Earnings Management and Conservatism: The Role of Private Equity Sponsors*

Sharon P. Katz

Harvard Business School
Email: skatz@hbs.edu

Current Version: March 2008

Abstract

This study explores the change in earnings management and conservatism as firms that are backed by private equity (PE) sponsors transition between private and public ownership. Using a unique sample of U.S. firms, a private phase, in which firm equity is privately held while firm debt is publicly held, is compared to a public phase, in which firm equity is also publicly held. In addition, within the private phase, this study analyzes separately PE-backed firms and non-PE-backed firms. The study finds evidence that during the public phase, PE-backed firms engage in greater upward earnings management to avoid small earnings decreases and recognize losses in a more timely manner than during the private phase. Furthermore, this study finds evidence that PE-backed private firms engage less in upward earnings management, and recognize losses more promptly, than do non-PE-backed private firms. Results are robust for various measures and controls, and are not affected by factors such as endogenous listing status and PE financing choices.

Keywords: conservatism; earnings management; private and public firms; private equity.
Data Availability: data are available from sources identified in the paper.

* This paper is based on my dissertation at Columbia University. I would like to thank my committee members: Bjorn Jorgensen (Sponsor), Stephen Penman (Chair), Doron Nissim, Andrew Ang and Daniel Cohen for their guidance and support. I would also like to thank Sudhakar Balachandran, Nerissa Brown, Fabrizio Ferri, Dan Givoly, Carla Hayn, Partha Mohanram, Gregory Miller and Yuan Zhang, as well as the participants of the U.S. Securities and Exchange Commission, AAA 2006 annual meeting, Columbia University, Duke University, Harvard University, Northwestern University (Kellogg), Penn State University, University of California, Berkeley, University of California, Los Angeles, University of Chicago, and the University of Michigan workshops, and the Annual Accounting Conference at Yale University, for their helpful comments, and Joseph Marren, my former colleague at the M&A department of Citigroup Investment Banking, for his insightful feedback. I am especially thankful to my wife Elissa Swift Katz for all of her support during the process. I gratefully acknowledge the financial support from Columbia Business School, the Deloitte Doctoral Fellowship and Harvard Business School. All errors are mine. This Paper won the 2007 Competitive Manuscript Award, presented by the AAA, as well as the 2007 Best Dissertation Award, presented by the AAA Financial Accounting and Reporting Section.

Earnings Management and Conservatism: The Role of Private Equity Sponsors

I. INTRODUCTION

This study explores the *change* in earnings management and conservatism as firms, which are backed by private equity (PE) sponsors, transition between private and public ownership. A unique sample of PE-backed U.S. firms is analyzed under two distinct ownership phases in the firms' lifecycle. The first phase is that in which firm equity is privately held while firm debt is publicly held (private phase), and the second phase is that in which firm equity is also publicly held (public phase).[1] In addition, within the private phase, the study further distinguishes between firms that are backed by PE sponsors and non-PE-backed firms.

The comparison between the private and public phases of PE-backed firms can shed light on the influence of ownership structure (private and public) on accounting practices. Only scant data is available on privately held firms in the U.S., with the exception of financial institutions and insurance firms (Nichols et al. 2005; Beatty and Harris 1998; Mikhail 1999). However, due to their public debt, private phase firms in my sample are subject to the same financial reporting regulations as public firms, under section 13 and 15(d) of the Securities Exchange Act of 1934.[2] With complete and standardized financial information available in both private and public phases of ownership, a "clean," direct comparison of reporting under the two ownership structures is possible. I initially identify 556 (2,864 firm-year observations) U.S. private firms with public debt during the years 1980-2003, which include some familiar names such as J. Crew, Levi Strauss, and Sealy Corp.

[1] In my sample the ownership of PE sponsors is reduced, on average, from 78% before an IPO (during the private phase) to 49% after an IPO (during the public phase).

[2] The 1934 Act requires the registration of all securities that are to be traded on a securities exchange and the registration of some equity securities regardless of where they trade. At the time of registration, an issuing company must provide detailed disclosures regarding both the company and the registered security. The 1934 Act also requires continued disclosure for publicly traded securities that are already issued and outstanding.

Private firms are important players in the U.S. market. In the year 2005 only 17,000 of 4.9 million U.S. firms were registered as public firms. More than 99% of the U.S. businesses are privately held (AICPA Task Force Report 2005). Furthermore, according to *Forbes* in November of 2005, 339 closely held businesses, each with at least $1 billion dollars in revenues, together sold a trillion dollars' worth of goods and services and employed 4 million people during that same year. However, despite their significant role, very little is known about the accounting practices of private firms, which, with the exception of those private firms with public debt, are not subject to SEC filings rules.

Beyond the ubiquitous presence of private firms in the marketplace, the financial reporting of these firms is also of particular interest. Despite the absence of SEC filing rules, many private firms try to mimic the disclosure practices of public firms. According to *PricewaterhouseCoopers* survey (2005), 27% of the fast-growing private companies are adopting Sarbanes-Oxley practices because they want flexibility to eventually go public or be acquired by a public company. Moreover, about 70% of private firms prepare GAAP compliant financial statements to satisfy lenders and investors (AICPA 2005).[3] Clearly many private companies behave in accord with the standards set for public firms, and it will be interesting to check the degree to which this is true, as well as the contexts in which this tends to take place. Furthermore, the financial reporting of private firms has become a hotly debated issue, as of late. A task force sponsored by AICPA concluded that "*fundamental changes should be made in the current GAAP standards-setting process to ensure that the financial reporting needs of private company constituents are met*" (AICPA 2005). In response to these findings, On June 8, 2006,

[3] Although many private firms elect to use GAAP reporting, FASB Chairman Robert Herz testified before the U.S. Banking, Housing and Urban Affairs Committee in 2003 and emphasized that such compliance was optional. "*For most small businesses, the use of GAAP is a private choice. Current and potential lenders, suppliers or other contracting parties may influence or control that choice …. The board has long recognized that the costs of complying with financial accounting and reporting standards fall disproportionately on smaller businesses,*" (as quoted at *Advantage*, October 2004).

FASB and AICPA published a joint proposal to enhance the financial accounting and reporting standard-setting process for private companies (AICPA and FASB 2006).

This study focuses on firms that are backed by PE-sponsors investment firms, such as The Blackstone Group, Texas Pacific Group, or Kohlberg Kravis Roberts & Co. (KKR). As distinguished from the venture-capital firms, which invest in early-stage companies, PE sponsors firms generally buy mature businesses via leveraged buyout (LBO) and management buyout (MBO) transactions. In recent years, PE sponsors became important participants in the U.S. market. PE-backed private firms were involved in one-third of all IPOs over the past three years and in more than one-quarter of all U.S. mergers during the past two years (*Investment Dealers' Digest*, February 23, 2006).[4] Furthermore, many PE sponsors encourage their portfolio firms to adopt Sarbanes-Oxley and other accounting practices in order to increase their "exit value" (*U.S. News & World Report*, January 30, 2006).

To shed light on earnings management behavior, I look at the tendencies of PE-backed firms during their public and private phases to manage earnings in order to avoid reporting an earnings decline. Public firms in the U.S. tend to have many shareholders who obtain only a small fraction of the benefits from monitoring the firm's activities. These benefits may not be enough of an incentive to cover the cost of obtaining the necessary information to monitor the firm (Beatty et al. 2002). Private firms, conversely, are closely held. They have fewer shareholders who are more intimately involved in the management of the firm, and hence, their cost of acquiring information is lower. Therefore, I expect shareholders of public firms to be more likely than those of private firms to rely on heuristic cutoffs at zero changes or levels of earnings (Burgstahler and Dichev 1997). As predicted, I find that relative to the firms' private

[4] PE-backed private firms made up 36% of all IPOs and 48% of all the dollars raised through new stocks in 2005 (*Wall Street Journal*, February 13, 2006).

phase, during their public phase these firms report fewer than expected small earnings declines and report more than expected small earnings increases.

Furthermore, within the private phase, when looking at the tendency of PE-backed firms to engage in earnings management, I expect that the presence of the *sophisticated* PE sponsors will restrain such earnings management. Further, I expect that the main focus of these PE sponsors is to create "cookie jar" reserves for a future exit via IPO or a sale (Xie et al. 2003; Beuselinck et al. 2005). Consistent with this prediction, I find that PE-backed *private* firms engage in significantly lower upward earnings management than do *private* firms owned by management.

Finally, I test for timely loss recognition (conditional conservatism) during the public and private phases. All firm-year observations in my sample, during both periods, are subject to identical financial reporting regulations. However, firms in the private phase are more closely held, with many shareholders having "inside information," and there is less of a need to rely on detailed information through financial statements. For this reason, the demand for the quality of such financial reporting is diluted, and therefore, the quality is predicted to be lower during the private phase (Ball and Shivakumar 2005). Furthermore, timelier loss recognition is associated with lower shareholder litigation costs (Skinner 1997), which create an additional incentive for firms during their public phase to recognize losses in a more timely manner. Indeed, the results of the two models of conditional conservatism, time-series measures of timely loss recognition model and an accruals-based model, suggest that while under private ownership, firms report fewer transitory losses than they do when these same firms are publicly traded. Therefore, during the private phase the financial reporting is of a lower quality. Consistent with the assumptions that the involvement of PE-sponsors induces higher earnings quality and that debt holders

demand timelier loss recognition (Ball et al. 2005), I find that PE-backed *private* firms, which are also more highly levered, recognize losses in a more timely manner than do non-PE-backed *private* firms.

I use the Heckman (1979) two-stage approach to control for any endogeneity of selecting listing status (public versus private ownership) or receiving PE financing. Despite the smaller sample sizes, the results remain qualitatively unaltered. Furthermore, my results are robust for various winsorization cutoffs, different bin sizes in the histogram analyses, various earnings definitions, and the use of either PROBIT or LOGIT model. The results also remain robust after controlling for size, leverage, growth, profitability, industry membership, auditor size, external events, and after employing the Fama-MacBeth (1973) regression models for the conditional conservatism analyses.

This paper contributes to the existing literature in several ways. First, the unique sample of PE-backed private firms with public debt enables a direct comparison between the private and public phases of the same firms in the U.S. and across industries. Indeed, prior literature focused on private firms that have both private equity and private debt (*pure* private firms). These pure private firms do not have access to public capital markets (neither equity nor debt), and, in the U.S., are subject to different financial reporting regulations. The prior literature does include analyses conducted in Europe (Burgstahler et al. 2005; Ball and Shivakumar 2005; Coppens and Peek 2004), in which pure private firms are required to file financial statements. Researchers also conducted analyses in the U.S. using surveys (Cloyd et al. 1996), questionnaires (Penno and Simon 1986), and tax return filings (Mills and Newberry 2001), gathering only scant financial information on pure private firms. Several other papers focused on specific regulated industries, such as life insurance companies and banks (Nichols et al. 2005; Mikhail 1999; Beaty et al.

2002; Beaty and Harris 1998) where financial information is available for pure private firms in the U.S. However, the advantage of my sample is that I can extract complete and standardized financial information from COMPUSTAT on firms during both their private and public phases in the U.S. across industries. Furthermore, because this study looks at the full lifecycle of the same firms from private to public ownership (or vise versa), the main difference between the two phases is the ownership status, and more precisely, the impact of the public equity markets. Hence, this study presents a unique opportunity to evaluate the effect of stock price (or lack thereof) on earnings management and conservatism.

Second, the majority of firms during their private phase in my sample are owned by PE sponsors. These PE-backed private firms, were once public or later became public through a "reverse LBO" transaction.[5] This study presents a unique and interesting opportunity to examine the influence of PE sponsors on accounting practices. Due to the incentives particular to PE-backed firms, one can expect that their practice of earnings management and conservatism will differ from the practice of non-PE-backed private firms. This study expands upon the growing literature on earnings characteristics of PE-backed firms (Jain and Kini 1995; Hochberg 2006; Hand 2005; Darrough and Rangan 2005). Prior studies conducted in the U.S. are limited to periods surrounding a reverse buyout because of the lack of data available for the private firm years. Some of these studies relied heavily on financial data from prospectus filings, which may be contaminated by optimistic bias, window dressing or earnings manipulation (Ang and Brau 2002). However, since complete financial information is available for my sample of private

[5] Reverse LBOs are a special form of IPO where a company that has been taken private returns to public trading (Chou et al. 2005). In recent years, a significant number of IPO deals were backed by large private equity firms. In the first 9 months of 2005, 53% of the U.S.-priced IPO deals were backed by PE firms (*The Wall Street Journal*, October 10, 2005). Many of these PE-backed firms' IPOs have gone sour: "Take a quick private-equity turnaround, mix in lots of debt and award most of the proceeds to the prior owners." (*The Wall Street Journal*, May 16, 2005). However, in a recent study, Cao and Lerner (2006), examine 496 reverse LBOs between 1980 and 2002, and document evidence consistent with reverse LBOs outperform other IPOs in the first, fourth and fifth year after going public.

firms during the buyout periods, I am able to avoid historical financials from the prospectus, but rather, turn to actual 10Ks as collected from COMPUSTAT for these private firm-year observations and therefore, uncover more in depth insight into earnings management and conservatism of PE-backed firms.

The remainder of this paper is organized as follows: section II discusses the motivation and the theory underlying the hypotheses, section III describes the data collection procedures and the research design, section IV describes the sample descriptive statistics, section V presents the results, section VI describes a variety of robustness checks, and section VII concludes and discusses implications for further research.

II. MOTIVATION, THEORY AND HYPOTHESES

Earnings Management

To date there is only mixed and limited evidence regarding the effect of listing status on earnings management. For example, while Burgstahler et al. (2005) provide European evidence that publicly traded firms tend to engage in earnings management to a lesser extent than *pure* privately held firms, Beatty and Harris (1998) and Beatty et al. (2002) document U.S. evidence supporting higher earnings management among public financial institutions.

There is theory and evidence to support the prediction that public firms have a higher incentive to manage earnings than do private firms, mainly to circumvent constraints designed to mitigate agency costs or to reduce information asymmetry (Beatty and Harris 1998). Public firms in the U.S. tend to have many shareholders who obtain only a small fraction of the benefits from monitoring the firms' activities. These benefits may not be enough of an incentive to cover the cost of obtaining the necessary information to monitor the firms (Beatty et al. 2002).

Therefore, shareholders in public firms may rely on low-cost heuristic cutoffs at zero levels or zero changes in earnings (Burgstahler and Dichev 1997). Furthermore, stock price penalties and declines in managers' wealth (due to their stake in the firm) give the managers of public firms additional incentives to avoid reporting small losses or declines in earnings. This pattern is consistent with the view that the opportunity to manipulate the stock price is a motive for earnings management (Jensen 2005). Private firms, conversely, are closely held. They have fewer shareholders who are more intimately involved in the management of the firm, and hence, a lower cost of acquiring information. In addition, in the absence of stock price, the related penalties are not a factor in determining the managers' wealth.

Alternatively, theory and evidence also support higher earnings management by private firms as compared to public firms. According to Coppens and Peek (2004), agency costs may even increase in pure private firms since the risk is distributed among fewer shareholders, and these shareholders lack a stock price to use as an additional performance measure. In addition, as I will elaborate upon in the next section, the role of financial statements as a tool for reducing information asymmetry is less important for private firms than for public firms, and hence, it can lead to higher earnings management among private firms. Furthermore, my sample of firms during their private phase shows significantly higher leverage than during their public phase, and the fear of creditor inferences of highly levered private firms can create an incentive to manipulate true performance (Burgstahler et al. 2005; Kim and Yi 2005).

Thus, it is ultimately an empirical question whether during their public or private phase firms engage in more earnings management. Consistent with the evidence in the U.S. market (i.e. Beatty and Harris 1998; Beatty et al. 2002), my hypothesis (stated in alternative form) is as follows:

H1: *PE-backed firms during their public phase engage in upward earnings management to avoid reporting earnings decreases to a greater extent than do the same firms during their private phase.*

Within the private phase, this study further compares PE-backed firms to non-PE-backed firms. Xie et al. (2003) find a negative association between earnings management and board member sophistication and Beuselinck et al. (2005) show that PE sponsors' board presence restrains earnings management by taking extensive monitoring actions (regarding the monitoring role of PE sponsors see also Gompers, 1995, Lerner, 1995). In addition, since PE sponsors plan to monetize their investment via an IPO or a sale, one would expect that they have an incentive to create "cookie jar" reserves for these future exits. Thus my hypothesis (stated in alternative form) is as follows:

H2: *Non-PE-backed private firms engage in upward earnings management to avoid reporting earnings decreases to a greater extent than do PE-backed private firms.*

Conditional Conservatism

All the firms in my sample, during both their private and public phases, are subject to identical financial reporting regulations. However, similar to Ball and Shivakumar (2005), who test for earnings quality differences between private and public firms in the U.K., I predict the demand for the quality of such financial reporting to be lower for firms while under private ownership:

> "Private companies are more likely to resolve information asymmetry by an "insider access" model. They are less likely to use public financial statements in contracting with lenders, managers and other parties …. Their financial reporting is correspondingly more likely to be influenced by taxation, dividend and other policies" (Ball and Shivakumar 2005, 84).

Indeed, Burgstahler et al. (2005) emphasize that publicly traded firms have strong incentives to provide financial statements that influence outsiders' assessment of economic

performance. Similarly, Nichols et al. (2005) predict and find that stakeholders in U.S. public banks demand greater degrees of accounting conservatism relative to private banks due to the separation of ownership and control, as well as to the higher need to reduce information asymmetry.

