72		0.34	-0.24	-2.76	***	-3.40	***	-2.04		-1.77		
N	122		139	179	170		147		108		73		
Panel F: Cash only													
Changes in adjusted discretionary total accruals from previous year													
Mean, percent			1.58	0.60	-1.82		-0.91		2.88		0.64		
Median, percent			0.44	-0.42	-0.06		-2.37		4.92	**	1.13		
N			120	139	170		143		106		72		

Two-tailed t-test is used for the means and Wilcox sign rank test for the medians. ***, **, and *, indicates significance at the 1%, 5%, and 10% levels, respectively.

Table 4.5 reports industry- and performance-adjusted total discretionary accruals using cash flow statement data for three fiscal years before the merger announcement year and three fiscal years after the announcement year. It also shows differences in the variable for each of the years. Panels A and B are for the sample of announced mergers, Panels C and D are for the sample of completed mergers, and Panels E and F report results for the cash only sample.

Table 4.6 reports industry- and performance-adjusted total discretionary accruals using cash flow statement data for three fiscal years before the merger announcement year and three fiscal years after the announcement year. It also shows differences in the variable for each of the years. Panels A and B are for the sample of announced mergers, Panels C and D are for the sample of completed mergers, and Panels E and F report results for the cash only sample. All results are winsorized at the top and bottom 1%.

Furthermore, during the year of announcement, adjusted discretionary total accruals decline significantly in the median (-1.85), providing further support against opportunistic earnings management. As to the managerial optimism hypothesis, the decline in year zero in the mean is contrary to the hypothesis predictions. If managers are optimistic about the future of the firm and reflect this optimism in their earnings management, one would expect to find changes in adjusted discretionary total accruals to be positive and significant.

The completed samples' industry- and performance-adjusted discretionary total accruals are presented in Panels C and D of Tables 4.5 and 4.6. Focusing on the winsorized results in Table 4.6 Panel C, completed mergers show similar patterns in industry- and performance-adjusted discretionary total accruals throughout the three

years before and three years after the merge as the announced merger sample. Adjusted discretionary total accruals are negative both three years before the announcement and three years after the announcement and significant in all but two years prior to the announcement. As to the changes in discretionary total accruals, Panel D, they are negative the year before and the year of the merger announcement, although not significantly so. These results also provide no support for opportunistic earnings management or managerial optimism.

The results for the cash only sample are somewhat different than the other two samples. Table 4.6 Panel E shows negative industry- and performance-adjusted total discretionary accruals for the three years before and after the announcement, but only year-3 is significant before the announcement in the mean. The year of the announcement shows significantly negative results of -2.7 and -2.76 in the mean and median respectively, and the one year after the announcement also shows significantly negative results. The changes in accruals, Panel F, are only significant in the medians two years after announcement at 4.92. There is no significant, positive change in the year before the announcement year. Again, these results do not provide support for either the opportunistic earnings management hypothesis or the managerial optimism hypothesis.

Based on the analysis of the three samples using industry- and performance-adjusted discretionary total accruals from the cash flow statements, there appears to be evidence of downward earnings management in the year of the merger announcement which is contrary to the predictions of the opportunistic earnings management hypothesis and managerial optimism hypothesis. For these to be supported, firms in the announced

and completed merger samples would have exhibited positive and significant changes in discretionary total accruals the year before the announcement year.

Real Earnings Management

Another method whereby managers can directly impact earnings results is through the reduction of spending in research and development (R&D). If managers are manipulating earnings through direct expense reductions, I would expect to see a reduction in R&D the year before the offering providing support for the opportunistic earnings management hypothesis. However, if managers are optimistic about the future of the firm, there should not be a reduction in R&D but rather continued spending in this area up to and including the year of the merger announcement. Tables 4.7 and 4.8 present the results of the calculation of R&D expenses normalized by beginning total assets and the changes using raw and winsorized results for the announced, completed and cash only samples. Table 4.7 presents the raw findings while table 4.8 presents the winsorized findings. Winsorizing at the top and bottom 1% did not significantly alter the findings so the discussion will focus on Table 4.8 using the winsorized results. Panels A and B of Table 4.8 are the findings from the announced sample. Panel A shows that R&D expenditures are positive and significant throughout the three years before and three years after the announcement year in both the means and medians. The changes reported in Panel B show a significant increase in the year of the merger announcement. The results of changes the year before the announcement are negatively significant in the means at -1.22 but not significant in the median. Although there is a decrease in the year before the announcement in the mean, it is not replicated in the median value. These results are contrary to the opportunistic earnings management hypothesis, but may provide support

for the managerial optimism hypothesis. In addition, the results could also provide support for real downward earnings management, supporting the finding of downward earnings management found in the analyses of industry- and performance-adjusted discretionary total accruals.