Since the firms in my sample are owned by PE sponsors, these shareholders have "inside information," and therefore, less need to rely on detailed information through financial statements. My sample of private firms also shows significantly higher leverage, and a higher concentration of private and bank debt than the sample of public firms.[6] Because of their concentrated holdings and access to information, private lenders and banks have the ability to exert much greater influence and pressure on management than do public debt-holders (Denis and Mihov 2002). Hence, they rely *less* heavily on financial statements. Furthermore, timelier loss recognition is associated with lower shareholders litigation costs (Skinner 1997), which create an additional incentive for firms during their public phase to recognize losses in a more timely manner. On the other hand, borrowers with lower accounting quality face substantially higher loan-related costs (Bharath et al. 2004). In addition, conditional conservatism makes loan covenants, which use accounting ratios, more effective (according to contracting theory), and indeed, conditional conservatism is found to be increasing with the size of the debt capital market (Ball et al. 2005). This in turn, can create an incentive for highly leveraged *private* firms to have *higher* quality of financial reporting.

[6] Cotter and Peck (2001) show that for LBOs controlled by a buyout specialist, the average ratio of senior bank debt to total debt is 38%. Kaplan and Stein (1993) find that for 124 large buyouts, bank debt represents over 70% of total debt in 1982-1984, and declines in later years to around 52%-57%.

In this study, I will focus on a conditional conservatism measure, timely loss recognition, used both by Ball and Shivakumar (2005) and Nichols et al. (2005).[7] Following their findings, my next hypothesis, (stated in alternative form) is as follows:

H3: *PE-backed firms during their public phase are more likely to recognize losses in a timely fashion than during their private phase.*

As for PE-backed firms during their private phase, a recent study conducted in Belgium (Beuselinck et al. 2005) shows that PE-backed firms have significantly higher financial reporting quality, as measured by timely loss recognition, than a matched sample of non-PE-backed firms. These findings are attributed to the professionalized environment created by PE sponsors, and their higher demand for timely information. Indeed, Kaplan and Strömberg (2002) show that PE sponsors make control rights contingent upon financial as well as non-financial measures. This, in turn, can trigger harsher financial reporting discipline, and higher demand for quality accounting information.[8] In addition, PE-backed private firms have significantly higher leverage than non-PE-backed private firms. This, in turn, can lead to a higher demand for timely loss recognition by the debt holders (Ball et al. 2005). Hence, one can expect higher earnings quality for PE-backed private firms, and therefore, a lower difference in earnings quality when compared to public firms. However, I expect that PE sponsors' ownership would have only a secondary order effect, while the listing status (private versus public) would have a first order effect. I also expect that PE-backed private firms would have higher earnings quality than non PE-backed private firms. Thus, my last hypothesis, (stated in alternative form) is as follows:

[7] Basu (1997) defines conditional conservatism as follows: ". . . accountants' tendency to require a higher degree of verification for recognizing good news than bad news in financial statements … earnings reflect bad news more quickly than good news."

[8] In contrast, Cohen and Langberg (2005) find that, on average, reported earnings are less informative for venture-capital-backed firms, and that the value of, and information within, reported earnings decreases as a function of venture capitalists' ownership of firm equity.

H4: *PE-backed private firms are more likely to recognize losses in a timely fashion than are non-PE-backed private firms.*

III. SAMPLE SELECTION AND RESEARCH DESIGN

Sample Selection

Sample Selection: Private Firms with Private Equity and Public Debt

The analysis of private firms with public debt covers firm-year observations on the combined COMPUSTAT (industrial, full coverage and research) files for any of the 26 years from 1978 to 2003 that satisfy the following requirements:[9] (1) The sample selection excludes financial institutions (firms with SIC codes between 6000 and 6999), since incentives to avoid earnings decreases or losses may be linked to regulatory oversight. (2) The sample selection excludes firms in regulated industries (i.e. utilities firms with SIC codes between 4800 and 4900), since regulated firms have different reporting requirements and earnings management incentives than non-regulated firms. (3) The sample selection excludes firms with a price per share at fiscal year end (COMPUSTAT data item #199). (4) The sample selection includes firms with total debt exceeding $1 million dollars (#9 + #34), or COMPUSTAT notes that the firm went through an LBO or became private. (5) The sample selection excludes foreign firms (usually traded as American Depositary Receipts), since foreign firms face different tax and financial accounting rules. (6) The sample selection requires firm revenues above $1 million to avoid the small

[9] Prior to 1980, there was little leveraged takeover activity and few private firms with public debt. Indeed, one of the first instances (if not the first) of private firms with public debt was Movado in 1979: "North American Watch Corp [later, Movado Group Inc.], a small privately held company, sells $14 million in bonds to public in unusual financing that could pave way for other private companies to enter bond market. The company, as condition of issue, will begin issuing quarterly and annual statements similar to those required of publicly held companies. Fifteen-year issue allows company to raise funds at lower than current bank rates and keep funds far longer." (*The New York Times*, May 24, 1979). I collected data from 1978 forward in order to have an additional two years of historical lag information for observations from the year 1980.

denominator problem in determining growth rates. (7) The sample selection excludes subsidiaries of public firms in order to exclude cases where major financing and reporting decisions are made by a parent firm. (8) The sample selection includes all firms with available data regardless of fiscal year-ends. (9) The sample selection excludes firms for which data is available only for the IPO year and its prior year, since, in many instances COMPUSTAT adds historical information prior to the filings. The sample selection also excludes firms for which data is available only for one year, due to the absence of historical lag information. The resulting initial sample includes 12,261 firm-year observations and 2,817 firms.

In further "cleaning" the data, and in order to focus on private firms with public debt, I manually deleted 9,368 firm-year observations and 2,261 firms beyond those eliminated from COMPUSTAT (see **Table 1, Panel A** for an explanation of methodology). For this purpose, I hand collected SEC filings' information from EDGAR (since 1993) and 10K Wizard (prior to 1993), bankruptcy information from BankruptcyData.com, and other historical information from Hoover's DataBase as well as several news resources including Factiva, ProQuest, and LexisNexis. Cleaning the sample resulted in the removal of 23.3% of firm-year observations due to historical information prior to filing a prospectus, 18.9% of the firm-year observations since they were publicly traded firms (including 5.6% of firms traded over the counter), and 13.7% of firm-year observations with no information regarding ownership structure.

I further hand collected information from the above resources regarding the ownership and organizational structure of each of the private firms in this resulting sample. I categorized each firm as one of the following: (1) PE-sponsor-owned – defined as those that are owned by private equity investment firms or financiers (e.g. Carl Icahn). I identified a firm as owned by a PE sponsor in all instances where the sponsor's ownership was equal to or exceeded 50%. (2) PE-

sponsor and management-owned – defined as PE sponsors holding less than 50% of the ownership in the firm. (3) Management-owned – defined as those that are at least 50% owned by the founders, executives and directors, or family members. (4) Employee-owned - defined as those that are at least 50% owned by their employees. (6) Cooperatives and subsidiaries of cooperatives. (7) Limited partnerships. (8) Subsidiaries of another privately held firm. (9) Firms owned by the government. (10) NA – No available information regarding the ownership of the firm. Furthermore, I identified changes in organization type due to equity IPOs, M&A, bankruptcies or deregistration (form type 15-15D). For each of the above organizational changes, including "going private" transactions, I identified the year in which the restructuring took place.[10] I also noted private firms that went private through an MBO.[11]

The resulting sample, which includes 2,864 firm-year observations and 556 private firms (for the years 1980-2003), is used for the descriptive statistics reported in **Table 2**.

Insert Table 1

Sample Selection: Public Firms that Once Were, or Later Became, Private Firms with Public Debt

For each of the 556 private firms identified above, I pulled all available financial information for the years 1978-2003 from COMPUSTAT. I began with 2,394 firm-year observations. Following the methodology I used for private firms, I manually deleted 413 firm-year

[10] For nine firms in my sample, I found inconsistencies between the news resources and the pricing information in COMPUSTAT concerning the precise year the firm "went private." I verified the "going private" year via the web site of the firm. If it was not available, I then called the firms' investor relations representatives. In three instances, where the conflict was not resolved, I used the information available in news sources.

[11] I identified a management buyout when the senior management team was part of the investors' group that took the company private via a leveraged buyout transaction (Smith 1990).

observations (see **Table 1, Panel B** for an explanation of firm-year eliminations). The resulting sample includes 1,792 public firm-year observations and 226 firms (for the years 1980-2003). I further omitted 345 *private* firm-year observations (26 firms), as well as 22 *public* firm-year observations (3 firms) of cooperatives and subsidiaries of cooperatives, limited partnerships, and government-owned firms since these firms may have different earnings management incentives resulting from the organizational and ownership structure. Furthermore, cooperatives' averaged financials are quite different from the total sample averaged financials, with much lower leverage and lower gross margins, and limited partnerships account for less than 1% of the entire sample and have significantly lower total sales (untabulated). The resulting sample includes 223 firms (1,770 public firm-year observations and 1,082 private firm-year observations).

Sample Selection: Removal of Observations During Transition Periods

In an untabulated analyses I identified specific earnings management incentives for firms that arise in the transition between public and private ownership via reverse buyout (private to public) and "going private" (public to private) transactions such as LBOs and MBOs.

Overall, my findings are consistent with the results of prior literature. First, I find higher unexpected discretionary accruals, growth in net operating assets and other unexpected specific accruals in the year of initial public offering (IPO) compared to prior years. These results are consistent with the motivation of firms attempting to sell equity to raise their stock prices (Teoh et al. 1998a; Teoh et al. 1998b; Marquardt and Wiedman 2004). These results hold despite the full disclosure during the private phase, and therefore lower information asymmetries in my sample (Cai 2002). Alternatively, these findings could be attributed to the alleged bias of the "discretionary accruals" model around large transactions and events, due, for example, to the firms' use of IPO proceeds (for further discussion see Ball and Shivakumar 2006). Furthermore,

this upward earnings management appears to be more significant for PE-backed firms than for firms owned by management. Second, I document downward unexpected accounts receivable in the two years prior to an MBO transaction. This is consistent with the incentive of managers to act in their own financial interest and influence the firm price in their favor (DeAngelo 1988; Perry and Williams 1994; Wu 1997; Marquardt and Wiedman 2004). Finally, I find higher unexpected discretionary accruals and growth in net operating assets in the two years prior to an LBO. These results are consistent with the incentive of entrepreneurs to manage earnings upward prior to PE financing (Beuselinck et al. 2005).

Before conducting further analyses of earnings management and conservatism on the sample firms during both their private and public phases, I remove 625 public firm-year observations and 317 private firm-year observations during the years of IPO transactions, during the two years before and two years after "going private" transactions, during the two years prior to M&A transactions[12] and during the two years before filing for bankruptcy protection.[13] The purpose of removing these particular firm-year observations is to eliminate additional incentives for earnings management and conservatism in these specific contexts, which may add bias to the results of the analysis. The final sample, which includes 180 firms, is used for the analyses that follow.

Research Design: Earnings Management

[12] In an untabulated analysis I find evidence consistent with upward earnings management by PE-backed public firms in the years prior to M&A transaction, consistent with the assumption that these firms can anticipate an acquisition or initiate and plan for a sale, and therefore, are able to manipulate earnings accordingly (Erickson and Wang 1999).

[13] In an untabulated analysis I find evidence of downward earnings management by PE-backed public firms in the two years prior to a bankruptcy filing when compared to the years prior to that. This result is consistent with the incentive of managers, especially in public firms, to avoid the threat of lawsuits by stakeholders (Rosner 2003).

Unexpected Discretionary Accruals

In order to be able to compare my findings to prior research, I use the cross-sectional Jones (1991) model as my comprehensive measure of earnings management. Indeed, Bartov et al. (2000) find that the cross-sectional Jones (1991) model is superior to other models in an audit qualification setting. Following Xie (2001), I use the Jones model to estimate normal accruals and discretionary accruals, as appears in equation (1). The Jones model regresses total accruals (TACC) on the change in sales and the level of property, plant and equipment for a test sample of all public firms in the same two-digit SIC code and year combination. The test sample of all public firms is taken from the entire population of public firms on COMPUSTAT with a price higher than \$1.[14] I further excluded from the test sample IPO years as well as the 556 firms in my sample of public and private firms, and required at least ten observations to be available before performing each regression (Teoh et al. 1998b).

I calculated the expected portion of total accruals (ETACC) using the estimated coefficients from regression (1), subtracting the change in trade receivables from the change in sales, to allow for the possibility of sales manipulations (Teoh et al. 1998a), as it appears in equation (2), denoting the residuals as the unexpected discretionary accruals (UTACC) as appears in equation (3) and winsorize all the continuous variables needed for the regression at the 1st and 99th percentile.

$$TACC_{j,t} / TA_{j,t-1} = a_1*[1 / TA_{j,t-1}] + a_2*[\Delta REV_{j,t} / TA_{j,t-1}] + a_3*[PPE_{j,t} / TA_{j,t-1}] + e_{j,t} \quad (1)$$

$$ETACC_{j,t} = \hat{a}_1*[1 / TA_{j,t-1}] + \hat{a}_2*[(\Delta REV_{j,t} - \Delta TR_{j,t}) / TA_{j,t-1}] + \hat{a}_3*[PPE_{j,t} / TA_{j,t-1}] \quad (2)$$

$$UTACC_{j,t} = TACC_{j,t} / TA_{j,t-1} - ETACC_{j,t} \quad (3)$$

Where: $TACC_{j,t}$ are total accruals for firm j in year t. Following Hribar and Collins (2002), I define total accruals as the difference between income before extraordinary items

[14] The restriction on the stock price is to avoid public firms in distress or that file for bankruptcy protection.

(COMPUSTAT data item #123) and net cash flow from operating activities, adjusted to extraordinary items and discontinued operations (#308 - #124). For the years prior to 1988, when COMPUSTAT item #308 is unavailable, I define total accruals as follows: Δ(current assets #4) - Δ(current liabilities #5) - Δ(cash #1) + Δ(short-term debt #34) - (depreciation and amortization #125). In addition, to correct for measurement errors in the balance sheet approach prior to 1988, I eliminated firm-year observations with "non-articulation" events, namely: merger or acquisition, discontinued operations, and gain or loss on foreign currency translations (Hribar and Collins 2002). $TA_{j,t-1}$ is the beginning-of-the-year total assets (lagged #6). $\Delta REV_{j,t}$ is the change in sales in year t (#12). $PPE_{j,t}$ is gross property, plant and equipment in year t (#7). $\Delta TR_{j,t}$ is the change in trade receivables in year t (#151).[15,16]

Unexpected Specific Accruals

Following Marquardt and Wiedman (2004), and in order to gain further insight into the specific accruals used to manage earnings in specific contexts, I test for unexpected changes in

[15] Though widely used in the earnings management literature, accruals models such as the modified Jones model are far from perfect in detecting earnings management. Because the models assume the relationship between cash flows and accruals to be linear, thus ignoring the asymmetry in the gain and loss recognition of accruals, I also incorporate in the estimation of the modified Jones model the improvement in accruals models proposed by Ball and Shivakumar (2006a). Specifically, I add to the model a proxy for potentially reportable gains and losses in the form of the sign of the cash flows from operations. Consistent with the results reported by Ball and Shivakumar (2006a), the introduction of this proxy increases the explanatory power of the model considerably. In particular, in an untabulated analysis, I augmented the modified Jones model with the following independent variables: cash flow from operations in year t (CFt), a dummy variable set to 1 if CFt <1 and 0 otherwise (DCFt), and an interactive variable, CFt x DCFt. The results are qualitatively similar.

[16] Because performance might be a key driver of both a firm's decision to go public and of PE sponsors to provide financial backing (Morsfield and Tan 2006), I employ in an untabulated analysis the Kothari et al. (2005) performance-matching approach, which is indicated to have relevance in an IPO setting. Specifically, I use ROA, which is defined as net income (COMPUSTAT data item #172) plus net of tax interest expense (#15) divided by total assets at end of year t–1 (lagged #6), as the performance measure, and match each observation by industry, year, and the deciles of ROA in the same industry and year. These results, as well as the results of the current unexpected discretionary accruals model derived from the cross-sectional modified Jones model used by Teoh et al. (1998a, 1998b), Morsfield and Tan (2006), and Chou et al. (2006), are qualitatively similar. Current accruals are defined as the difference between the change in noncash current assets and the change in current operating liabilities. The unexpected discretionary accruals are estimated from a cross-sectional regression, in the same year and industry, of current accruals on the change in sales, both scaled by prior year total assets.

recurring items, such as accounts receivable, inventory, accounts payable, accrued liabilities and depreciation as well as in nonrecurring items such as special items.[17]

Unexpected change in accounts receivable:

$$UAR_{j,t} = (AR_{j,t} - (AR_{j,t-1} * SALES_{j,t} / SALES_{j,t-1}))/TA_{j,t-1} \quad (4)$$

In an untabulated analysis, I further test for unexpected changes in gross account receivables as well as unexpected changes in the allowance for doubtful accounts.[18]

Unexpected change in inventory:

$$UINVj,t = (INV_{j,t} - (INV_{j,t-1} * COGS_{j,t} / COGS_{j,t-1}))/TA_{j,t-1} \quad (5)$$

Unexpected change in accounts payable:

$$UAPj,t = (AP_{j,t} - (AP_{j,t-1} * COGS_{j,t} / COGS_{j,t-1}))/TA_{j,t-1} \quad (6)$$

Unexpected change in accrued liabilities:

$$UACCL_{j,t} = (ACCL_{j,t} - (ACCL_{j,t-1} * SALES_{j,t} / SALES_{j,t-1}))/TA_{j,t-1} \quad (7)$$

Unexpected depreciation expense:

$$UDEP_{j,t} = (DEP_{j,t} - (DEP_{j,t-1} * \text{Gross PPE}_{j,t} / \text{Gross PPE}_{j,t-1}))/TA_{j,t-1} \quad (8)$$

Unexpected special items:

$$USI_{j,t} = (SI_{j,t}) / TA_{j,t-1} \quad (9)$$

Prior literature also identifies the value-relevance of changes in research and development (R&D) and capital expenditures (CAPEX) and their use by practitioners to manage earnings (Darrough and Rangan 2005; Lev and Thiagarajan 1993; Nelson et al. 2003). Therefore, I also include the following measures: ChRD - Changes in R&D expense (#46) between year t

[17] Lev and Thiagarajan (1993) find further support for the value-relevance of several unexpected accruals, and Nelson et al. (2003) identify the use of several unexpected accruals to manage earnings by practitioners. *COGS* is cost of goods sold (#41). Table 5 includes the COMPUSTAT data item numbers for all of these variables.