Panels C and D present the results for the completed merger sample. The results are similar to the announced merger sample in that R&D results are positive and significant for the three years before and three years after announcement. Also, Panel D shows that the completed merger sample also significantly increases R&D in the year of the announcement. The year prior to the announcement shows no significant results. Similar to the announced sample, these results are contrary to opportunistic earnings management, but could provide support for managerial optimism or downward earnings management.

Table 4.7 reports research and development expense by beginning total assets and annual changes for the three fiscal years before and three fiscal years after the merger announcement fiscal year. Panels A and B report results from the announced merger sample, Panels C and D report results from the completed merger sample and Panels E and F report results from the cash only merger sample.

Table 4.8 reports research and development by beginning total assets and annual changes for the three fiscal years before and three fiscal years after the merger announcement fiscal year. Panels A and B report results from the announced merger sample, Panels C and D report results from the completed merger sample and Panels E and F report results from the cash only merger sample. All results are winsorized at the top and bottom 1%.

Table 4.7. Research and Development Expenses

Panel A: Announced														
Fiscal year	-3		-2		-1		0		1		2		3	
Mean, percent	13.46	***	15.73	***	13.05	***	16.99	***	12.17	***	11.26	***	10.86	***
Median, percent	8.36	***	8.23	***	9.09	***	9.22	***	7.51	***	7.22	***	6.92	***
N	341		388		488		433		390		360		330	
Panel B: Announced														
Changes in R&D Expenses														
Mean, percent			0.89		-2.72	*	3.90	***	-5.40	***	-0.66		-0.62	
Median, percent			0.00		0.00		0.00	**	-0.03	***	0.00		0.00	
N			328		382		428		381		345		321	
Panel C: Completed														
Fiscal year	-3		-2		-1		0		1		2		3	
Mean, percent	14.52	***	16.90	***	13.79	***	18.12	***	12.05	***	11.16	***	10.82	***
Median, percent	9.40	***	9.70	***	9.77	***	10.09	***	8.14	***	7.27	***	7.39	***
N	296		333		382		370		340		321		295	
Panel D: Completed														
Changes in R&D Expenses														
Mean, percent			0.91		-0.30	*	4.29	***	-6.35	***	-0.40		-0.56	
Median, percent			0.00		0.00		0.00	***	-0.17	***	0.00		0.00	
N			285		328		365		331		306		287	

Table 4.7 (Continued)

Panel E: Cash only														
Fiscal year	-3		-2		-1		0		1		2		3	
R&D Expenses														
Mean, percent	11.01	***	12.61	***	11.46	***	11.85	***	9.30	***	7.95	***	8.44	***
Median, percent	6.94	***	7.31	***	8.97	***	9.55	***	6.43	***	6.09	***	6.19	***
N	87		92		103		106		96		83		64	
Panel F: Cash only														
Changes in R&D Expenses														
Mean, percent			1.58		0.70		0.98		-3.65	*	-1.22		0.67	*
Median, percent			0.00		0.00		0.02	*	-0.35	***	-0.02		0.09	*
N			86		89		101		93		82		63	

Two-tailed t-test is used for the means and Wilcox sign rank test for the medians. ***, **, and *, indicates significance at the 1%, 5%, and 10% levels, respectively

Table 4.8. Research and Development Expenses (Winsorized)

Panel A: Announced														
Fiscal year	-3		-2		-1		0		1		2		3	
Mean, percent	13.16	***	14.61	***	12.82	***	16.35	***	11.65	***	10.56	***	10.38	***
Median, percent	8.36	***	8.23	***	9.09	***	9.22	***	7.51	***	7.22	***	6.92	***
N	341		388		488		433		390		360		330	
Panel B: Announced														
Changes in R&D Expenses														
Mean, percent			-0.93		-1.22	*	3.36	***	-5.15	***	-1.05	**	-0.25	
Median, percent			0.00		0.00		0.00	**	-0.03	***	0.00		0.00	
N			328		382		428		381		345		321	
Panel C: Completed														
Fiscal year	-3		-2		-1		0		1		2		3	
Mean, percent	14.21	***	15.58	***	13.52	***	17.55	***	11.7	***	10.45	***	10.38	***
Median, percent	9.40	***	9.70	***	9.77	***	10.09	***	8.14	***	7.27	***	7.39	***
N	296		333		382		370		340		321		295	
Panel D: Completed														
Changes in R&D Expenses														
Mean, percent			-1.16		-1.26		3.81	***	-6.03	***	-0.98	**	-0.13	
Median, percent			0.00		0.00		0.00	***	-0.17	***	0.00		0.00	
N			285		328		365		331		306		287	

Table 4.8 (Continued)