[18] Unexpected changes in gross accounts receivable is defined as $UGAR_{j,t} = (GAR_{j,t}$ [#151+ #67] - $(GAR_{j,t-1} * SALES_{j,t}$[#12] $/ SALES_{j,t-1}))/TA_{j,t-1}$[#6]; Unexpected changes in the allowance for doubtful accounts is defined as $UAllow_{j,t} = (Allowance_{j,t}$ [#67] - $(Allowance_{j,t-1} * GAR_{j,t}$ [#151+#67] / $GAR_{j,t-1}))/TA_{j,t-1}$[#6].

and year t-1, divided by total sales at year t (#12); and ChCAPEX - Changes in capital expenditures (#128) between year t and year t-1, divided by total sales at year t (#12).[19]

In addition, following Penman and Zhang (2004) the operating activities for clean surplus relation leads to $OpI_{j,t}$ = Free Cash $Flow_{j,t}$ + $\Delta NOA_{j,t}$. While the free cash flow is the "hard" aspect of the operating income calculation, $\Delta NOA_{j,t}$ is the "soft" aspect of operating income calculation, which involves discretionary measurements and estimations. Therefore $\Delta NOA_{j,t}$ can be used as an additional signal of earnings management, where:

Growth in net operating assets: $GNOA_{j,t} = (NOA_{j,t} - NOA_{j,t-1})/|NOA_{j,t-1}|$ (10)

When comparing unexpected discretionary and other specific accruals between the firms' private and public phases (and during the private phase), I use a two-tailed test to compare the difference in means, a two-tailed Wilcoxon signed ranked test to compare the differences in medians (untabulated), as well as a LOGIT model to test the probability that a firm is private with public debt rather than publicly listed.[20] The LOGIT model is as follows: $Private_i = \beta_0 + \Sigma\beta_j * X_{ji} + \varepsilon_i$, where: *Private* is a dummy variable that takes the value "1" if the firm is private and "0" if it is public (or takes the value "1" and "0" according to the ownership during the private phase). X_{ji} are firms' unexpected discretionary accruals and other specific accruals. I omit, however, the variable USI, due to the small number of observations. To control for leverage, size and profitability, I run the LOGIT model above on four additional firm characteristics: leverage (total debt divided by total assets at the end of the year), size (sales),[21] growth (growth in total assets) and profitability (ROA and RNOA). These characteristics are identified in the descriptive statistics analysis as significant differences between private firms and public firms.

[19] The results of UAP and ChRD are insignificant across all the analyses and therefore untabulated.

[20] Amemiya (1981) claims that "in the univariate dichotomous model, it does not matter much whether one uses a probit model or a logit model, except in cases where data are heavily concentrated in the tails due to the characteristics of the problem being studied." In untabulated analyses, I use the PROBIT model, though all the results, as predicted, remain qualitatively similar.

[21] When using the natural logarithm of sales as a measure of size the results remain qualitatively unaltered.

Univariate analysis of earnings changes (ΔRNOA)

Following Burgstahler and Dichev (1997), I present a series of histograms that document the empirical distribution of ΔRNOA, where ΔRNOA is defined as changes in net operating earnings from year t-1 to year t, standardized by total net operating assets in the beginning of year t-1.[22] I chose to present the results of changes in *RNOA* because earnings are before-interest income and interest expense, and therefore less affected by leverage. In addition, the effects of nondiscretionary taxes and special items on any discontinuity around zero are muted in the distribution of earnings *changes* relative to the distribution of earnings levels (Beaver et al., 2003).

The basic assumption of the Burgstahler and Dichev (1997) study is that earnings follow a smooth distribution in the absence of earnings management. If managers do indeed avoid small declines in earnings, I expect to observe unusually fewer observations just below zero change in earnings, and unusually more observations just above zero change in earnings than would appear in a smooth distribution. I use bin widths according to the formula suggested by Degeorge et al. (1999):

$BW = 2(IQR)n^{-1/3}$, where *BW* is bin width, *IQR* is the sample inter-quartile range, and *n* is the number of observations. Based on this formula, the bin width I apply in the histograms is 0.028 for ΔRNOA for PE-backed firms, for both public and private firms. Tests that use other widths lead to similar results. I further use the Burgstahler and Dichev (1997) method to judge the statistical significance of any discontinuity found in the histograms, and calculate the

[22] Burgstahler and Dichev (1997) standardized changes in net earnings by market value. However, I do not have equity market value information for private firms. Durtschi and Easton (2005) suggest the use of EPS instead of a deflator. However, most of the firms during the private phase do not report EPS. *RNOA* is defined as operating income divided by net operating assets at end of year t-1 (Nissim and Penman 2003). In an untabulated analysis, I test other definitions of earnings (net income, earnings before extraordinary items and operating income, all deflated by the beginning-of-the-year total assets) as well as the level of earnings instead of changes in earnings. In all cases, I obtained similar results.

standardized differences for the two intervals just below zero (bins -1 and -2), and the two intervals just above zero (bins 0 and 1). The standardized difference for any given bin is the difference between the actual and expected number of observations in the bin, standardized by the estimated standard error of the difference.[23] Under the assumption of no earnings management, the expected number of observations in any given interval is equal to the average of the number of observations in the two adjacent intervals. If managers do avoid small declines in earnings, observations will shift from bins -1 and -2 to bins 0 and 1. Therefore, I predict standardized differences to be unusually negative for bins -1 and -2, and unusually positive for bins 0 and 1.[24]

Following Dechow et al. (2003), I further investigated whether small positive ΔRNOA firms (bins 0 and 1), have higher discretionary accruals and other unexpected specific accruals relative to two groups: (1) all other firms (in order to compare them to the general population) and (2) small negative ΔRNOA firms (bins -1 and -2) (in order to directly test whether boosting discretionary accruals and other unexpected specific accruals causes discontinuity in the histograms). The bin size in this analysis is twice the bin width used in the histograms of ΔRNOA, resulting from the tradeoff between fineness and precision demands, and relies on the results of the histograms analysis. I conducted the above analysis separately for the firms' private and public phases, and further compared between private phase small positive ΔRNOA firms and public phase small positive ΔRNOA firms.

[23] Burgstahler and Dichev (1997) noted that since the number of observations in an interval is a random variable and approximately independent of the number in adjacent intervals, one can use the following formula to calculate the variance of the difference: $N*Pi*(1 - Pi) + (1/4)*N*(Pi_{-1} + Pi_{+1})(1 - Pi_{-1} - Pi_{+1})$. Where *N* is the total number of observations, and *Pi* is the probability that an observation will fall into interval i.

[24] As noted by Dichev and Skinner (2002), "managerial actions to move observations from bin –1 to bin 0 simultaneously affect the standardized differences in both bins, which are not independent. Therefore, the standardized differences for bin –1 and bin 0 should not be interpreted as independent tests of the same hypothesis."

Research Design: Conditional Conservatism

Conditional Conservatism - Timely Loss Recognition

Earnings are more conservative when losses are recognized in a relatively more timely manner, as emphasized by Basu (1997). In Basu's model, stock returns are used as proxy for economic gains and losses. Ball and Shivakumar (2005) (BAS), who do not have stock returns for the sample of pure private firms, use changes in accounting income as the independent variables associated with transitory gains and losses. Thus, BAS estimate the following variation of Basu's regression, which allows for different timely loss recognition between public and private firms (and I use it to test **H3)**:

$$\Delta NI_t = a_0 + a_1*D\Delta NI_{t-1} + a_2*\Delta NI_{t-1} + a_3*D\Delta NI_{t-1}*\Delta NI_{t-1} + a_4*DPR + a_5*DPR*D\Delta NI_{t-1} + \\ + a_6*DPR*\Delta NI_{t-1} + a_7*DPR*D\Delta NI_{t-1}*\Delta NI_{t-1} + e_t \quad (11)$$

Where: ΔNI_t is changes in earnings from year t-1 to year t, standardized by total assets at the end of year t-1. Earnings are measured before extraordinary items and discontinued operations (EBXI), after extraordinary items (NI), and before interest expense and interest income (OpI). $D\Delta NI_{t-1}$ is a dummy variable that gets the value 1 if $\Delta NI_{t-1}<0$ and 0 otherwise, and *DPR* is a dummy variable with the value 1 for private firms and 0 for public firms.

BAS predict the deferred recognition of economics gains as a persistent positive component of accounting income, and therefore expect $a_2 = 0$. They also predict that economic losses receive timelier recognition than do economic gains, and that economic losses are recognized as transitory income decreases, and therefore they expect $a_3 < 0$, as well as $a_2 + a_3 < 0$. Similar to Nichols et al. (2005), I expect firms during their private phase to have less persistent gain recognition, and therefore $a_6 < 0$. BAS' primary hypothesis is that private firms tend to have lower earnings quality because these firms have less of a tendency to recognize economic

losses in a timely fashion than do public firms, and therefore I expect that $a_7 > 0$. In addition, I controlled for leverage, growth and size (total assets).[25]

To identify directly earnings quality among PE-backed private firms and to test **H4**, I ran the following variation of BAS' regression, as in Beuselinck et al. (2005):

$$\Delta NI_t = a_0 + a_1*D\Delta NI_{t-1} + a_2*\Delta NI_{t-1} + a_3*D\Delta NI_{t-1}*\Delta NI_{t-1} + a_4*PE + a_5*PE*D\Delta NI_{t-1} + \\ + a_6* PE *\Delta NI_{t-1} + a_7* PE *D\Delta NI_{t-1}*\Delta NI_{t-1} + e_t \quad (11a)$$

Where: *PE* is a dummy variable with the value 1 for PE-backed private firms and 0 for non PE-backed private firms. I predict that the involvement of PE sponsors leads to a higher level of earnings quality, as measured by greater timely loss recognition. As a result, I expect PE-backed firms to have more persistent gain recognition, and therefore expect that $a_6>0$, as well as more timely loss recognition, than do non-PE-backed private firms, and therefore expect that $a_7<0$.

Conditional Conservatism – Accrual Model for Timely Loss Recognition

BAS also developed an alternate model that recognizes unrealized gains and losses via accruals. This model further verifies that the timely loss recognition identified above is not a result of random errors in accruals or a result of earnings management. Dechow et al. (1998) show that accruals can mitigate the noise in operating cash flow, and can then lead to negative correlation between accruals and cash flow. BAS also identify a second role of accruals: timely recognition of economic gains and losses lead to positive but asymmetric correlation between accruals and contemporaneous cash flow. As explained by BAS, the asymmetry in the accruals model exists because there is more timely recognition of economic losses in non-cash items than of economic gains. Therefore, the second role of accruals is greater in the case of losses. BAS presented the following model:

[25] When using the natural logarithm of total assets as a measure of size, and when controlling for profitability, the results remain qualitatively unaltered.

$$ACC_t = b_0 + b_1*DCFO_t + b2*CFO_t + b3*DCFO_t*CFO_t + b_4*DPR + b_5*DPR*DCFO_t + + b_6*DPR*CFO_t + b_7*DPR*DCFO_t*CFO_t \quad (12)$$

Where: ACC_t is total accruals in year t, standardized by beginning of the year total assets. For the definition of accruals see discussion in section 3.2.1 above. Following Hribar and Collins (2002), CFO_t is defined, for years after 1988, as cash from operations in year t, adjusted to extraordinary items and discontinued operations (#308 - #124), standardized by total assets at end of year t-1.[26] $DCFO_t$ is a dummy variable that takes the value 1 if $CFO_t < 0$, and 0 otherwise, and *DPR* is as defined above.

Following BAS, I predict that the above model will demonstrate the strong role of accruals in mitigating noise in operating cash flow, which in turn leads to $b_2<0$. I also predict that $b_3>0$, due to asymmetric loss recognition. Similar to BAS, I offer no projection for the coefficient b_6. BAS's primary hypothesis is that private firms are less likely to recognize economic losses in a timely fashion than are public firms, the prediction being $b_7 < 0$. I also control for leverage, growth and size, and following Dechow and Ge (2005), in an untabulated analysis, I control for special items and profitability as well.

To identify directly earnings quality among PE-backed private firms, I ran the following version of BAS's regression, as in Beuselinck et al. (2005):

$$ACC_t = b_0 + b_1*DCFO_t + b2*CFO_t + b3*DCFO_t*CFO_t + b_4*PE + b_5*PE*DCFO_t + + b_6*PE*CFO_t + b_7*PE*DCFO_t*CFO_t \quad (12a)$$

Where: *PE* is as defined in regression (12a) above. I predict that PE sponsor involvement leads to higher earnings quality, which in turns leads to positive but asymmetric correlation between accruals and contemporaneous cash flow. Therefore, I predict that the coefficient $b_7>0$.

[26] Following Xie (2001), for years prior to 1988, I define cash flow from operations as funds from operations (COMPUSTAT data item #110) – Δ(current assets #4)$_t$ + Δ(cash and cash equivalent #1)$_t$ + Δ(current liabilities #5)$_t$ - Δ(short-term debt #34)$_t$. All variables are divided by total assets at end of year t-1 (lagged #6).

IV. DATA DESCRIPTIVE STATISTICS

Descriptive Statistics: Private Firms with Public Debt

Column 1 of **Table 2** includes descriptive statistics for the entire sample of private firms with public debt (2,864 firm-year observations and 556 firms). The remaining data in Table 2 show the distribution of firms and firm-year observations amongst various ownership and organizational forms.

Private firms owned by PE sponsors make up 51% of the total number of firms in the sample, 14% are owned by PE sponsors and management, and 21% are owned by management.[27] I observe several interesting trends with regards to PE-backed firms. These firms have the highest leverage (mean of 76.1% and 77.1%, respectively, versus total sample mean of 63.3%), the lowest ROA, the lowest deflated total accruals and the highest concentration of HY ranked debt (66.9% and 60.7%, respectively, versus 47.6%). They are also more likely to file for bankruptcy protection (17.8% and 18.5%, respectively, versus 16%). These observations are not surprising since PE sponsors tend to be involved in LBO and MBO activities, which increase debt levels, and hence, the overall risk of default. Furthermore, PE-backed private firms (both majority and minority ownership) are more likely to exit via equity IPO (28.4% and 38.3%, respectively versus 27.2%). This result is consistent with the goal of PE sponsors to monazite their investments through an IPO or M&A transaction. However, trends differ with the ownership structure and justify a separate analysis for PE-backed and non-PE-backed firms during the private phase.

Insert Table 2

---

[27] The total number of firms adds up to 567, since several firms changed their ownership structure during this period.

Descriptive Statistics: Distribution across Time

Table 3 presents the changes in financial measures for the sample of firms in both their private and public phases during the years 1980-2003. The changes in firms' size, leverage, growth and profitability during the sample period justify the use of control for these variables in the analyses of earnings management and conservatism. **Figure 1** further presents the time line transitions between private and public firms. I observe an increase in the number of private firms since the mid 1980s, with a peak in buyout activities in 1990. Since 1990 there has been a decline in the number of private firms, resulting from a decline in buyout activity. These observations are consistent with the findings of Holmstrom and Kaplan (2001) regarding a large wave of takeover and restructuring activity during the 1980s, which was distinguished by the use of leverage and hostility. However, in the early 1990s leverage and hostility declined substantially. Furthermore, the increase in buyout reversal since 1991 has also contributed to the decline in private firms in my sample.

Insert Table 3 and Figure 1

Descriptive Statistics: Firms' Private versus Public Phases

Table 4 Panel A, presents descriptive statistics for 223 firms during their public phase (1,770 firm-years) versus 223 firms during their private phase (1,082 firm-years). Leverage is the most obvious difference between public and private phases of these firms. During their private phase, firms in the sample have a mean leverage of 63.9%, compared to 38% during their public phase. This result is not surprising, since many of the private firms with public debt went through

an LBO or MBO – the reason to issue public debt in the first place. Indeed, 75% of the private firms in this sample are owned by PE sponsors (majority or minority ownership) and 16% are owned by management. Furthermore, an untabulated analysis reveals that bond ranking is higher during the public phase as compared to the private phase, suggesting that private firms are exposed to more risk than are public firms.[28] Size (total sales), profitability (ROA and RONA) and growth (in assets) are also significantly higher in the public phase. These results are not surprising since public firms have access to external equity financing, which is likely to increase their size, growth rate and profitability (Beatty et al. 2002). These results remain significant under a LOGIT model and further suggest the need to control for these variables in my earnings management and conservatism analyses.

In **Table 4, Panels B – D**, I present further descriptive statistics among PE-backed firms (both majority and minority ownership) and firms owned by management.[29] Overall, the differences between the public and private phases hold across the various ownership and organizational forms with one exception: private firms owned by management are significantly larger than public firms. Furthermore, in **Panel E**, I conduct a direct comparison of PE-backed firms and firms owned by management. These results indicate that total assets, sales, and assets' growth are significantly higher for firms in the public phase that once were, or later became, PE-backed private firms. During the private phase, PE-backed firms are significantly more levered than management-owned firms, and have lower profitability and accruals.

Insert Table 4

[28] It is worth noting that in the sample used by BAS in the U.K. there was also a significant difference in the mean leverage between private and public firms. However, while I restricted my sample to private firms with publicly traded debt, the private firms in BAS' sample are prohibited from offering shares or debentures to the public.

[29] I will not conduct separate analyses for the other ownership and organizational forms due to the small number of observations.