Panel E: Cash only														
Fiscal year	-3		-2		-1		0		1		2		3	
R&D Expenses														
Mean, percent	11.01	***	12.61	***	11.46	***	11.85	***	9.3	***	7.95	***	8.44	***
Median, percent	6.94	***	7.31	***	8.97	***	9.55	***	6.43	***	6.09	***	6.19	***
N	87		92		103		106		96		83		64	
Panel F: Cash only														
Changes in R&D Expenses														
Mean, percent			1.58		0.70		0.98		-3.65	*	-1.22		0.67	*
Median, percent			0.00		0.00		0.02	*	-0.35	***	-0.02		0.09	*
N			86		89		101		93		82		63	

Two-tailed t-test is used for the means and Wilcox sign rank test for the medians. ***, **, and *, indicates significance at the 1%, 5%, and 10% levels, respectively.

The last two panels of Table 4.8 report the findings from the cash only sample. Again, the results are similar to the other two samples as these firms also show significantly positive results before and after the merger announcement. The changes show a significant increase in the median values the year of the announcement, but no significant finding the year before. The cash sample also does not support opportunistic earnings management, but may provide support for managerial optimism and downward earnings management.

Earnings Restatements

If a firm misrepresents the financial condition in disclosed financial statements, the firm may be required to make formal restatements. If managers are inflating earnings then the restatements would be related to downward adjustments to earnings. I use information compiled by the General Accounting Office to obtain data on my samples and industry- and performance-matched[11] firms as it relates to downward or negative earnings restatements made the year of the announcement and the subsequent three years. Based on the raw data presented in Table 4.9, 6.17% of the announced sample firms had downward earnings restatements compared to 3.16% of the matched firms, and this difference is significant at the 1% level. For the completed mergers, 6.76% of the sample firms restated earnings downward compared to 3.29% for the matched firms. This difference is also significant that the 1% level. The cash sample has different results with 3.19% of the sample restating earnings downward compared to 2.23% of the matched firms. This difference is not significant for the cash only sample. These findings alone lend support to the opportunistic earnings management hypothesis, however, when

[11] Matching is done on 2 digit SIC code and ROA the year before the announcement.

viewed together with previous results of no evidence of earnings management in adjusted discretionary total accruals and the significantly positive increases in R&D at announcement year, the presence of opportunistic earnings management remains questionable. The idea that the restatements are not significant in the cash sample may point to the use of stock in the transaction as a trigger for the restatements after the announcement.

Table 4.9 reports the percentage of firms making negative earnings restatements by sample type and the related industry- and performance- matched firms from the fiscal year of merger announcement to three years after.

Table 4.9. Negative Earnings Restatements

	Announced		Completed		Cash Only
Sample Firms	6.17%		6.76%		3.91%
Matched Firms	3.16%		3.29%		2.23%
Difference	3.01%	***	3.47%	***	1.68%
Z-value	2.6677		2.6947		0.9188

***, **, and *, indicates significance at the 1%, 5%, and 10% levels, respectively.

Post-Announcement Litigations

Firms engaged in earnings management before the announcement of a merger may experience a high incidence of class action shareholder lawsuits after the announcement if shareholders feel that management misstated earnings. Gong, Louis, and Sun (2008) show a positive relationship between adjusted accruals and litigations for their sample of firms. To test opportunistic earnings management further, I look at the number of post-announcement lawsuit filings for both my sample firms and industry- and performance-matched firms. I use data from the Stanford Securities Class Action

Clearinghouse, which provides the names of companies for which a federal class action security fraud lawsuit was filed. I then count the number of sample and matched firms sued for the three years after the announcement year. Table 4.10 presents the results of the findings related to litigations.

This table reports the percentage of sample firms and industry- and performance-matched firms in each sample group that were sued in a federal class action securities fraud suit three years after merger announcement.

Table 4.10. Litigations

	Announced		Completed		Cash Only	
Sample Firms	16.21%		17.68%		17.11%	
Matched Firms	7.46%		8.49%		4.81%	
Difference	8.75%	***	9.19%	***	12.30%	***
Z-value	5.06		4.63		3.81	

***, **, and *, indicates significance at the 1%, 5%, and 10% levels, respectively.

Significantly more of the firms in my three sample groups, announced, completed, and cash only, experience suit filings than their matched group. The announced merger sample has 16.21% with litigation filings versus 7.46% for the matched firms. The completed merger sample has 17.68% being sued while matched has 8.49%. The cash only sample has 17.11% with suits while the matched group has 4.81%. This finding, a significant, high incident of merger announcing firms being sued, does provide some support for opportunistic earnings management in the announced and completed samples, but the fact that the cash only sample also has significant findings in litigations may be more supported by the argument that the event itself, the merger announcement, results in a higher incident of shareholder lawsuit filings.

Post-Announcement Stock Performance

In order to replicate investor experience in estimating long-term stock performance, I calculate buy-and-hold abnormal returns for each sample for the 6, 12, 24, 48, and 60 month periods using the methodology recommended by Barber and Lyon (1996, 341) and Lyon, Barber, and Tsai (1999, 165). The results for each sample are presented in Table 4.11 below.

Table 4.11 reports the results of the returns calculated using prior size-, prior return- and book-to-market matched buy-and-hold abnormal returns calculated for each sample covering time frames from 6 months to 60 months from merger announcement month. T-statistics are provided in parentheses.

Table 4.11. Buy-and-Hold Abnormal Returns

Time Period	Announced		Completed	Cash Only	
6 month	0.03		0.03	-0.03	
	(1.27)		(1.25)	(0.60)	
12 month	0.07	*	0.06	-0.06	
	(1.76)		(1.40)	(0.78)	
24 month	-0.01		-0.09	-0.17	*
	(0.12)		(1.24)	(1.87)	
36 month	-0.01		-0.10	-0.06	
	(0.17)		(1.21)	(0.52)	
48 month	-0.01		-0.11	-0.81	
	(0.01)		(1.21)	(0.68)	
60 month	0.02		-0.07	-0.09	
	(0.20)		(0.66)	(0.85)	

***, **, and * indicates significance at the 1%, 5%, and 10% levels, respectively.

As Table 4.11 indicates, the sample of completed mergers shows no significant long-run abnormal returns over the reported time frames. The sample of announced mergers show a slightly positive significant abnormal return of 0.07 (7%) at the 10%

level one year from announcement, and the cash only sample shows a slightly significant negative abnormal return of -0.17 (-17%) at the 10% level two years after announcement. These findings do not indicate significant long-run poor post-announcement stock performance and are similar to the long-run performance findings of Moeller, Schlingemann, and Stulz (2005, 757). Their study found no significant abnormal returns for mergers financed with stock.

Discretionary Accruals and Post-Announcement Stock Performance

Based on the opportunistic earnings management hypothesis, if managers use discretion in accruals to increase earnings, and hence stock value, before a merger announcement, and if this discretion is the cause for the inflated values, which are later corrected when the inflated earnings do not materialize, then the hypothesis would be supported by a negative and significant relationship between abnormal returns after the merger announcement and discretionary accruals before the merger announcement.

To further test if post-announcement returns are negatively related to adjusted discretionary total accruals pre-announcement, I run an ordinary least squares regression using the buy-and-hold abnormal returns taken from the 36-, 24-, and 12-month periods as the dependent variables. Independent variables include adjusted discretionary total accruals at the end of the fiscal year before the merger announcement and four control variables. I use the log of the market value of equity as a control for size, Tobin's Q as a control for growth opportunities, book leverage as a control for financial distress, and the log of the value of the merger transaction to the acquiring firm's total assets as a control for deal size. All variables are measured at the end of the fiscal year before the

announcement year with the exception of deal size. The results of the regression for each sample are presented in Table 4.12.

Table 4.12 reports the results of an ordinary least squares regression using 36-, 24-, and 12-month buy-and-hold abnormal return as the dependent variable and industry- and performance- adjusted total discretionary accruals (Discretionary total accruals), the log of the market value of equity, Tobin's Q, book leverage, and the log of deal size relative to the acquires total assets. All variables are measured at the end of the fiscal year before the announcement with the exception of deal size. Deal size is calculated as the value reported in SDC divided by the acquirer's total assets. P-values are provided in parentheses.

As can be seen, industry- and performance-adjusted discretionary total accruals measured at the end of the fiscal year before the merger announcement are not significantly related to buy-and-hold abnormal returns one, two, or three years after the merger announcement. This finding does not provide support for the opportunistic earnings management hypothesis based on the use of discretionary accruals to inflate value. For this hypothesis to be supported there should be a negative and significant relationship indicating that the higher are the adjusted discretionary total accruals before announcement, the lower are the returns (or the higher the negative abnormal returns).