V. EMPIRICAL RESULTS

Results: Earnings Management

Figure 2 plots ΔRNOA for PE-backed firms during the periods of both private and public ownership. Consistent with my predictions, public phase firms report fewer small declines in RNOA than expected (standardized difference of –2.20).[30] Furthermore, this standardized difference is the second most negative of the standardized differences across all 34 public firm-year bins. As further predicted, I find more than expected small increases in RNOA (standardized difference of 4.34 in the interval (0, 0.028) that is the largest across all 34 bins).

I find no significant evidence that PE-backed firms during their private phase report fewer small decreases in earnings than expected (standardized difference of 0.18 in the interval (-0.028, 0)), as do the same firms during their public phase. Further, I find only *less* dramatic evidence that PE-backed private phase firms report more small increases in earnings than expected (standardized difference of 2.84 in the interval (0, 0.028), which is the second largest across all 38 bins). Therefore I cannot reject **H1**.[31] An untabulated analysis further indicates similar results for the total sample as well as for a subgroup of firms owned by management.

Insert Figure 2

---

[30] As noted by Beatty et al. (2002) "it is inappropriate to interpret the standardized difference as a t-statistic for assessing significance," since the distributions of the RNOA changes are not smooth. The assumption of a smooth distribution was a more reasonable one for Burgstahler and Dichev (1997) because of their large sample size.

[31] The difference in sample sizes prevents me, however, from comparing the standardized differences of public versus private firms (Burgstahler and Dichev 1997; Beatty et al. 2002). Furthermore, USI is significantly more negative for public firms than for private firms (untabulated). The asymmetric treatment of special items for profit and loss firms can explain part of the discontinuity in the public firms' distribution of ΔRNOA (Beaver et al. 2003).

Following Dechow et al. (2003), I examined whether small positive ΔRNOA PE-backed firms, bins (0 and 1), have higher unexpected discretionary accruals and other unexpected specific accruals relative to two groups: (1) small negative ΔRNOA PE-backed firms, bins (-1 and -2); and (2) all other PE-backed firms. I conducted the above analysis separately for firms during their private and public phases.

In **Table 5, Panel A**, I report the results of this analysis for the sample of PE-backed firms during their *public* phase. Consistent with my prediction that PE-backed *public* firms in the small positive ΔRNOA bins manage earnings upward to avoid earnings decreases, unexpected discretionary accruals (UTACC) is significantly more positive, and unexpected special items (USI) is significantly less negative, for the *public* PE-backed firms in the small positive bins (0 and 1) than for the small negative bins (-1 and -2) and for all other PE-backed *public* firms. This result is consistent with the findings of Marquardt and Wiedman (2004) that public firms trying to avoid reporting an earnings decrease are less concerned with earnings persistence. Hence, these firms prefer to manage earnings upwards using transitory and nonrecurring items, in particular, special items. The UTACC results are significant under the LOGIT model (with a p-value of 0.03 versus the small negative bins, and with a p-value of 0.005 versus all other bins). Furthermore, the means of unexpected change in accounts receivable (UAR) and unexpected change in inventory (UINV), as well as unexpected gross receivables (untabulated) are significantly more positive for the small positive bins. However, these results are not significant under the LOGIT model.

Table 5, Panel B presents the results for the sample of PE-backed firms during their *private* phase. UTACC is no longer significantly less negative for the *private* PE-backed firms in the small positive bins (0 and 1) than it is for the firms in the small negative bins (-1 and -2).

Indeed, UTACC is significantly less negative for the *private* PE-backed firms in the small positive bins versus all other bins (with a p-value of 0.04). However these results do not remain significant under the LOGIT model. USI, on the other hand, is significantly more positive for the *private* PE-backed firms in the small positive bins than it is for the firms in the small negative bins, or for all other PE-backed *private* firms. Taken together, these results indicate that private phase firms do not engage in earnings management to avoid small earnings decreases as measured by UTACC to the extent that public phase firms do. However, they *do* use nonrecurring special items to avoid reporting small earnings decreases.

In **Table 5, Panel C,** I compare discretionary accruals and other unexpected special accruals between public and private phases in the small positive bins (0, 1). In support of **H1**, UTACC, UAR and growth in net operating assets (GNOA) are significantly more positive for the *public* phase PE-backed firms in the small positive bins, than they are for the *private* phase PE-backed firms in the small positive bins. The UTACC and GNOA results remain significant under the LOGIT model (with p-values of 0.06 and 0.02, respectively). USI, on the other hand, is not significantly different between the *public* and *private* phases.[32]

Overall, and consistent with **H1**, these results indicate that firms during their *public* phase avoid reporting earnings decreases to a greater extent than do firms during their *private* phase, and therefore manage earnings upward, as indicated by the significantly more positive UTACC and GNOA. However, firms in both the *private* and *public* phases use nonrecurring special items to avoid reporting small earnings decreases.

Insert Table 5

[32] I also conducted similar analysis for a sub-sample of firms during the private phase, comparing those owned by management to those owned by PE sponsors (untabulated). A major constraint in this analysis is the small sample size that, which lead to insignificant results.

Table 6 compares discretionary accruals and other unexpected special accruals between PE-backed firms and firms that are owned by management during the five years prior to the IPO filing. UTACC of PE-backed firms are significantly more negative from those of firms owned by management. The mean UTACC value for firms owned by management prior to the filings is 2.21% versus -4.16% for PE-backed firms prior to the filings (with a p-values of 0.001 for the differences in means and 0.01 under the LOGIT model). Consistent with **H2**, these results indicate that during the private phase, several years prior to an IPO filing, PE-backed private firms are *less* likely to engage in upward earnings management than are private firms owned by management. This is consistent with PE sponsors incentive to create "cookie jar" reserves for future exit via IPO or a sale and with prior literature, which illustrate that PE sponsors restrain earnings management in private firms (Xie et al. 2003; Beuselinck et al. 2005; Hochberg 2006).[33]

Insert Table 6

Results: Conditional Conservatism

Conditional Conservatism - Timely Loss Recognition

Table 7, Panel A reports the results of regression (11) for the PE-backed firms sample, after controlling for leverage, growth of total assets, and size. In the case of firms during a period under public ownership, there is clear evidence of timely loss recognition and deferred

[33] In an untabulated analysis I compare the entire sample of 33 private firms owned by management (161 firm-year observations) to the entire sample of 93 private firms owned by PE Sponsors (358 firm-year observations). The results indicate that both UTACC and UAR are significantly more positive for the sample of private firms owned by management.

recognition of economics gain. As predicted, the coefficient a_2 on prior positive earnings changes is small and insignificant under NI and OpI earnings definitions, indicating deferred recognition of economics gains. The sum of the coefficients $a_2 + a_3$ is negative under all three earnings definitions, NI, EBXI and OpI (coefficients sum to –0.78, -0.84, and -0.71, respectively), indicating timely loss recognition, which leads to a reversal of income decreases (on average, approximately 71%-84%). The incremental coefficient a_3 on prior negative earnings changes is significantly negative for all three earnings definitions, indicating that losses are recognized in a timelier manner than are gains. The a_3 coefficient estimate is substantially more negative when earnings are defined before extraordinary items, indicating that extraordinary items may be classified as permanent loss components by public firms.

The incremental coefficient on earnings increases for firms during their private phase, a_6, is negative under all three income definitions. However, it is significant only for EBXI and OpI (with coefficients of -0.42 and -0.40, respectively, and t-values of -2.84 and -2.20, respectively), indicating that private phase firms are more likely to incorporate transitory gains than are public phase firms. Furthermore, the a_6 coefficient estimate is substantially more negative when earnings are defined before extraordinary items. The source of this finding may be that extraordinary items are classified as permanent gain components by private firms. As further predicted, the incremental coefficient on earnings decreases for private firms, a_7, is significantly positive under all three income definitions (with coefficients of 0.52, 0.82 and 0.77, respectively, and t-values of 2.02, 3.55 and 3.06, respectively), indicating that firms during their private phase are less likely to incorporate transitory losses in income than are firms during their public phase. Furthermore, the a_7 coefficient estimate is substantially more positive when earnings are defined

before extraordinary items, indicating that extraordinary items may be classified as a transitory loss component by firms during their private phase.[34]

Consistent with **H3** and with the prior literature's results (BAS 2005; Nichols et al. 2005), the quality of earnings reporting of firms during the period they are under private ownership is lower than that of the same firms under public ownership, as reflected in the lower frequency of timely loss recognition and the higher frequency of timely gain recognition.[35]

In order to identify indicators of earnings quality in PE-backed firms during the private phase**, Table 7, Panel B** presents the results from estimating regression (11a). Only the regression on earnings, defined as NI, produces significant results. As for non-PE-backed private firms, the coefficient, a_2, on prior positive earnings changes, is significantly negative, indicating timely recognition of economics gains (on average, approximately 64% reversal of income increases). The incremental coefficient, a_3, on prior negative earnings changes, is significantly positive, indicating that losses are recognized in a less timely manner than are gains. The sum of the coefficients $a_2 + a_3$ is negative but relatively small (coefficients sum of -0.09), indicating timely loss recognition, which leads to a reversal of income decreases (on average, only approximately 9%, significantly lower than the results for firms during their public phase in **Panel A** analyses with an average reversal of approximately 71%- 84%). Taken together, non-PE-backed private firms appear to have low earnings quality, as measured by deferred loss recognition.

[34] The sum of the coefficients ($a_6 + a_7$) for EBXI is positive 0.39, indicating that firms during their private phase recognize losses in a less timely manner as compared to firms during their public phase. Indeed, the sum of the coefficients ($a_3 + a_7$) for EBXI is -0.21, indicates that firms during their private phase recognize losses in a more timely manner than they do gains. However, the sum of the coefficients ($a_2 + a_3$) + ($a_6 + a_7$) for EBXI is -0.45 indicates that timely loss recognition by private firms (reversal on income decreases, on average, by approximately 45%) is significantly lower than that of public firms (with reversal on income decreases, on average, by approximately 84%).

[35] An untabulated analysis further reveals higher unconditional conservatism on the balance sheets of public firms than of private firms, as measured by unrecorded reserves as in Penman and Zhang (2002).

The incremental coefficient on earnings increases for PE-backed private firms, a_6, is significantly positive under the NI definition (with a coefficient of 0.56, and a t-value of 2.86), indicating that PE-backed private firms are more likely to defer the recognition of economics gains than are non-PE-backed private firms. As I further predicted, the incremental coefficient on earnings decrease for private-firms, a_7, is negative under all three income definitions, and is significant both for the NI and the OpI regressions, indicating that PE-backed private firms are more likely to incorporate transitory losses in income than are non-PE-backed private firms. Consistent with **H4** and with the prior literature's results (Beuselinck et al. 2005), PE-backed private firms have higher-quality of earnings reporting than do non-PE-backed private firms.

Insert Table 7

Conditional Conservatism – Accrual Model for Timely Loss Recognition

Table 8, Panel A reports the results of regression (12), after controlling for leverage, growth and size, on the sample of PE-backed firms. In the case of the public phase, there is clear evidence that accruals mitigate negative serial correlation in cash flow, as evident by the coefficient b_2, which is significantly negative (with a coefficient of -0.53, and a t-value of -10.84). As predicted, the coefficient b_3 is significantly positive, indicating greater timely loss recognition and therefore positive correlation between accruals and cash flow.

Relative to the public phase, the same firms during their private phase exhibit more evidence that accruals mitigate negative serial correlation in cash flow in years with positive cash flow, as evident by the coefficient b_6, which is significantly negative (with a coefficient of -0.23,

and a t-value -2.67). As hypothesized, the incremental coefficient, b_7, for private phase firms in cash-loss years is negative. However, these results are not statistically significant. Hence, compared to public phase firms, there is only weak evidence that firms during their private phase accrue fewer unrealized losses in negative cash flow years and therefore have lower-quality earnings reporting when compared to the same firms during their public phase.[36]

To precisely identify earnings quality among PE-backed private firms**, Table 8, Panel B** presents the results from estimating regression (12a). In the case of non-PE-backed private firms, the coefficient b_2 on prior positive cash flow is significantly negative (with a coefficient of -0.51, and a t-value of -10.78), indicating that, on average, 51% of cash flow is mitigated by accruals in years with positive cash flow. This finding is consistent with the role of accruals in mitigating noise in operating cash flow. The coefficient b_3 on prior negative cash flow is significantly negative as well (with a coefficient of -0.68, and a t-value of -1.90), indicating that non-PE-backed private firms mitigate noise in cash flow to an even greater degree in years with negative operating cash flow.

The incremental coefficient b_6 for PE-backed private firms in positive cash flow years is significantly negative (with a coefficient of -0.25, and a t-value of -3.41), indicating that PE-backed private firms are more likely to offset cash flow in years with positive cash flow than are non-PE-backed private firms. As further predicted, the incremental coefficient in negative cash flow years for PE-backed private firms, b_7, is significantly positive (with a coefficient of 1.64, and a t-value of 3.95), indicating that in negative cash flow years, the accruals of PE-backed

[36] Dechow and Ge (2005) predict and find that a high proportion of low-accruals firms (firms with large negative accruals), report transitory special items. These special items are important drivers of the low persistence of earnings in these firms and can lead to a negative correlation between accruals and cash flow. The significant, more negative special items among public firms (untabulated), as well as the significant lower accruals among private firms (see Table 4), could contribute to the weak results presented in the accrual regression above. Indeed, the accruals regression model (12) leads to slightly more significant results once I omit the extreme 5% observations from each side of the distribution (Table 8, Panel A) and when I control for USI (untabulated).

private firms offset cash flow to a lesser extent than in the case of non-PE-backed private firms (higher positive correlation). Therefore, consistent with **H4** and the prior literature's results (Beuselinck et al. 2005), PE-backed private firms have higher-quality earnings reporting than do non-PE-backed private firms. These results are consistent with the prediction that the involvement of PE sponsors induces higher earnings quality.

Insert Table 8

VI. ROBUSTNESS CHECKS

Two-Stage Heckman (1979) Correction Test for Endogeneity

Following prior literature (BAS 2005; Nichols et al. 2005; Beuselinck et al. 2005), I use the Heckman (1979) two-stage approach to control for any endogeneity of selecting listing status or receiving PE financing, in the conservatism regression models (untabulated). In the first stage, I estimate a PROBIT selection model using size (alternatively defined as the natural logarithms of total assets or sales), ratio of book value of equity to total assets, growth (in sales), leverage, profitability (RNOA), quick ratio, length of the operating cycle, age, cash and capital expenditures (both divided by total assets), a dummy for loss firms, and audit quality (a dummy for the big national accounting firms)[37] as my predictor variables.[38] I then use the estimates of

[37] An audit firm's size can influence a firm's timely loss recognition (Basu et al. 2001). In my sample, 90.5% of the firms during their public phase are audited by one of the Big Eight (or Big Five or Big Six, depending on the period) as compared to 87% of the same firms during their private phase.

[38] The above control variables were used in the prior literature in the context of IPOs and the choice of private equity financing, in particular, size, growth, leverage, and profitability (Morsfield and Tan 2006, Chou et al. 2006), and age, investments, and liquidity (Beuselinck et al. 2005).

this PROBIT model to compose the inverse Mills ratio for each sample firm.[39] In the second stage, I include the inverse Mills ratio as a control in all the conservatism OLS regression models, and I allow its coefficient to vary between public and private phases (or PE-backed and non-PE-backed firms). The coefficients on the inverse Mills ratios are significant in most of the accruals regression models and few of the income changes regression models, indicating potential endogeneity biases. However, after controlling for endogeneity, and despite the smaller sample sizes, the results remain qualitatively unaltered. Once controlling for all the above control variables in both conservatism OLS regression models, all results remain qualitatively unaltered.

I further include the inverse Mills ratio as a control in all the earnings management LOGIT models. Indeed, in the ΔRNOA analysis, most of the coefficients on the inverse Mills ratio are significant, indicating potential endogeneity biases. However, after controlling for endogeneity, the results remain qualitatively unaltered.

Restructuring Activities

Renneboog and Simons (2005) argue that PE sponsors can create the "stronger incentive alignment with a focus on performance and value, the reduction in wasting corporate resources, and the improved monitoring capabilities embedded in the governance structure of an LBO." PE-backed firms, therefore, might be involved in more restructuring activities than non-PE-backed firms, which might affect the results of this study.

I identify and compare for PE-backed and non-PE-backed firms several proxies for restructuring activities including magnitude of discontinued operations, involvement in M&A activities, and yearly increase or decrease in assets greater than 50%. This analysis reveals that the involvement of both groups of firms in restructuring activities is not significantly different in

[39] Inverse Mills ratio is defined as: $\lambda(Z) = \phi(Z)/\Phi(Z)$ if DPR (or PE) = 1, and $\lambda(Z) = -\phi(Z)/(1 - \Phi(Z))$ if DPR (or PE) = 0. Where: $\phi(Z)$ is the standard normal pdf, $\Phi(Z)$ is the standard normal cdf, and Z are the estimates of the first stage PROBIT model.

the period surrounding an IPO. However, the proportion of special items is significantly higher for majority PE-backed than for non-PE-backed firms during the private phase. To control for these differences, I conduct the conservatism analyses on operating income and EBXI definitions that exclude such special items. Furthermore, when I remove observations during restructuring periods, the results are qualitatively similar.

Controls for External Events, Industry and Time

In this study, I confine my measurement of earnings management to a comparison of a firm's measures in one period relative to its own measures in another. However, changes in measures can be attributed to external factors and period effects. Following prior literature (Teoh et al. 1998c), I conduct further analysis on the differences between the measures of each firm and the median measures in the same industry (3-digit SIC codes) and year. The results of the earnings management analyses (untabulated) do not differ significantly from the initial analyses. I further re-estimated all the conservatism regression models with six dummy variables, one for each industry as is defined in Table 2. All results remain qualitatively unaltered (untabulated).

Fama-Macbeth (1973)

In order to avoid cross-sectional correlation in the conditional conservatism regression models, I further conduct an annually cross sectional Fama-MacBeth (1973) regression for all years with more than 10 observations (untabulated). The Fama-MacBeth main coefficient of interest, a_7 (regression 11), remains positive, as predicted. However these results are no longer significant at the 10% level. In the accruals model, the Fama-MacBeth coefficient of interest, b_7 (regression 12), remains negative, as expected, and is significant at the 1% level for the sample of PE-backed firms (with a coefficient of -4.18, and a t-value of -4.72). The results of regressions 11(a) and 12(a) are no longer significant, which can be attributed to the small sample sizes.

Changes in Asset Turnover as an Additional Earnings Management Measure

Following Fairfield and Yohn (2001), who suggest the use of change in asset turnover (ΔATO_t) as an additional signal of earnings management, I include this variable in the earnings management analyses in this study.[40] Consistent with my predictions and with the results of the earnings management analyses, I find that ΔATO_t is significantly more negative for PE-backed firms during their public rather than private phase, indicating higher upward earnings management for firms during their public phase than for firms during their private phase.

VII. SUMMARY AND CONCLUSIONS

In this paper, I study a unique sample of PE-backed U.S. firms under two distinct ownership phases in the firms' lifecycle. The first phase is that in which firm equity is privately held while firm debt is publicly held, and the second phase is that in which firm equity is also publicly held. In order to gain insight into the influence of PE sponsors during the private phase, I further extend these analyses to distinguish between PE-backed and non-PE-backed firms.

Consistent with my predictions I find that once firms are publicly listed, they engage in greater upward earnings management to avoid small earnings decreases, and recognize losses in a more timely manner. As for PE-backed *private* firms, I expect and find that the presence of the *sophisticated* PE sponsors restrains upward earnings management and induces higher frequency of timely loss recognition.

My results are robust for various measures and controls. However, by including quarterly financial information, one could increase the sample size, and hence, the statistical significance of the results. It is also worthwhile exploring the incentive of private versus public firms to

[40] I define change in asset turnover as follows: $\Delta ATO_t = (ATO_t - ATO_{t-1})*PM_{t-1}$. Where: $ATO_t = Sales_t$ / (Average $NOA)_t$. $PM_{t-1} = OpI_{t-1} / Sales_{t-1}$. *OpI* and *NOA* are as defined in the notes of Table 2 (Fairfield and Yohn 2001).

manage earnings in order to minimize taxes or to manipulate bond prices (Coppens and Peek 2004; Bhojraj and Swaminathan 2003). Further analysis is also required to address changes in performance and efficiency before and after a buyout and a reverse buyout, as well as changes in corporate governance. Furthermore, a comparison between private firms with public debt and public firms in other international settings could enhance the results obtained in this study for domestic firms.

REFERENCES

American Institute of Certified Public Accountants, Task Force Report. 2005. *Private company financial reporting*. New York, NY: AICPA.

American Institute of Certified Public Accountants and the Financial Accounting Standard Board. 2006. A joint proposal: enhancing the financial accounting and reporting standard-setting process for private companies. *Financial Accounting Series* (June): 1-7.

Ang, J. S., and J. C. Brau. 2002. Firm transparency and the costs of going public. *The Journal of Financial Research* 1 (Spring): 1-17.

Amemiya, T. 1983. Qualitative response models: a survey. *Journal of Economics Literature* 19 (December): 1483-1536.

Ball, R., A. Robin, and G. Sadka. 2005. Is accounting conservatism due to debt or equity markets? An international test of "contracting" and value relevance" theories of accounting. *Review of Accounting Studies, Forthcoming.*

Ball, R., and L. Shivakumar. 2005. Earnings quality in UK private firms: comparative loss recognition timeliness. *Journal of Accounting and Economics* 39 (February): 83-128.

Ball, R., and L. Shivakumar. 2006. Earnings quality at initial public offerings. Working Paper, University of Chicago, and London Business School.

Ball, R., and Shivakumar, L., 2006a. The role of accruals in asymmetrically timely gain and loss recognition. *Journal of Accounting Research* 44 (May): 207-242.

Bartov, E., F. Gul, and J. Tsui. 2000. Discretionary-accrual models and audit qualifications. *Journal of Accounting and Economics* 30 (December): 421-452.

Bharath, S. T., J. Sunder, and S. V. Sunder. 2004. Accounting quality and debt contracting. Working Paper, University of Michigan, and Northwestern University.

Basu, S. 1997. The conservatism principle and asymmetric timeliness of earnings. *Journal of Accounting and Economics* 24 (December): 3-37.

Basu, S., L. Hwang, and C. Jan. 2001. Differences in conservatism between big eight and non-big eight auditors. Working Paper, Baruch College.

Beatty, A. L., B. Ke, and K. R. Petroni. 2002. Earnings management to avoid earnings declines across publicly and privately held banks. *The Accounting Review* 77 (July): 547-570.

Beatty, A. L., and D. G. Harris. 1998. The effects of taxes, agency costs and information asymmetry on earnings management: a comparison of public and private firms. *Review of Accounting Studies* 3 (December): 299-326.

Beaver, W. H., M. F. McNichols, and K. K. Nelson. 2003. An alternative interpretation of the discontinuity in earnings distributions. Working Paper, Stanford University.

Beuselinck, C. A. C., M. Deloof, and S. Manigart. 2005. Earnings quality and private equity investments. Working Paper, Ghent University and University of Antwerp.

Burgstahler, D., and I. Dichev. 1997. Earnings management to avoid earnings decreases and losses. *Journal of Accounting and Economics* 24 (December): 99-126.

Burgstahler, D., L. Hail, and C. Leuz. 2005. The importance of reporting incentives: earnings management in European private and public firms. Working Paper, University of Washington and the University of Pennsylvania's Wharton School.

Cai, N. 2002. Two essays in finance: the pricing of corporate straight debt IPOs; the pricing of equity IPOs that follow debt public offerings. Dissertation. University of Houston.

Cao, J., and Lerner, J., 2006. The performance of reverse leverage buyouts. Working Paper, Boston College and Harvard University.

Chou D. W., M. Gombola, and F. Y. Liu. 2005. Earnings management and stock performance of reverse leveraged buyouts. *Journal of Financial and Quantitative Analysis* 41 (June): 407-437.

Cloyd, C. B., J. Pratt, and T. Stock. 1996. The use of financial accounting choice to support aggressive tax positions: public and private firms. *Journal of Accounting Research* 34 (Spring): 23-43.

Cohen, D. A., and N. S. Langberg. 2005. From private to public: venture capital financing and the informativeness of earnings. Working Paper, University of Southern California and University of Houston.

Coppens, L., and E. Peek. 2004. An analysis of earnings management by European private firms. Working Paper, Netmanagement, and Universiteit Maastricht.

Cotter, J. F., and S. W. Peck. 2001. The structure of debt and active equity investors: the case of the buyout specialist. *Journal of Financial Economics* 59 (January): 101-147.

Darrough, M., and S. Rangan. 2005. Do insiders manipulate earnings when they sell their shares in an initial public offering? *Journal of Accounting Research* 43 (March): 1-33.

DeAngelo, E. L. 1986. Accounting numbers as market valuation substitutes: a study of management buyouts of public stockholders. *The Accounting Review* 41 (July): 400-420.

Dechow, P. M., and W. Ge. 2005. The persistence of earnings and cash flows and the role of special items: implication for the accrual anomaly. Working Paper, University of Michigan.

Dechow, P. M., S. P. Kothari, and R. L. Watts. 1998. The relation between earnings and cash flows. *Journal of Accounting and Economics* 25 (May): 133-168.

Dechow, P. M., S. A. Richardson, and I. Tuna. 2003. Why are earnings kinky? An examination of the earnings management explanation. *Review of Accounting Studies* 8 (June - September): 355-384.

Degeorge, F., J. Patel, and R. Zeckhauser. 1999. Earnings Management to exceed thresholds. *The Journal of Business* 72 (January): 1-34.

Denis, D. J., and V. T. Mihov. 2003. The choice among bank debt, non-bank private debt and public debt: evidence from new corporate borrowings. *Journal of Financial Economics* 70 (October): 3-28.

Dichev, I. D., and D. J. Skinner. 2002. Large-sample evidence on the debt covenant hypothesis. *Journal of Accounting Research* 40 (September): 1091- 1123.

Durtschi, C., and P. Easton. 2005. Earnings Management? The shapes of the frequency distributions of earnings metrics are not evidence ipso facto. *Journal of Accounting Research* 43 (September): 557- 592.

Fairfield, P. M., and T. L. Yohn. 2001. Using asset turnover and profit margin to forecast changes in profitability. *Review of Accounting Studies* 6 (December): 371-385.

Fama, E. F., and J. D. MacBeth. 1973. Risk, return and equilibrium: Empirical tests. *Journal of Political Economy* 81 (May / June): 607-636.

Gompers, P. A. 1995. Optimal investment, monitoring and the staging of venture capital. Journal of Finance 50 (December): 1461-1489.

Hagle, T. M., and G. E. II. Mitchell. 1992. Goodness-of-fit measures for probit and logit. *American Journal of Political Science* 36 (August): 762-784.

Hand, J. R. M. 2005. The value relevance of financial statements in the venture capital market. *The Accounting Review* 80 (April): 613-648.

Hayn, C. 1995. The information content of losses. *Journal of Accounting and Economics* 20 (September): 125-153.

Heckman, J. J. 1979. Sample selection bias as a specification error. *Econometrica* 47 (January): 153-162.

Hochberg, Y. 2006. Venture capital and corporate governance in the newly public firm. Working Paper, Northwestern University.

Holmstrom, B., and S. N. Kaplan. 2001. Corporate governance and merger activity in the U.S.: making sense of the 1980s and 1990s. Working Paper, Massachusetts Institute of Technology, and University of Chicago.

Hribar, P., and D. W. Collins. 2002. Errors in estimating accruals: implications for empirical research. *Journal of Accounting Research* 40 (March): 105-134.

Jain, B. A., and O. Kini. 1995. Venture capitalist participation and the post-issue operating performance of IPO firms. *Managerial and Decision Economics* 16 (December): 593-606.

Jensen, M. C. 2005. Agency cost of overvalued equity. *Financial Management* 34 (Spring): 5-19.

Jones, J. 1991. Earnings management during import relief investigations. *Journal of Accounting Research* 20 (Autumn): 192-228.

Kaplan, S. N., and J. C. Stein. 1993. The evolution of buyout pricing and financial structure in the 1980s. *The Quarterly Journal of Economics* 108 (May): 313-357.

Kaplan, S. N., and P. Strömberg. 2003. Financial contracting theory meets the real world: an empirical analysis of venture capital contracts. *Review of Economic Studies* 70 (April): 281-315.

Kim, J., and Yi, C. H. 2005. Ownership structure, business group affiliation, listing status and earnings management: evidence form Korea. Working Paper, The Hong Kong Polytechnic University.

Kothari, S. P., Leone, A. J., and Wasley, C. E., 2005. Performance-matched discretionary accrual measures. *Journal of Accounting and Economics* 39 (February): 163-197.

Lerner, J. 1995. Venture capitalists and the oversight of private firms. Journal of Finance 50 (March): 301-318.

Marquardt, C. A., and C. I. Wiedman. 2004. How are earnings managed? An examination of special accruals. *Contemporary Accounting Research* 21 (Summer): 461-491.

Mills, F. L., and K. J. Newberry. 2001. The influence of tax and nontax costs on book-tax reporting differences: public and private firms. *The Journal of the American Taxation Association* 23 (Spring): 1-19.

Mikhail, M. 1999. Coordination of earnings, regulatory capital and taxes in private and public companies. Working Paper, Massachusetts Institute of Technology.

Morsfield, G. S., and Tan, C., 2006. Do venture capitalists influence the decision to manage earnings in initial public offerings? *The Accounting Review* 81 (October): 1119-1150.

Nelson, M. W., J. A. Elliott, and R. L. Tarpley. 2003. How are earnings managed? Examples from auditors. *Accounting Horizons* 17 (Supplement): 17-35.

Nichols, C. D., J. M. Wahlen, and M. M. Wieland. 2005. Publicly-traded versus privately held. Implications for bank profitability, growth risk, and accounting conservatism. Working Paper, Cornell University, and University of Georgia.

Nissim, D., and S. H. Penman. 2003. Financial statement analysis of leverage and how it informs about profitability and price-to-book ratios. *Review of Accounting Studies* 8 (December): 531-559.

Penno, M., and D. T. Simon. 1986. Accounting choices: public versus private firms. *Journal of Business Finance & Accounting* 13 (Winter): 561-570.

Perry S. E., and T. H. Williams. 1994. Earnings management preceding management buyout offers. *Journal of Accounting and Economics* 18 (March): 157-179.

Penman, S., and X. Zhang. 2002. Accounting conservatism, the quality of earnings, and stock returns. *The Accounting Review* 77 (April): 237-264.

Penman, S., and X. Zhang. 2004. Modeling sustainable earnings and P/E ratios with financial statement information. Working Paper, Columbia University, and University of California, Berkeley.

Renneboog, L., and Simons, T., 2005. Public-to-private transactions: LBOs, MBOs, MBIs, and IBOs. Working Paper, Tilburg University and McKinsey & Co., Inc. (Amsterdam office).

Rosner, R. 2003. Earnings manipulation in failing firms. *Contemporary Accounting Research* 20 (Summer): 361-408.

Skinner, D. J. 1997. Earnings disclosures and stockholder lawsuits. *Journal of Accounting and Economics* 23 (November): 249-282.

Teoh, S. H., I. Welch, and T. J. Wong. 1998a. Earnings management and the long run market performance of initial public offerings. *The Journal of Finance* 53 (December): 1935-1974.

Teoh, S. H., T. J. Wong, and G. Rao. 1998b. Are accruals during initial public offerings opportunistic? *Review of Accounting Studies* 3 (December): 175-208.

Teoh, S. H., I. Welch, and T. J. Wong. 1998c. Earnings management and the underperformance of seasoned equity offerings. *Journal of Financial Economics* 50 (October): 63 – 99.

Wu, Y. W. 1997. Management buyouts and earnings management. *Journal of Accounting Auditing and Finance* 12 (Fall): 373-389.

Xie, H. 2001. The mispricing of abnormal accruals. *The Accounting Review* 76 (July): 357-373.

Xie, B., W. Davidson, and P. DaDalt. 2003. Earnings management and corporate governance: the role of the board and the audit committee. *Journal of Corporate Finance* 9 (June): 295-316.

Table 1: Sample Selection

Panel A: Private Firms with Public Debt (Private Phase)		No. of Firm-Year Observations	No. of Firms
Initial Sample of "Potential" Private Firms (COMPUSTAT)		**21,001**	**8,386**
Eliminate firms with only one observation available prior to a year with price information		(5,832)	(2,740)
Eliminate firms with only one observation		(2,908)	(2,829)
		12,261	**2,817**
Hand-Collected Eliminations:	Historical Prospectus Data	(2,856)	(1,093)
	Public Firms	(1,632)	(243)
	OTC Firms	(691)	(127)
	Subsidiaries of Public Firms	(561)	(102)
	Spin-Offs	(111)	(34)
	In-Bankruptcy Process	(288)	(98)
	No Consecutive Years Information	(189)	(80)
	Same Firm - Different Name	(134)	(43)
	No Available Information	(594)	(126)
	No Available Information for These Years	(1,089)	(218)
	Foreign Firms	(504)	(130)
	Subsidiaries of Foreign Firms	(222)	(38)
	JVs with Public Firms	(34)	(5)
	Partnerships with Public Firms	(6)	(1)
	Holding Companies of Public Firms	(74)	(14)
	Information Only for the Years 1978-1979	(267)	(107)
	IPO Year	(116)	(116)
Total Manually Eliminated Observations		(9,368)	(2,261)
Minus 1978-1979 Firm-Year Observations		(29)	0
Initial Sample of Private Firms with Pubic Debt (Private Phase)		**2,864**	**556**
Panel B: Public Firms (Same Firms During the Public Phase)			
Additional Public Firm-Year Observations (Same CUSIP)		2,394	226
Hand-Collected Eliminations:	Historical Prospectus Data	(173)	0
	In-Bankruptcy Process	(125)	0
	No Consecutive Years Information	(3)	0
	Same Firms - Different Name	(42)	0
	No Available Information for These Years	(10)	0
	Subsidiaries of Foreign Firms	(4)	0
	Firms Sold in These Years	(7)	0
	Private Firms	(21)	0
	Other	(28)	0
Total Manually Eliminated Observations		(413)	0
Minus 1978-1979 Firm-Year Observations		(189)	0
Minus Cooperatives, LPs and Government Owned Firms		(22)	(3)
Initial Sample of Public Phase Firms (1980-2003)		**1,770**	**223**
Matched Sample of Private Phase Firms with Public Debt (1980-2003)		**1,082**	**223**

Table 2: Descriptive Statistics for Private Firms with Public Debt

Private Firms with Public Debt		Total	Private Firms - Ownership Breakdown: PE Sponsors	PE & Manag.	Manag.	Employ.	Other
No. of Firms		556	292	81	119	17	58
No. of Firm-Year Obs.		2864	1203	348	613	186	514
Financials							
Total Assets	Mean	$654	$549	$703	$658	$1,177	$1,058
(in millions)	Median	$343	$361	$352	$295	$367	$346
	Std.	$887	$603	$1,039	$942	$2,278	$4,023
	t-stat[a]		-4.31***	0.84	0.11	3.08***	2.24**
Total Sales	Mean	$926	$643	$915	$911	$2,248	$1,655
(in millions)	Median	$443	$400	$491	$392	$618	$635
	Std.	$1,385	$756	$1,349	$1,461	$3,926	$5,009
	t-stat[a]		-8.28***	-0.15	-0.24	4.52***	3.24***
Leverage	Mean	63.3%	76.1%	77.1%	60.3%	28.1%	41.1%
	Median	63.2%	72.2%	72.8%	62.5%	24.0%	39.6%
	Std.	31.3%	29.1%	26.4%	28.7%	21.2%	20.7%
	t-stat[a]		12.36***	8.88***	-2.22**	-20.87***	-20.25***
Sales' Growth	Mean	5.5%	4.5%	6.8%	6.0%	6.2%	5.9%
	Median	4.6%	3.2%	5.0%	4.7%	7.7%	4.9%
	Std.	13.8%	14.1%	15.8%	13.2%	7.9%	14.1%
	t-stat[a]		-1.79*	1.21	0.77	0.96	0.58
Accruals/	Mean	-6.5%	-7.6%	-8.7%	-5.8%	-7.8%	-3.2%
Total Assets	Median	-6.2%	-6.8%	-7.2%	-6.0%	-7.4%	-3.9%
	Std.	7.0%	7.3%	8.3%	6.2%	6.8%	6.7%
	t-stat[a]		-4.01***	-4.06***	2.07**	-2.57**	9.13***
CFO /	Mean	7.2%	5.8%	6.2%	8.9%	14.6%	5.9%
Total Assets	Median	6.5%	5.6%	5.9%	7.3%	13.9%	6.5%
	Std.	7.5%	6.2%	6.4%	8.5%	9.7%	7.6%
	t-stat[a]		-5.27***	-2.29**	3.97***	9.73***	-3.15***
ROA	Mean	0.6%	-1.9%	-2.5%	3.1%	6.2%	2.4%
	Median	1.1%	-0.6%	-1.0%	2.3%	5.5%	2.2%
	Std.	7.6%	7.8%	9.5%	7.5%	6.0%	5.3%
	t-stat[a]		-8.19***	-5.17***	6.52***	11.46***	6.16***
RNOA	Mean	9.4%	6.2%	6.1%	14.1%	18.2%	9.3%
	Median	7.9%	6.7%	6.9%	9.8%	13.0%	8.1%
	Std.	15.1%	13.6%	19.0%	16.9%	22.5%	10.4%
	t-stat[a]		-5.87***	-2.68***	5.66***	4.99***	-0.29
COGS/Sales	Mean	71.5%	67.5%	71.2%	71.5%	77.0%	79.0%
	Median	73.7%	70.8%	73.8%	74.7%	84.4%	86.7%
	Std.	15.5%	14.7%	13.7%	13.5%	16.0%	17.2%
	t-stat[a]		-7.61***	-0.35	-0.02	4.50***	9.17***

[a] t-stat for two-tailed tests of the differences between the specific ownership's financials and the total financials.
* denotes p<.10; ** denotes p<.05; *** denotes p<.01.
For each variable in the table above, the extreme 1% of the observations on each side is excluded and missing observations are omitted.
(The table is continued on the next page.)