Table 4.12. Discretionary Accruals and Post-Announcement Stock Performance

	Announced			Completed			Cash Only		
Independent Variables	36 Months	24 Months	12 Months	36 Months	24 Months	12 Months	36 Months	24 Months	12 Months
Intercept	0.05	-0.08	0.05	-0.43	-0.46	-0.05	1.61**	0.64	0.74
	(0.9125)	(0.8622)	(0.8458)	(0.3988)	(0.2897)	(0.8524)	(0.0368)	(0.2739)	(0.1157)
Discretionary total accruals	-0.65	-0.33	-0.05	-0.22	0.28	0.17	-1.2	-0.05	0.39
	(0.1242)	(0.4213)	(0.8214)	(0.6273)	(0.4685)	(0.4609)	(0.1066)	(0.8256)	(0.4034)
ln(market value of equity)	-0.03	0	0	-0.01	0.01	0.00	-0.12**	-0.05	-0.06*
	(0.4052)	(0.8952)	(0.9264)	(0.7521)	(0.7227)	0.9622	(0.0269)	(0.2022)	(0.0937)
Tobin's Q	0	-0.01	0.01	0.0100	0.0000	0.0100	0.0100	0.01	0.01
	(0.8781)	(0.7640)	(0.3569)	(0.7065)	(0.8586)	0.2535	(0.8188)	(0.8821)	(0.5967)
Book Leverage	0.8***	0.48*	0.03	1.03***	0.53*	0.05	0.14	0.04	-0.08
	(0.0075)	(0.0964)	(0.8540)	(0.0019)	(0.0579)	0.7834	(0.7796)	(0.9118)	(0.7961)
Deal size	0.02	0.04	0	-0.01	0.00	-0.78	0.08	0.07	0.03
	(0.6841)	(0.4506)	(0.9186)	(0.9283)	(0.8978)	(0.0200)	(0.4569)	(0.3392)	(0.6800)
Number of observations	615	615	615	514	514	514	164	164	164
R Squared	0.04	0.01	0.002	0.02	0.01	0.01	0.01	0.02	0.03

***, **, and *, indicates significance at the 1%, 5%, and 10% levels, respectively.

Managerial Optimism Proxy

To test the managerial optimism hypothesis I use an optimism proxy offered by Di, Goodwin, and Marciukaityte (2009) and defined in the methodology section. The argument for the use of the proxy as a measure of managerial optimism is based on the idea that optimistic managers feel that their stock is undervalued and would prefer to use cash or debt to finance projects rather than undervalued stock (Heaton 2002, 33). If this is the case, then firms operated by optimistic managers would have higher debt levels than other similar firms. Using Baker and Wurgler (2002, 1) methodology to estimate if a firm is predicted to issue debt or equity based on an optimal capital structure, the optimism proxy is formed. Firms with excess leverage are considered to be managed by optimistic managers.

If managerial optimism is the reason for the high and significant R&D expenses and the significant increase in the year of announcement, as insinuated by Loughran and Ritter (1997, 1823), then I would expect to see a positive and significant relationship between R&D and changes in R&D at the year of announcement and the optimism proxy. I use announcement year R&D normalized by total assets at the end of the fiscal year before the announcement and the change in R&D as the dependent variable in an ordinary least squares regression using the optimism proxy measured at the end of the fiscal year before the announcement. Table 4.13 reports the findings for each of the three samples using raw data for R&D[12]. Given that R&D expenses were positive and significant with a significant increase in the year of the announcement; this could represent real downward earnings management or managerial optimism about future

[12] Winsorizing R&D did not changes my results when I studied the changes in R&D, therefore winsorizing is not used for the regression.

projects. Based on the regression, the optimism proxy is negative and significant for all three samples in both the amount of R&D expenses in the year of the announcement and the change in R&D in the year of the announcement.

This is contrary to what would be expected if these values can be attributed to optimism. For optimism to be supported, the optimism proxy should be positive and significant as opposed to negative. The findings, although contrary to the optimism hypothesis, do not rule out optimism or downward real earnings management using R&D expenses. High leverage levels may make it hard to increase R&D due to a lack of funds so optimism cannot be totally rejected based on this finding.

Table 4.13 reports the results of an ordinary least squares regression with R&D expenses normalized by total assets the fiscal year before the merger announcement and the change in the variable in the fiscal year of the announcement as the dependent variables. Independent variables include the optimism proxy calculated using excess leverage predictions in Baker and Wurgler (2002, 1), the log of the market value of equity, Tobin's Q, and book leverage. All independent variables are measured at the end of the fiscal year before the announcement. P-values are reported in parentheses.

Table 4.13. Optimism Proxy and R&D Expenses

	Announced				Completed				Cash Only			
	R&D		Change		R&D		Change		R&D		Change	
Intercept	0.23	**	0.03		0.25	**	0.02		0.15	**	-0.04	
	(0.0214)		(0.7469)		(0.0330)		(0.8259)		(0.0329)		(0.4673)	
Optimism proxy	-0.02	***	-0.02	***	-0.03	***	-0.02	***	-0.01	**	-0.02	***
	(0.0001)		(0.0010)		(0.0000)		(0.0004)		(0.0107)		(0.0000)	
Log market Value	-0.02	***	-0.01	*	-0.03	***	-0.01	**	-0.01		0.00	
of Equity	(0.0017)		(0.0534)		(0.0012)		(0.0494)		(0.1584)		(0.3840)	
Tobin's Q	0.04	***	0.02	***	0.04	***	0.02	***	0.01	***	0.00	
	(0.0000)		(0.0000)		(0.0000)		(0.0000)		(0.0004)		(0.6855)	
Book leverage	0.17	**	0.20	***	0.27	***	0.27	***	0.01		0.21	***
	(0.0299)		(0.0048)		(0.0054)		(0.0012)		(0.8611)		(0.0001)	
N	343		340		295		292		96		91	
Adjusted Rsqrd	0.26		0.12		0.28		0.13		0.18		0.27	