Table 2: Descriptive Statistics for Private Firms with Public Debt *(continued)*

		Private Firms - Ownership Breakdown				
Private Firms with Public Debt	**Total**	**PE Sponsors**	**PE & Manag.**	**Manag.**	**Employ.**	**Other**
Industry *(# Firms)*						
Mining & Const (SIC 10-14, 15-17)	3.6%	1.7%	2.5%	8.4%	5.9%	3.4%
Manuf. I (20-29)	23.9%	22.3%	27.2%	25.2%	17.6%	25.9%
Manuf.II (30-39)	29.5%	38.0%	23.5%	21.8%	11.8%	15.5%
Transp. & Pub. Util. (40-49)	4.1%	3.4%	3.7%	2.5%	11.8%	8.6%
Retail & Wholesale (50-59)	23.2%	21.2%	32.1%	20.2%	11.8%	36.2%
Services (70-89)	15.3%	13.4%	9.9%	21.8%	35.3%	10.3%
Other	0.4%	-	1.2%	-	5.9%	-
Exit *(# Firms)*						
IPO	27.2%	28.4%	38.3%	19.3%	29.4%	20.7%
Bankruptcy	16.0%	17.8%	18.5%	12.6%	5.9%	13.8%
M&A	14.2%	13.4%	11.1%	12.6%	23.5%	22.4%
Deregistering	10.1%	8.6%	3.7%	20.2%	5.9%	5.2%
Debt Ranking *(# Firm-Years)*						
BBB or Better	3.2%	0.2%	2.0%	1.5%	11.8%	9.7%
BB	8.7%	9.6%	4.9%	13.2%	6.5%	4.5%
B	35.1%	51.9%	50.9%	27.2%	7.5%	4.5%
C - CCC	3.5%	5.2%	4.9%	3.3%	-	-
D & Selective Default	0.3%	0.2%	-	0.8%	-	0.2%
Not Rated	49.2%	32.8%	37.4%	54.0%	74.2%	81.1%

Variable definitions:

Ownership

PE Sponsors Ownership of private equity investments firms' share was equal to or exceeded 50%.

PE & Manag. Private equity investments firms' ownership equaled less than 50% of the ownership in the firm.

Manag. Ownership of founders, executives and directors or family members was equal to or exceeded 50%.

Employ. Ownership of employees (including employees' pension plans and ESOPs) was equal or exceeded 50%.

Other Includes subsidiaries of another privately held firm, cooperatives and subsidiaries of cooperatives, limited partnerships, firms owned by the government and firms with no available information regarding the ownership of the private firm.

Financials

Total Assets Total end of the year assets in millions of dollars (COMPUSTAT data item #6).

Total Sales Sales (net) in millions of dollars (#12).

Leverage Total debt (#9+#34) divided by total assets at end of the year (#6).

Sales' Growth Growth in sales (#12) from year t-1 to year t.

Assets' Growth Growth in assets (#6) from year t-1 to year t.

CFO / Total Assets For year>=1988: net cash flow from operating activities (#308) divided by total assets at end of year t-1 (lagged #6).
For year <1988: [funds from operations (#110) - change in current assets during period t (#4) + change in cash and cash equivalent during period t (#1) + change in current liabilities during period t (#5) - change in current maturities of long-term debt and other short-term debt included in current liabilities during period t (#34)]. All variables are divided by total assets at end of year t-1 (lagged #6) (Xie, 2001).

Table 2: Descriptive Statistics for Private Firms with Public Debt *(continued)*

Financials *(continued)*

Accruals / Total Assets	For Year>=1988: total accruals [income before extraordinary items (SCF) (#123) – net cash flow from operating activities (#308) + extraordinary items and discounted operations (SCF) (#124)] divided by total assets at end of year t-1 (lagged #6). For year<1988: [change in current assets during period t (#4) - change in current liabilities during period t (#5) - change in cash and cash equivalents during period t (#1) + change in current maturities of long-term debt and other short-term debt included in current liabilities during period t (#34) - depreciation and amortization expense during period t (#125)]. All variables divided by total assets at end of year t-1 (lagged #6). In addition, I eliminated firm-year observations with the following "non-articulation" events: firm-year observations in which a company is involved in a merger or acquisition (#AFTNT35 code #1); firm-year observations in which a company reports "discontinued operations" greater than $10,000 (#66), and firm-year observations in which a company reports a gain or loss on foreign currency translations greater than $10,000 (#150) (Hribar and Collins, 2002).
ROA	Net Income (#172) divided by total assets at end of year t-1 (lagged #6).
RNOA	Operating income (OpI) divided by net operating assets (NOA) at end of year t-1. Where: NOA: common equity: [common equity (#60) + preferred treasury stock (#227) - preferred dividends in arrears (#242)] + financial obligations: [debt in current liabilities (#34) + total long-term debt (#9) + preferred stock (#130) - preferred treasury stock (#227) + preferred dividends in arrears (#242)] - financial assets: [cash and short-term Investments (#1) + investments and advances minus other (#32)] + minority interest (#38). OpI: earnings: [net income (#172) - preferred dividends (#19) + change in marketable securities adjustment (change in #238) + change in cumulative translation adjustment (change in #230)] + net interest expense: [after-tax interest expense (#15 × (1 – marginal tax rate)) + preferred dividends (#19) - after-tax interest income (#62 × (1 – marginal tax rate)) + minority interest in income (#49) minus the change in marketable securities adjustment (change in #238)]. Where the marginal tax rate is the top statutory federal tax rate plus 2% average state tax rate. The top federal statutory corporate tax rate was 48% in 1971-1978, 46% in 1979-1986, 40% in 1987, 34% in 1988- 1992 and 35% in 1993-2003. (Nissim and Penman, 2003).
COGS/Sales	Cost of goods sold (#41) divided by total sales at year t (#12).
Industry	2-digit SIC codes.
Exit	
IPO	The company had an initial public offering of public equity.
Bankruptcy	The company filed for chapter 11 or chapter 7 protection.
M&A	The company merged or was a target of an acquisition.
Deregistering	The company deregistered a class of securities by filing Form 15.
Debt Ranking	
BBB or Better	S&P senior debt ranking (#280), code numbers 2, 4-12.
BB	S&P senior debt ranking, code numbers 13-15.
B	S&P senior debt ranking, code numbers 16-18.
CCC or below	S&P senior debt ranking, code numbers 19-21, 23-24, 26.
Default	S&P senior debt ranking, code numbers 27 (D) and 29 (selective default).
Not Rated	When no ranking appears.

Table 3: Distribution Across Time

	n		Total Assets		Total Sales		Leverage		Sales' Growth		Assets' Growth		Accruals/Assets		RNOA	
Year	**Public**	**Private**	**Public**	**Private**	**Public**	**Private**	**Public**	**Private**	**Public**	**Private**	**Public**	**Private**	**Public**	**Private**	**Public**	**Private**
1980	79	7	**$623**	**$346**	$1,186	$715	**27.1%**	**34.5%**	18.5%	1.7%	**24.9%**	**10.0%**	-2.7%	-10.7%	**9.3%**	**11.1%**
1981	78	9	**$654**	**$333**	$1,290	$671	**25.6%**	**32.1%**	17.2%	12.8%	**10.9%**	**16.4%**	-2.0%	-12.2%	**12.6%**	**26.6%**
1982	80	9	**$685**	**$460**	$1,291	$785	**24.7%**	**32.3%**	1.9%	0.2%	**6.5%**	**3.0%**	-4.7%	-0.2%	**-2.5%**	**21.2%**
1983	85	10	**$712**	**$503**	$1,307	$868	**25.9%**	**27.1%**	13.5%	15.6%	**29.7%**	**13.9%**	1.0%	-8.5%	**10.0%**	**24.6%**
1984	85	14	**$831**	**$434**	$1,494	$725	**27.6%**	**39.1%**	24.0%	11.7%	**17.7%**	**10.3%**	0.0%	-1.0%	**9.8%**	**27.9%**
1985	85	19	**$835**	**$745**	$1,450	$906	**30.5%**	**44.9%**	4.0%	0.8%	**15.1%**	**20.8%**	-5.5%	-1.8%	**9.5%**	**14.0%**
1986	80	35	**$968**	**$831**	$1,423	$975	**35.0%**	**53.3%**	8.7%	1.5%	**19.1%**	**7.5%**	-2.6%	-5.1%	**2.2%**	**10.4%**
1987	75	52	**$884**	**$1,032**	$1,026	$1,449	**39.4%**	**63.4%**	11.0%	17.6%	**24.7%**	**7.4%**	-4.7%	-7.3%	**11.4%**	**2.4%**
1988	61	78	**$780**	**$1,118**	$917	$1,456	**47.2%**	**65.3%**	13.1%	9.0%	**20.8%**	**-1.0%**	-6.5%	-6.3%	**9.8%**	**14.1%**
1989	34	111	**$785**	**$1,079**	$802	$1,397	**42.5%**	**69.7%**	79.3%	6.1%	**113.9%**	**-1.5%**	-10.1%	-8.2%	**9.6%**	**16.1%**
1990	25	113	**$805**	**$1,038**	$1,303	$1,229	**36.3%**	**66.1%**	13.4%	3.3%	**10.1%**	**-1.1%**	-7.0%	-7.0%	**13.8%**	**7.1%**
1991	37	100	**$973**	**$963**	$1,494	$1,194	**38.8%**	**62.6%**	11.3%	1.1%	**23.7%**	**-2.3%**	-7.1%	-7.0%	**20.3%**	**8.4%**
1992	56	82	**$830**	**$983**	$1,231	$1,231	**38.4%**	**63.1%**	16.2%	4.2%	**13.0%**	**1.7%**	-6.6%	-7.8%	**10.3%**	**15.5%**
1993	80	63	**$748**	**$1,046**	$1,105	$1,376	**38.2%**	**64.8%**	9.4%	8.1%	**11.8%**	**7.2%**	-5.8%	-8.6%	**8.9%**	**3.6%**
1994	86	55	**$922**	**$1,071**	$1,236	$1,446	**37.3%**	**64.8%**	17.4%	8.9%	**22.2%**	**8.6%**	-4.7%	-6.7%	**11.5%**	**9.6%**
1995	89	47	**$1,048**	**$1,165**	$1,407	$1,598	**39.4%**	**63.8%**	14.1%	5.8%	**16.5%**	**4.8%**	-6.2%	-6.6%	**9.2%**	**10.2%**
1996	100	32	**$993**	**$1,466**	$1,303	$2,094	**43.7%**	**58.8%**	9.7%	0.4%	**14.5%**	**-4.3%**	-7.7%	-7.3%	**7.6%**	**11.3%**
1997	96	28	**$1,101**	**$1,270**	$1,405	$1,893	**45.2%**	**62.2%**	12.9%	1.3%	**15.6%**	**6.6%**	-7.0%	-3.7%	**9.0%**	**13.7%**
1998	91	38	**$1,305**	**$1,175**	$1,508	$1,667	**49.6%**	**73.2%**	9.2%	11.8%	**14.9%**	**27.0%**	-6.6%	-10.2%	**9.9%**	**11.9%**
1999	84	40	**$1,733**	**$912**	$2,044	$1,069	**51.1%**	**75.9%**	4.9%	4.8%	**11.8%**	**3.6%**	-6.1%	-5.2%	**7.6%**	**9.8%**
2000	78	41	**$1,938**	**$822**	$2,311	$1,073	**51.5%**	**73.2%**	9.3%	7.6%	**5.1%**	**-0.8%**	-5.9%	-9.9%	**6.1%**	**1.9%**
2001	68	40	**$2,207**	**$746**	$2,620	$1,087	**44.5%**	**72.8%**	1.9%	7.1%	**0.6%**	**3.4%**	-8.0%	-8.7%	**1.2%**	**-10.6%**
2002	70	31	**$2,308**	**$629**	$2,858	$671	**41.5%**	**79.8%**	3.4%	1.4%	**3.9%**	**-4.9%**	-8.5%	-7.2%	**2.1%**	**3.4%**
2003	68	28	**$2,414**	**$685**	$3,142	$770	**39.1%**	**84.0%**	9.9%	29.5%	**8.2%**	**8.5%**	-6.5%	-8.0%	**6.6%**	**1.7%**
Mean	74	45	**$1,128**	**$869**	$1,548	$1,181	**38.3%**	**59.4%**	13.9%	7.2%	**19.0%**	**6.0%**	-5.5%	-6.9%	**8.6%**	**11.1%**
Median	80	39	**$903**	**$937**	$1,356	$1,140	**39.0%**	**63.6%**	11.1%	6.0%	**15.0%**	**5.7%**	-6.1%	-7.2%	**9.4%**	**10.7%**
Std.	19	32	**$553**	**$305**	$603	$394	**8.1%**	**16.1%**	15.0%	6.9%	**21.5%**	**7.9%**	2.6%	2.9%	**4.6%**	**8.7%**

For each variable in the table above, missing observations are omitted. Extreme observations are NOT excluded.
Private is defined as private firms with public debt. *Public* is defined as publicly held firms that once were, or later became, private firms with public debt.
All other variables are defined in the notes of Table 2. *Total Assets* and *Total Sales* are measured in millions of dollars.

Table 4: Descriptive Statistics: The Public versus Private Phase

A. Total Sample		Total Assets	Sales	Lever	Sales' Growth	Assets' Growth	Accruals / Assets	ROA	RNOA
Public Phase	(223 Firms, 1,770 Obs.)								
	n	1734	1734	1700	1540	1543	1330	1543	1543
	Mean	$982	$1,315	38.0%	9.5%	13.2%	-5.5%	3.4%	9.2%
	Median	$451	$604	35.9%	7.3%	6.9%	-5.4%	4.4%	9.8%
	Std Dev.	$1,454	$2,109	23.5%	19.0%	27.0%	7.5%	7.7%	13.5%
Private Phase	(223 Firms, 1,082 Obs.)								
	n	1057	1060	1039	837	833	794	834	810
	Mean	$887	$1,116	63.9%	5.3%	2.0%	-7.1%	-0.3%	8.6%
	Median	$427	$524	64.9%	4.6%	0.0%	-6.5%	0.5%	7.8%
	Std Dev.	$1,175	$1,658	29.2%	14.3%	16.7%	8.0%	8.3%	15.5%
	t-stat[a]	1.9*	2.8***	-24.2***	6.1***	12.5***	4.5***	10.8***	0.9
	Logit Coeff.[b]	0.00	0.00	-2.99	-0.17	3.04	1.23	15.67	-14.33
R^2= 0.72	Logit P-Value[b]	0.95	0.07	<.0001	0.69	<.0001	0.19	<.0001	<.0001

B. PE Sponsors		Total Assets	Sales	Lever	Sales' Growth	Assets' Growth	Accruals / Assets	ROA	RNOA
Public Phase	(121 Firms, 896 Obs.)								
	n	878	878	866	765	765	645	765	765
	Mean	$1,052	$1,469	39.2%	9.3%	13.6%	-5.9%	2.8%	8.2%
	Median	$542	$667	36.2%	6.9%	6.6%	-5.4%	4.3%	9.7%
	Std Dev.	$1,424	$2,413	24.1%	19.8%	29.0%	7.9%	8.3%	14.1%
Private Phase	(121 Firms, 531 Obs.)								
	n	518	519	509	398	397	386	397	386
	Mean	$767	$883	70.8%	4.4%	0.6%	-8.0%	-1.9%	6.1%
	Median	$468	$544	68.9%	3.7%	-0.7%	-6.9%	-0.1%	7.0%
	Std Dev.	$857	$1,020	26.8%	15.0%	18.7%	8.8%	7.8%	13.4%
	t-stat[a]	4.7***	6.3***	-21.9***	4.8***	9.2***	3.8***	9.7***	2.4**
	Logit Coeff.[b]	0.00	0.00	-4.03	-1.45	2.84	0.82	12.19	-12.52
R^2= 0.79	Logit P-Value[b]	0.48	0.14	<.0001	0.03	<.0001	0.57	0.04	<.0001

C. Management		Total Assets	Sales	Lever	Sales' Growth	Assets' Growth	Accruals / Assets	ROA	RNOA
Public Phase	(37 Firms, 285 Obs.)								
	n	279	279	254	253	253	219	253	253
	Mean	$634	$606	37.2%	9.3%	10.5%	-5.2%	4.4%	11.8%
	Median	$302	$471	36.8%	6.6%	7.1%	-5.8%	3.7%	9.6%
	Std Dev.	$1,067	$593	20.4%	17.0%	21.3%	7.5%	7.2%	14.3%
Private Phase	(37 Firms, 204 Obs.)								
	n	197	198	193	163	162	150	162	156
	Mean	$872	$987	54.7%	4.8%	2.4%	-4.3%	2.8%	13.5%
	Median	$331	$467	57.8%	3.9%	0.1%	-4.7%	1.7%	9.4%
	Std Dev.	$1,116	$1,349	24.8%	10.9%	12.8%	7.3%	5.9%	13.4%
	t-stat[a]	-2.3**	-3.7***	-8.0***	3.3***	4.9***	-1.1	2.5**	-1.3
	Logit Coeff.[b]	0.000	0.00	-4.41	0.26	4.66	1.06	2.95	-18.51
R^2= 0.76	Logit P-Value[b]	0.97	0.52	<.0001	0.85	0.001	0.65	0.85	<.0001

(The table is continued on the next page.)

Table 4: Descriptive Statistics: The Public versus Private Phase *(continued)*

D. PE & Management		Total Assets	Sales	Lever	Sales' Growth	Assets' Growth	Accruals / Assets	ROA	RNOA
Public	(47 Firms, 422 Obs.)								
Phase	n	412	412	411	375	375	325	375	375
	Mean	$1,178	$1,718	41.1%	9.2%	13.8%	-5.4%	3.9%	9.4%
	Median	$571	$748	37.3%	6.8%	6.5%	-5.3%	4.3%	10.0%
	Std Dev.	$1,620	$2,368	24.1%	19.2%	27.3%	6.6%	6.8%	11.1%
Private	(47 Firms, 208 Obs.)								
Phase	n	201	202	198	152	150	147	151	146
	Mean	$927	$1,154	74.1%	6.9%	-0.3%	-8.4%	-4.0%	4.3%
	Median	$423	$517	72.4%	4.6%	-1.4%	-7.1%	-1.8%	5.9%
	Std Dev.	$1,365	$1,728	26.0%	18.1%	15.5%	8.9%	10.4%	20.9%
	t-stat[a]	2.0**	3.4***	-15.0***	1.3	7.4***	3.7***	8.5***	2.8***
	Logit Coeff.[b]	0.00	0.00	-2.82	-0.76	4.93	-4.46	52.63	-26.40
R^2= 0.89	Logit P-Value[b]	0.10	0.02	0.0002	0.44	<.0001	0.16	<.0001	<.0001

E. PE Sponsors versus Management		Total Assets	Sales	Lever	Sales' Growth	Assets' Growth	Accruals / Assets	ROA	RNOA
Public	t-stat[a]	5.2***	9.7***	1.3	0.02	1.8*	-1.2	-2.9***	-3.5***
Phase	Logit Coeff.[b]	0.00	0.00	-0.12	-0.49	1.56	-1.10	-3.89	-1.45
R^2= 0.73	Logit P-Value[b]	0.07	<.0001	0.79	0.42	0.003	0.38	0.56	0.45
Private	t-stat[a]	-1.2	-1.0	7.5***	-0.4	-1.3	-4.9***	-7.7***	-5.8***
Phase	Logit Coeff.[b]	0.00	0.00	2.45	1.82	0.54	-2.15	0.03	-4.55
R^2= 0.59	Logit P-Value[b]	0.46	0.81	0.0002	0.09	0.53	0.24	0.996	0.09

[a] t-stat for two-tailed tests of the differences between public firms and private firms.
* denotes p<.10; ** denotes p<.05; *** denotes p<.01.
[b] The following LOGIT model: $Private_i = \beta_0 + \Sigma\beta_j * X_{ji} + \varepsilon_i$, where: *Private* is a dummy variable that takes the value 0 if the firm is public and 1 if it is private. X_{ji} include: Total Assets, Sales, Lever, Sales' Growth, Assets' Growth, Accruals/Assets, ROA, RNOA, Sales/Assets, and EBXI/Assets. *Sales* are sales (net) in millions of dollars (#12). *Lever* is total debt (#9+#34) divided by total assets at end of year t (#6). *Sales/Assets* is sales in year t (#12) divided by total assets at end of year t-1 (lagged #6). *EBXI/Assets* is earnings before extraordinary items (#123) divided by total assets at end of year t-1 (lagged #6). All other variables are as defined in the notes of Table 2. R^2 is the MacKelvey-Zavonia pseudo-R^2, which is defined as: $R^2 = var(\hat{y}_i) / [1 + var(\hat{y}_i)]$, where: $var(\hat{y})$ is the variance of the forecasted values for the latent dependent variable (Hagle and Michell, 2001).
Private Phase is defined as private firms with public debt. *Public Phase* is defined as publicly held firms that once were, or later became, private firms with public debt.
For each variable in the table above the extreme 1% of the observations on each side is excluded.

Table 5: The PE-Backed Private versus Public Phase - ΔRNOA

A. ΔRNOA			Specific Items					
Public Phase PE Sponsors		**UTACC**	**UAR**	**UINV**	**UACLL**	**UDEP**	**USI**	**GNOA**
Positive	(50 Firms, 145 Obs.)							
Bins	n	116	145	145	129	144	43	145
(0 & 0.056)	Mean	1.51%	0.76%	0.31%	0.40%	-0.06%	-0.34%	13.80%
	Median	0.90%	0.33%	0.06%	0.04%	-0.02%	-0.11%	7.93%
	% Positive	53.1%	58.6%	51.0%	46.2%	46.2%	13.1%	72.4%
Negative	(40 Firms, 79 Obs.)							
Bins	n	60	79	78	73	79	37	79
(-0.056 & 0)	Mean	-0.34%	-0.21%	-0.90%	0.15%	0.00%	-2.61%	5.58%
	Median	-0.02%	0.07%	-0.29%	0.25%	0.08%	-2.05%	2.70%
	% Positive	36.7%	50.6%	40.5%	51.9%	55.7%	13.9%	58.2%
	Diff. Mean	1.86%	0.97%	1.21%	0.25%	-0.06%	2.27%	8.22%
(0 & 0.056)	Expected Sign	+	+	+	-	-	+	+
v.	Diff. P-Value*	0.04	0.02	0.03	0.37	0.60	0.001	0.02
(-0.056 & 0)	Logit Coeff.**	12.0	-1.2	-1.9	11.2	-0.1	-	0.6
R^2= 0.80	Logit P-Value**	0.03	0.90	0.80	0.39	1.00	-	0.59
All	(56 Firms, 247 Obs.)							
Other	n	199	243	243	222	245	125	247
Bins	Mean	-1.41%	-0.14%	-0.47%	0.17%	-0.21%	-3.67%	9.01%
(>0 & 0.056>)	Median	-1.02%	0.09%	-0.15%	0.27%	0.02%	-1.71%	2.70%
	% Positive	34.0%	51.8%	44.1%	51.4%	51.8%	13.8%	54.7%
	Diff. Mean	2.92%	0.90%	0.78%	0.24%	0.15%	3.33%	4.79%
(0 & 0.056)	Expected Sign	+	+	+	-	-	+	+
v.	Diff. P-Value*	0.0002	0.02	0.07	0.36	0.38	<.0001	0.16
(>0 & 0.056>)	Logit Coeff.**	6.9	6.8	-1.8	0.5	6.4	-	0.1
R^2= 0.59	Logit P-Value**	0.005	0.15	0.67	0.94	0.61	-	0.86

(The table is continued on the next page.)

Table 5: The PE-Backed Private versus Public Phase - ΔRNOA *(continued)*

B. ΔRNOA Private Phase PE Sponsors			Specific Items					
		UTACC	UAR	UINV	UACLL	UDEP	USI	GNOA
Positive Bins (0 & 0.056)	(29 Firms, 54 Obs.)							
	n	54	50	51	47	53	16	54
	Mean	-0.59%	-0.99%	0.03%	0.49%	-0.31%	0.53%	3.43%
	Median	-0.42%	-0.34%	-0.17%	0.28%	-0.12%	-0.52%	-0.18%
	% Positive	44.4%	33.3%	42.6%	51.9%	37.0%	7.4%	48.1%
Negative Bins (-0.056 & 0)	(25 Firms, 42 Obs.)							
	n	42	39	42	33	42	17	42
	Mean	-4.11%	-1.80%	-0.38%	-0.25%	-0.16%	-1.48%	2.11%
	Median	-3.44%	0.06%	-0.33%	-0.22%	-0.11%	-1.15%	-1.71%
	% Positive	31.0%	50.0%	33.3%	38.1%	42.9%	9.5%	40.5%
	Diff. Mean	3.52%	0.80%	0.41%	0.74%	-0.15%	2.01%	1.32%
(0 & 0.056)	Expected Sign	+	+	+	-	-	+	+
v.	Diff. P-Value*	0.17	0.63	0.49	0.21	0.52	0.08	0.78
(-0.056 & 0)	Logit Coeff.**	-0.2	8.1	24.9	-5.0	-0.2	-	-2.7
R^2= 0.63	Logit P-Value**	0.96	0.24	0.16	0.82	1.00	-	0.30
All Other Bins (>0 & 0.056>)	(43 Firms, 117 Obs.)							
	n	116	113	116	90	116	62	116
	Mean	-4.11%	-0.95%	-1.05%	0.13%	-0.18%	-2.38%	0.44%
	Median	-2.25%	0.05%	-0.32%	-0.02%	-0.08%	-1.50%	-0.59%
	% Positive	38.5%	52.1%	39.3%	37.6%	41.9%	10.3%	46.2%
	Diff. Mean	3.52%	-0.04%	1.08%	0.36%	-0.13%	2.91%	2.99%
(0 & 0.056)	Expected Sign	+	+	+	-	-	+	+
v.	Diff. P-Value*	0.04	0.96	0.08	0.54	0.48	0.03	0.47
(>0 & 0.056>)	Logit Coeff.**	0.9	2.9	12.5	-2.3	-10.5	-	-1.0
R^2= 0.27	Logit P-Value**	0.59	0.60	0.10	0.82	0.58	-	0.28

C. Positive Bins (0 & 0.056)			Specific Items					
		UTACC	UAR	UINV	UACLL	UDEP	USI	GNOA
	Diff. Mean	2.10%	1.75%	0.28%	-0.09%	0.25%	-0.87%	10.37%
Public	Expected Sign	+	+	+	-	-		+
v.	Diff. P-Value*	0.02	0.01	0.57	0.88	0.12	0.43	0.01
Private	Logit Coeff.**	20.9	9.1	-26.6	-44.8	46.1	-	8.1
R^2= 0.99	Logit P-Value**	0.06	0.71	0.18	0.04	0.37	-	0.02

* P-values for differences in means are based on two-tailed tests.

** The following LOGIT model: $(\text{Positive Bins})_i = \beta_0 + \Sigma\beta_j * X_{ji} + \varepsilon_i$, where: *Positive Bins* is a dummy variable that takes the value 0 if positive bins and 1 otherwise. X_{ji} include: UTACC, UAR, UINV, UAP, UACLL, UDEP, ChCAPEX, ΔATO, GNOA (omitting USI due to the small number of observations), as well as leverage, size (total sales), growth (assets' growth) and profitability (RNOA), as control variables, which are defined in the notes of Table 2. R^2 is the MacKelvey-Zavonia pseudo-R^2, which is defined as: $R^2 = \text{var}(\hat{y}_i) / [1 + \text{var}(\hat{y}_i)]$, where: var($\hat{y}$) is the variance of the forecasted values for the latent dependent variable (Hagle and Michell, 2001).

Private Phase is defined as private firms with public debt. *Public Phase* is defined as publicly held firms that once were, or later became, private firms with public debt. *PE Sponsors:* ownership of private equity investments firms' was equal to or exceeded 50%.

All variables are winsorized at 1 percent and 99 percent to control for the influence of outliers.

Table 5: The PE-Backed Private versus Public Phase - ΔRNOA *(continued)*

Variable Definitions (Marquardt and Wiedman, 2004):

UTACC	Unexpected discretionary accruals based on the cross-sectional Jones model (1991).
UAR	Unexpected change in accounts receivable: $UAR_{j,t} = (AR_{j,t}$ [#151] - $(AR_{j,t-1} * SALES_{j,t}$ [#12] /$SALES_{j,t-1}))/TA_{j,t-1}$ [#6].
UINV	Unexpected change in inventory: $UINV_{j,t} = (INV_{j,t}$ [#3] - $(INV_{j,t-1} * COGS_{j,t}$ [#41] /$COGS_{j,t-1}))/TA_{j,t-1}$[#6].
UAP	Unexpected change in accounts payable: $UAP_{j,t} = (AP_{j,t}$ [#70] - $(AP_{j,t-1} * COGS_{j,t}$ [#41] /$COGS_{j,t-1}))/TA_{j,t-1}$[#6].
UACCL	Unexpected change in accrued liabilities: $UACCL_{j,t} = (ACCL_{j,t}$ [#153] - $(ACCL_{j,t-1} * SALES_{j,t}$ [#12]/$SALES_{j,t-1}))/TA_{j,t-1}$[#6].
UDEP	Unexpected depreciation expense: $UDEP_{j,t} = (DEP_{j,t}$ [#125]- $(DEP_{j,t-1} *$ Gross $PPE_{j,t}$[#7] / Gross $PPE_{j,t-1}))/TA_{j,t-1}$[#6].
USI	Unexpected special items: $USI_{j,t} = (SI_{j,t}$ [#17])/$TA_{j,t-1}$[#6].
ChCAPEX	Change in capital expenditures (#128) between year t and year t-1, divided by total sales at year t (#12).
GNOA	Growth in net operating assets: $GNOA_{j,t} = (NOA_{j,t} - NOA_{j,t-1}) / |NOA_{j,t-1}|$.
ΔATO	Change in asset turnover: $\Delta ATO_{j,t} = (ATO_{j,t} - ATO_{j,t-1}) * PM_{j,t-1}$. Where: $ATO_{j,t} = SALES_{j,t}$ / (Average NOA) $_{j,t}$, and $PM_{j,t-1} = OpI_{j,t-1} / SALES_{j,t-1}$. Both NOA and OpI are defined in the notes of Table 2.

Table 6: PE-Backed Private Firms versus Non-PE-Backed Private Firms - Reported Earnings

Private Phase Firms			Specific Items					
		UTACC	UAR	UACLL	UDEP	USI	ChCAPEX	GNOA
PE Sponsors	(95 Firms, 310 Obs.)							
	n	238	228	206	226	111	238	235
	Mean	-4.16%	-0.36%	0.35%	-0.30%	-1.78%	0.09%	-0.09%
	Median	-3.52%	-0.01%	0.04%	-0.23%	-0.78%	0.13%	-2.36%
	% Positive	20.0%	36.8%	34.2%	26.5%	6.8%	43.9%	29.4%
Manag.	(18 Firms, 63 Obs.)							
	n	39	48	29	44	13	51	48
	Mean	2.21%	-0.10%	0.59%	-0.09%	-0.60%	0.19%	35.84%
	Median	0.89%	0.10%	0.00%	-0.02%	-0.66%	0.29%	-0.37%
	% Positive	34.9%	39.7%	23.8%	33.3%	7.9%	46.0%	36.5%
	Diff. Mean	-6.37%	-0.26%	-0.24%	-0.21%	-1.18%	-0.11%	-35.93%
	Expected Sign	-	-	+	+		-	-
	Diff. P-Value*	0.001	0.56	0.69	0.33	0.61	0.91	0.22
	Logit Coeff.**	-20.6	3.1	-6.9	13.1	-	5.2	-1.5
R^2= 0.95	Logit P-Value**	0.01	0.86	0.71	0.62	-	0.79	0.50

* P-values for differences in means are based on two-tailed tests.

** The following LOGIT model: $PE_i = \beta_0 + \Sigma\beta_j * X_{ji} + \varepsilon_i$, where: *IPO* is a dummy variable that takes the value 0 if PE-backed-firms, and 1 otherwise. X_{ji} include: UTACC, UAR, UINV, UAP, UACLL, UDEP, ChCAPEX, ΔATO and GNOA (omitting USI due to the small number of observations), as well as leverage, size (total sales), growth (assets' growth) and profitability (ROA, RNOA), as control variables.

R^2 is the MacKelvey-Zavonia pseudo-R^2, which is defined as: $R^2 = var(\hat{y}_i) / [1+ var(\hat{y}_i)]$, where: var($\hat{y}$) is the variance of the forecasted values for the latent dependent variable (Hagle and Michell, 2001).

PE sponsors: PE sponsors (ownership of private equity investments firms was equal to or exceeded 50%) and PE & management owned firms (PE investment firms hold less than 50% of the ownership in the firm.). *Manag.:* ownership of founders, executives and directors or family members was equal to or exceeded 50%.

All variables are winsorized at 1 percent and 99 percent to control for the influence of outliers, and are defined in the notes Tables 2 and 5.