***, **, and *, indicates significance at the 1%, 5%, and 10% levels, respectively.

Summary of the Results

In testing for opportunistic earnings management and managerial optimism hypotheses around mergers and acquisitions I look at three samples of firms announcing mergers from 1989 to 2005. The firms in the sample must be seeking to acquire at least 50% of the target and the deal value must be at least $1 million dollars so as to eliminate small or partial acquisitions that would not induce earnings manipulation to inflate stock value. These restrictions are based on similar restriction in Ben-David and Roulstone (2008). The first sample includes all firms announcing mergers where the consideration offered includes some stock and includes 697 announced mergers. The second sample includes all firms completing mergers where the consideration offered includes some stock and includes 577 mergers, and the third sample of 179 is firms announcing mergers where the consideration is pure cash. The main findings are as follows:

1. Firms involved in mergers are large, high growth firms relative to industry- and performance- matched firms.

2. Net income and cash flow from operations are positive and significant based on median values, for the three years before the announcement year, indicating strong operating performance and a potential confidence builder for optimistic managers. Also, performance begins to drop off slightly at the time of the announcement and the two- to three- years following the announcement. This sets the stage for looking at the potential for opportunistic earnings management and managerial optimism.

3. Industry- and performance-adjusted discretionary total accruals are used to test for both earnings management and managerial optimism. Both three years before and three years after the merger announcement adjusted discretionary total accruals are negative

and significant for the samples of acquirers that use stock in the offerings. Overall, this does not support opportunistic earnings management or managerial optimism. Discretionary total accrual behavior appears to be more of an earnings decreasing strategy rather than earnings increasing one for these sample firms.

4. As a further test of earnings management I use R&D as a measure of real earnings management. In all samples R&D expenses are positive and significant the year before the announcement and increases significantly in the year of announcement. The behavior of R&D is not supportive of upwards earnings management as would be expected with the opportunistic earnings management hypothesis, but it does lend support to managerial optimism. As net income and cash flow performance is dropping off in the year of the announcement, evidence shows that spending in R&D increases. In addition to managerial optimism, it could also indicate downward earnings management before the announcement.

5. Earnings restatements after the merger announcement indicate that a significant number of sample firms, both announced and completed, make earnings decreasing restatements up to 3 years after the announcement. This is not the case in the cash only sample. This provides some support for upward earnings management before the announcement.

6. Litigation filings are reviewed on sample and industry- and performance-matched firms. The results indicate that in all three samples, the incidence of federal suits alleging securities fraud is significantly more for sample firms than the industry- and performance- matched firms. Although this may appear to support the opportunistic earnings management hypothesis for the samples that used stock, it does not explain the

significance also found in the cash only sample. The high incidence of filings may be the result of the corporate event triggering the filings and not necessarily earnings manipulation.

7. Long-run post-announcement stock performance for all three samples does not show signs of significant abnormal returns when using buy-and-hold abnormal return based on prior size-, prior return-, and book-to-market-matching. Although the abnormal returns have negative signs, they are not significant except in the cash only sample two years after the announcement. These returns do not support a successful opportunistic earnings management strategy.

8. There is no negative and significant relationship when looking at buy-and-hold abnormal returns and adjusted discretionary accruals the year before the announcement indicating no support for the opportunistic earnings management hypothesis and no significant findings in the year of the announcement providing no support for managerial optimism.

9. Managerial optimism is suspected in the behavior of R&D expenses. The results of the regression using R&D and changes in R&D in the year of announcement as dependent variables and the managerial optimism proxy as one of the independent variables in an ordinary least squares regression does not support the managerial optimism hypothesis. The optimism proxy is negative and significant as opposed to positive. However, this does not provide sufficient support to rule out optimism as firms with high leverage may not have access to funds to increase R&D.

Overall, I find no significant evidence to support opportunistic earnings management. The evidence for managerial optimism remains mixed. Merging firms in

the sample appear to use discretionary accruals and R&D expenses to reduce reported earnings as opposed to increasing them before the merger announcement. This could be supportive of the litigation avoidance hypothesis.