Table 7: Conditional Conservatism (Timely Loss Recognition)

Regression of changes in earnings on lagged changes in earnings for all firm years.

$$\Delta NI_t = a_0 + a_1*D\Delta NI_{t-1} + a_2*\Delta NI_{t-1} + a_3*D\Delta NI_{t-1}*\Delta NI_{t-1} + a_4*DPR + a_5*DPR*D\Delta NI_{t-1} + a_6*DPR*\Delta NI_{t-1} + a_7*DPR*D\Delta NI_{t-1}*\Delta NI_{t-1} + e_t$$

		Dependent variable ΔNIt Measured as:					
		NI		EBXI		OpI	
A. PE Sponsors	Pred.	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Intercept (a_0)	?	-0.006	-0.82	-0.003	-0.55	-0.017	-1.19
$D\Delta NI_{t-1}$ (a_1)	?	-0.015	-1.67*	-0.020	-2.47**	-0.018	-1.09
ΔNI_{t-1} (a_2)	0	0.114	1.35	0.189	2.28**	-0.001	-0.02
$D\Delta NI_{t-1}*\Delta NI_{t-1}$ (a_3)	-	-0.895	-6.44***	-1.030	-7.7***	-0.708	-5.13***
DPR (a_4)	?	0.009	0.78	0.018	1.79*	0.022	1.05
$DPR*D\Delta NI_{t-1}$ (a_5)	?	0.012	0.71	0.019	1.36	0.010	0.33
$DPR*\Delta NI_{t-1}$ (a_6)	-	-0.215	-1.35	-0.424	-2.84***	-0.401	-2.2**
$DPR*D\Delta NI_{t-1}*\Delta NI_{t-1}$ (a_7)	+	0.516	2.02**	0.818	3.55***	0.774	3.06***
LEVER	?	-0.010	-0.74	-0.019	-1.63	0.000	0.02
GROWTH	?	0.041	2.77***	0.042	3.33***	0.129	4.69***
SIZE	?	0.000	-0.16	0.000	-0.11	0.000	0.23
Adj-R-square		11.06%		15.10%		13.14%	
No. of Observations		520		520		518	

For each variable in the table above, the extreme 1% of the observations on each side is excluded and missing observations are omitted. * denotes p<.10; ** denotes p<.05; *** denotes p<.01.

$$\Delta NI_t = a_0 + a_1*D\Delta NI_{t-1} + a_2*\Delta NI_{t-1} + a_3*D\Delta NI_{t-1}*\Delta NI_{t-1} + a_4*PE + a_5*PE*D\Delta NI_{t-1} + a_6*PE*\Delta NI_{t-1} + a_7*PE*D\Delta NI_{t-1}*\Delta NI_{t-1} + e_t$$

		Dependent variable ΔNIt Measured as:					
		NI		EBXI		OpI	
B. Private Phase Firms	Pred.	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Intercept (a_0)	?	0.024	2.11**	0.022	2.47*	0.033	1.52
$D\Delta NI_{t-1}$ (a_1)	?	0.011	0.88	0.009	0.95	0.006	0.25
ΔNI_{t-1} (a_2)	?	-0.638	-3.84***	-0.341	-2.11**	-0.365	-2.52**
$D\Delta NI_{t-1}*\Delta NI_{t-1}$ (a_3)	?	0.552	2.63***	0.108	0.47	0.091	0.39
PE (a_4)	?	-0.010	-0.94	0.003	0.41	-0.011	-0.54
$PE*D\Delta NI_{t-1}$ (a_5)	?	-0.014	-0.83	-0.013	-1.06	-0.017	-0.57
$PE*\Delta NI_{t-1}$ (a_6)	+	0.564	2.86***	0.057	0.31	0.125	0.67
$PE*D\Delta NI_{t-1}*\Delta NI_{t-1}$ (a_7)	-	-1.000	-3.7***	-0.315	-1.16	-0.484	-1.7*
LEVER	?	-0.025	-1.86*	-0.030	-2.95***	-0.031	-1.19
GROWTH	?	0.065	3.43***	0.041	2.71***	0.145	3.99***
SIZE	?	0.000	-1.16	0.000	-1.45	0.000	-1.55
Adj-R-square		12.11%		14.52%		14.98%	
No. of Observations		382		376		366	

For each variable in the table above, the extreme 1% of the observations on each side is excluded and missing observations are omitted. * denotes p<.10; ** denotes p<.05; *** denotes p<.01.

Variable Definitions:

ΔNI_t is change in earnings from year t-1 to year t, standardized by total assets at end of year t-1 (#6). Earnings are measured after extraordinary items (NI #172) and before extraordinary items (EBXI, #123) and as Operating Income (OpI), as defined below; $D\Delta NI_{t-1}$ is a dummy variable, which = 1 if $\Delta NI_{t-1} < 0$; = 0 otherwise. *DPR* is a dummy variable that =1 if private firm; = 0 otherwise. *PE* is a Dummy variable that =1 if PE sponsors backed private firm (both for majority and minority ownership); = 0 otherwise.

Table 7: Conditional Conservatism (Timely Loss Recognition) *(continued)*

Variable Definitions *(continued)*:

OpI is operating income (OpIn) divided by net operating assets (NOA) at end of year t-1, where: *NOA*: common equity: [common equity (#60) + preferred treasury stock (#227) - preferred dividends in arrears (#242)] + financial obligations: [debt in current liabilities (#34) + total long-term debt (#9) + preferred stock (#130) - preferred treasury stock (#227) + preferred dividends in arrears (#242)] - financial assets: [cash and short-term Investments (#1) + investments and advances minus other (#32)] + minority interest (#38). *OpIn*: earnings: [net income (#172) - preferred dividends (#19) + change in marketable securities adjustment (change in #238) + change in cumulative translation adjustment (change in #230)] + net interest expense: [after-tax interest expense (#15 × (1 – marginal tax rate)) + preferred dividends (#19) - after-tax interest income (#62 × (1 – marginal tax rate)) + minority interest in income (#49) minus the change in marketable securities adjustment (change in #238)]. Where the marginal tax rate is the top statutory federal tax rate plus 2% average state tax rate. The top federal statutory corporate tax rate was 48% in 1971-1978, 46% in 1979-1986, 40% in 1987, 34% in 1988- 1992 and 35% in 1993-2003 (Nissim and Penman, 2003). *LEVER* is total debt (#9+#34) divided by total assets at end of year t (#6). *GROWTH* is growth in total assets (#6) from year t-1 to year t. *SIZE* is total assets (#6). *PE Sponsor:* ownership of private equity investments firms' was equal or exceeded 50%.

Table 8: The Private versus Public Phase – Conditional Conservatism (Accruals)

Regression of accruals on cash from operations for all firm-years.

$$ACC_t = b_0 + b_1*DCFO_t + b_2*CFO_t + b_3*DCFO_t*CFO_t + b_4*DPR + b_5*DPR*DCFO_t + b_6*DPR*CFO_t + b_7*DPR*DCFO_t*CFO_t + e_t$$

A. PE Sponsors	Prediction	Coeff.	t-stat
Intercept (b_0)	?	0.014	1.83*
$DCFO_t$ (b_1)	?	0.023	0.81
CFO_t (b_2)	-	-0.531	-10.84***
$DCFO_t*CFO_t$ (b_3)	+	1.755	2.19**
DPR (b_4)	?	0.006	0.73
$DPR*DCFO_t$ (b_5)	?	-0.011	-0.33
$DPR*CFO_t$ (b_6)	?	-0.226	-2.67***
$DPR*DCFO_t*CFO_t$ (b_7)	-	-0.725	-0.66
LEVER	?	-0.054	-4.96***
GROWTH	?	0.069	4.96***
SIZE	?	0.000	0.08
Adj-R-square		41.14%	
No. of Observations		429	

For each variable in the table above, the extreme 5% of the observations on each side is excluded and missing observations are omitted. * denotes p<.10; ** denotes p<.05; *** denotes p<.01.

$$ACC_t = b_0 + b_1*DCFO_t + b_2*CFO_t + b_3*DCFO_t*CFO_t + b_4*PE + b_5*PE*DCFO_t + b_6*PE*CFO_t + b_7*PE*DCFO_t*CFO_t + e_t$$

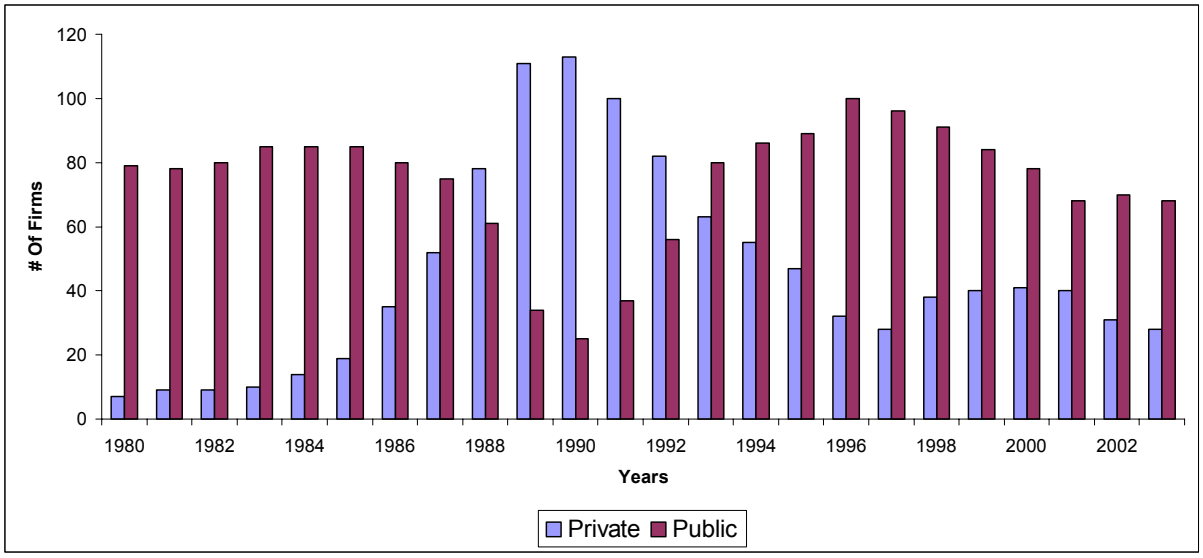
B. Private Phase Firms	Prediction	Coeff.	t-stat
Intercept (b_0)	?	0.025	2.99**
$DCFO_t$ (b_1)	?	-0.004	-0.21
CFO_t (b_2)	-	-0.514	-10.78***
$DCFO_t*CFO_t$ (b_3)	?	-0.683	-1.9*
PE (b_4)	?	0.006	0.80
$PE*DCFO_t$ (b_5)	?	0.021	1.02
$PE*CFO_t$ (b_6)	?	-0.251	-3.41***
$PE*DCFO_t*CFO_t$ (b_7)	+	1.639	3.95***
LEVER	?	-0.076	-8.44***
GROWTH	?	0.036	2.64***
SIZE	?	0.000	0.69
Adj-R-square		49.85%	
No. of Observations		503	

For each variable in the table above, the extreme 1% of the observations on each side is excluded and missing observations are omitted. * denotes p<.10; ** denotes p<.05; *** denotes p<.01.

Variable Definitions:

ACC_t is total accruals divided by total assets at end of year t-1, and is defined in the notes of table 2.
CFO_t is cash flow from operations divided by total assets at the end of year t-1, and is defined in the notes of table 2. $DCFO_t$ is a dummy variable that = 1 if $CFO_t < 0$; = 0 otherwise. *DPR* is a dummy variable that =1 if private firm; = 0 otherwise. *PE* is a dummy variable that =1 if PE sponsors backed private firm (both for majority and minority ownership); = 0 otherwise. *LEVER* is total debt (#9+#34) divided by total assets at end of year t (#6). *GROWTH* is growth in total assets (#6) from year t-1 to year t. *SIZE* is total assets (#6). *PE Sponsors:* ownership of private equity investments firms' was equal to or exceeded 50%.

Figure 1: Distribution Across Time



Year		80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	Total
Private	IPO			1			2	1	4	1	2	3	11	16	21	10	7	13	8	3	8	3	4	7	4	**129**
Firms'	Bankruptcy								1			3	4	5	3	1	3	1	4			3	2	3		**33**
Exit	M&A								1	4	2	3	2	2	1		2	1						1		**19**
	Deregistration									1						1	1		3					1		**7**
Public	Going Private	2	1	1	5	4	7	13	15	21	20	3	1		1		1		5	6	4	6	1		1	**118**
Firms'	Bankruptcy			1						1	1					1	2		3		2	5	7	1	3	**27**
Exit	M&A												1			7	1	8	6	4	6	2	1	2	1	**39**
	Deregistration																		1	1			1	1		**4**

Variable Definitions:

Private Private firms with public debt.

Public Publicly held firms that once were, or later became, private firms with public debt.

IPO Initial public offering.

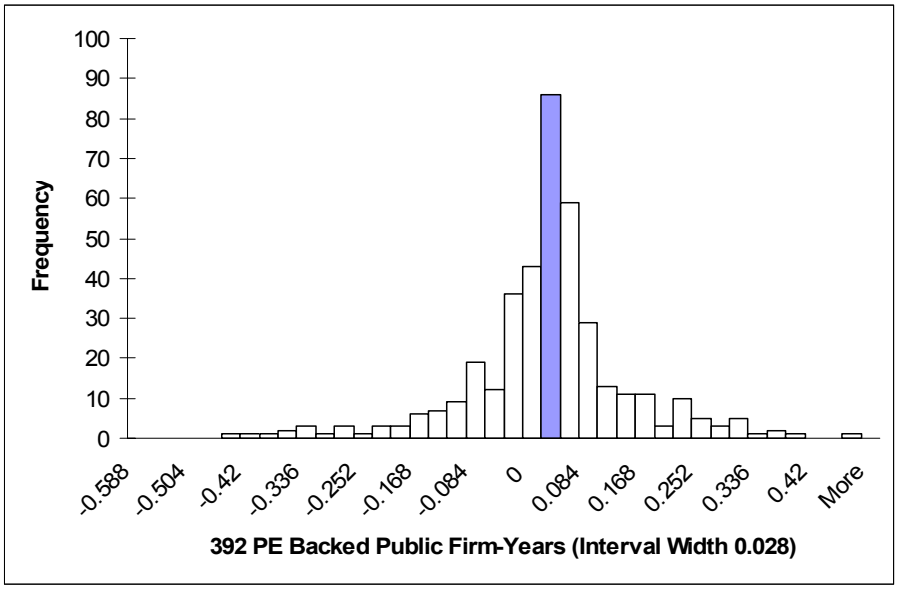
Going Private "Going private" transactions.

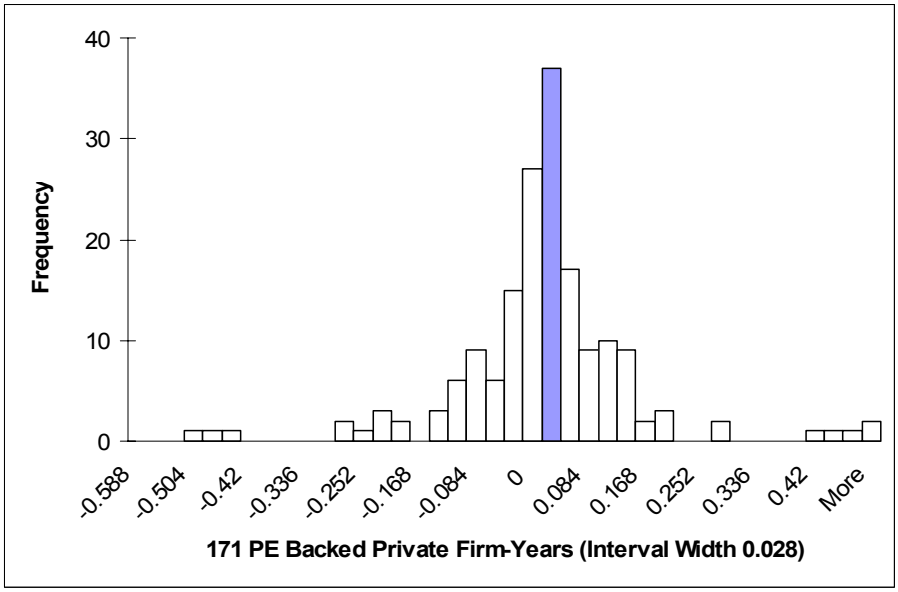
Bankruptcy Filing for bankruptcy protection.

M&A Target of an acquisition or a merger.

Deregistration Voluntary deregistration ("going dark" transaction).

Figure 2: The PE-Backed Private versus Public Phase - ΔRNOA





ΔRNOA	Interval	(-0.056 & -0.028)	(-0.028 & 0)	(0 & 0.028)	(0.028 & 0.056)
Public Phase	**Actual**	36	43	86	59
(392	**Expected**	27.5	61	51	57.5
firm-years)	**Std. Diff.**	**1.30**	**-2.20**	**4.34**	**0.18**
	Rank		#2/34	#1/34	
Private Phase	**Actual**	15	27	37	17
(171	**Expected**	16.5	26	22	23
firm-years)	**Std. Diff.**	**-0.32**	**0.18**	**2.84**	**-1.16**
	Rank			#2/38	#4/38

Actual is the actual number of firm-year observations in an interval. *Expected* is the expected number of firm-year observations in an interval. *Std. Diff.* is the difference between the actual and expected number of firm-year observations in an interval, divided by the estimated standard deviation of the difference. *Rank* is the rank of the Std. Diff. among all the intervals in the histogram. *ΔRNOA* is defined in the notes of Table 2. *Private Phase:* private firms with public debt. *Public Phase*: publicly held firms that once were, or later became, private firms with public debt. *PE Sponsors:* ownership of private equity investments firms' was equal to or exceeded 50%.