CHAPTER 5

CONCLUSIONS

Previous Findings

The findings of earnings management around mergers and acquisitions over the years have been mixed. Studies by Baik, Kang, and Morton (2007), Louis (2004, 121), and Erickson and Wang (1999, 149) find the presence of opportunistic earnings management by firms announcing mergers while studies by Ben-David and Roustone (2008), Pungaliya and Vijh (2008) and Heron and Lie (2002) find no evidence of opportunistic earnings management. This study finds no significant evidence of opportunistic earnings management around mergers and acquisitions regardless of the method of payment.

Post-acquisition stock performance of firms conducting mergers has also been studied with mixed results. Moeller, Schlingemann, and Stulz (2005, 757) find underperformance of the acquirer, while Andrade, Mitchell, and Stafford (2001, 103) do not find significant underperformance of the acquirer. Gong, Louis, and Sun (2008) find that only firms exposed to litigations see negative and significant long-run stock performance with no significant underperformance for firms not subject to litigation. Loughran and Vijh (1997, 1765) find underperformance only if the acquirer uses a stock swap, while Ben-David and Roulstone (2008) find underperformance in only the small stock acquirers where stock is used. This study finds no significant evidence of poor post-

announcement stock performance in the two- to three-years following merger announcement

Malmendier and Tate (2008, 20) look at mergers to see if managerial overconfidence can be used to explain mergers that did not create synergies. The authors develop a press proxy and an options proxy to determine if a manager is considered optimistic or cautious. The authors find CEO overconfidence increases the odds of making an acquisition by 65%. This study does not find consistent support for managerial optimism using an optimism proxy that is highly correlated to the proxies used by Malmendier and Tate (2008, 20).

Summary of Current Findings

Overall, there is no significant evidence of opportunistic earnings management in the samples used in this study. In contrast, there appears to be evidence of downward earnings management before and during the year of announcement of a merger. This coupled with the high incidence of litigation filings against merger announcing firms could indicate some type of litigation avoidance in anticipation of the merger announcement.

Using the managerial optimism proxy developed in Di, Goodwin, and Marciukaityte (2008) the pattern in R&D expenses before and during the announcement does not appear to be the result of optimistic managers. This increase in R&D is also contrary to opportunistic earnings management but could be supportive of downward earnings management before and during the announcement.

Future Research

The negative and significant pre-announcement adjusted discretionary total accruals, the positive and significant spending in R&D up-to and including the announcement year, and the high incidence of litigations against merger announcing firms, regardless of payment method, could be an indication of some type of active downward earnings management. One potential reason for downward earnings management could be some form of litigation avoidance and a potential area for future research. Currently, there is only one study (Gong, Louis, and Sun 2008) that looks at earnings management, litigations, and mergers. The authors find that litigations are related to earnings management and poor post-merger stock performance for sued acquirers. Also, a fourth sample of leverage buy-out merger announcements could be created to test managerial optimism on a finer scale using the optimism proxy. To ensure that the results are not being influenced by the "tech bubble" in and around year 2000, these firms could be removed and the remainder tested for opportunistic earnings management and managerial optimism.

REFERENCES

Amihud, Y., B. Lev, and N. Travlos. 1990. Corporate control and the choice of investment financing: The case of corporate acquisitions. *Journal of Finance* 45: 603-616.

Andrade, Gregor, Mark Mitchell, and Erik Stafford. 2001. New evidence and perspectives on mergers. *Journal of Economic Perspectives* 15: 103-120.

Ang, James. and Yingmei Cheng. 2006. Direct evidence on the market-driven acquisition theory. *Journal of Financial Research* 29: 199-216.

Baber, W., P. Fairfield and J. Haggard. 1991. The effect of concern about reported income on discretionary spending decisions: The case of research and development. *The Accounting Review* 66: 818-829.

Baik, Bok, Jun-Koo Kang, and Richard Morton. 2007. Earnings management in takeovers of privately held targets. Florida State University Working Paper.

Baker, Malcolm and Jeffrey Wurgler. 2002. Market Timing and Capital Structure. *Journal of Finance* 57: 1-32.

Barber, Brad and John D. Lyon. 1996. Detecting long-run abnormal stock returns: The empirical power and specification of test statistics. *Journal of Financial Economics* 43: 341-372.

Ben-David, Itzhak and Darren T. Roulstone. 2008. Why do small stock acquirers underperform in the long-term? University of Chicago Working Paper.

Dechow, Patricia M., Richard G. Sloan, and Amy P. Sweeney. 1995. Detecting earnings management. *Accounting Review* 70: 193-225.

Di, Hui and Dalia Marcuikaityte. 2008. Open-market share repurchases: Do managers obtain lower repurchase prices by manipulating earnings? Louisiana Tech University Working Paper.

Di, Hui, Eugenie Goodwin, and Dalia Marciukaityte. 2009. Earnings management around seasoned equity issues. Louisiana Tech University Working Paper.

Erickson, Merle and Shiing-wu Wang. 1999. Earnings management by acquiring firms in stock for stock mergers. *Journal of Accounting and Economics* 27: 149-176.

Fama, Eugene F. and Kenneth R. French. 1993. Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics* 33: 3-56.

Gaughan, Patrick A. 2007. *Mergers, Acquisitions, and Corporate Restructurings*, 4th ed., New Jersey, John Wiley & Sons, Inc.

Gong, Guojin, Henock Louis, and Amy X. Sun. 2008. Earnings management, lawsuits, and stock-for-stock acquirers' market performance. Smead College of Business, Working Paper.

Graham, John R. 1999. Global business outlook survey, past results. *Duke/CFO Magazine*, http://www.cfosurvey.org.

Heaton, J. B. 2002. Managerial optimism and corporate finance. *Financial Management* 31: 33-45.

Heron, Randall and Erik Lie. 2002. Operating performance and the method of payment in takeovers. *Journal of Financial and Quantitative Analysis* 37: 137-155.

Hetzel, Michael, Michael Lemmon, James S. Linck, and Lynn Rees. 2002. Long-run performance following private placements of equity. *Journal of Finance* 57: 2595-2617.

Hribar, Paul and Daniel W. Collins. 2002. Errors in estimating accruals: Implications for empirical research. *Journal of Accounting Research* 40: 105-134.

Hunt, Alister, Susan Moyer, and Terry Shevlin. 1997. Earnings volatility, earnings management, and equity value. University of Washington at Seattle Working Paper.

Jensen, Michael C. 2005. Agency Costs of Free Cash Flow, Corporate Finance and Takeovers. *American Economic Review* 76: 323-329.

Jones, Jennifer J. 1991. Earnings management during import relief investigations. *Journal of Accounting Research* 29: 193-228.

Kothari, S. P., Andrew J. Leone, and Charles E. Wasley. 2005. Performance matched discretionary accrual measures. *Journal of Accounting and Economics* 39: 163-197.

Loughran, Tim and J. Ritter. 1997. The operating performance of firms conduction seasoned equity offerings. *Journal of Finance* 52: 1823-1850.

Loughran, Tim and Anand M. Vijh. 1997. Do long-term shareholders benefit from corporate acquisitions? *Journal of Finance* 52: 1765-1790.

Louis, Henock. 2004. Earnings management and the market performance of acquiring firms. *Journal of Financial Economics* 74: 121-148.

Lyon, John, Brad Barber, and C. Tsai. 1999. Improved Methods for Tests of Long-Run Abnormal Stock Returns. *Journal of Finance* 54: 165-201.

Malmendier, Ulrike, and Geoffrey Tate. 2008. Who makes acquisitions? CEO overconfidence and the market's reaction. *Journal of Financial Economics* 89: 20-43.

Moeller, Sara B., Frederik P. Schlingemann, and Rene M. Stulz. 2005. Wealth destruction on a massive scale? A study of acquiring-firm returns in the recent merger wave. *Journal of Finance* 55: 757-782.

Myers, Stewart C. 1984. The capital structure puzzle. *Journal of Finance* 39: 575-592.

Myers, Stewart and N. Majluf. 1984. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13: 187-221.

Perry, S. and R. Grinaker. 1994. Earnings expectations and discretionary research and development spending. *Accounting Horizons* 8: 43-51.

Pungaliya, Raunaq S. and Anand M. Vijh. 2008. Do acquiring firms manage earnings? University of Iowa Working Paper.

Rangan, Srinivasan. 1998. Earnings management and the performance of seasoned equity offerings. *Journal of Financial Economics* 50: 101-122.

Russo, J. and P. Schoemaker. 1992. Managing Overconfidence, *Sloan Management Review* 33: 7-17.

Shivakumar, Lakshmanan. 2000. Do firms mislead investors by overstating earnings before seasoned equity offerings? *Journal of Accounting and Economics* 29: 339-371.

Shleifer, Andrei and Robert V. Vishny. 2003. Stock market driven acquisitions. *Journal of Financial Economics* 70: 295-311.

Shumway, Tyler. 1997. The delisting bias in CRSP data. *Journal of Finance* 52: 327-340.

Shumway, Tyler and Vincent A. Warther. 1999. The delisting bias in CRSP's Nasdaq data and its implications for the size effect. *Journal of Finance* 54: 2361-2379.

Smith, Adam. 1904. *Wealth of Nations, Book 1.* Chapter X, 107.

Teoh, Siew H., Ivo Welch, and T.J. Wong. 1998. Earnings management and the underperformance of seasoned equity offerings. *Journal of Financial Economics* 50: 63-99.

Weinstein, Neil D. 1980. Unrealistic optimism about future life events. *Journal of Personality and Social Psychology* 39: 806-820.