Evidence on the Role of Accounting Conservatism in Monitoring Managers' Investment Decisions

Anwer Ahmed*
Ernst & Young Associate Professor of Accounting
Texas A & M University

Scott Duellman
Assistant Professor
State University of New York at Binghamton

November 2007

* Contact Author; e-mail: aahmed@mays.tamu.edu, Telephone: 1 (979) 845-1498, Fax 1 (979) 845 0028.
We would like to thank Bill Brown, Ravi Dharwadkar, Randy Elder, and David Harris. Additionally, we thank the workshop participants at Syracuse University, State University of New York at Binghamton, Texas A & M University, University of South Florida and Villanova University for helpful comments.

Evidence on the Role of Accounting Conservatism in Monitoring Managers' Investment Decisions

Abstract: Watts (2003) and others argue that conservatism helps in corporate governance (specifically in monitoring firms' investment policies). We hypothesize that if conservatism reduces managers' *ex ante* incentives to take on negative NPV projects and improves the *ex post* monitoring of investments, firms with more conservative accounting ought to have higher future profitability and lower likelihood (and magnitude) of future special items charges. We find that firms with more conservative accounting have (i) higher future cash flows and gross margins, and (ii) lower likelihood and magnitude of special items charges than firms with less conservative accounting. Our results hold after controlling for industry, firm size, leverage, growth opportunities, prior special items charges, and stock returns. These findings are (i) consistent with conservatism mitigating agency problems associated with managers' investment decisions as predicted by Watts (2003) and Ball and Shivakumar (2005), and (ii) inconsistent with standard setters' view that conservatism is not a desirable characteristic in financial reporting.

JEL Classification: G3; M41
Keywords: accounting conservatism; corporate governance; agency costs.

1. Introduction

Prior work suggests that conservatism is potentially useful in mitigating agency problems associated with managers' investment decisions. In particular, Ball and Shivakumar (2005) argue that if managers know *ex ante* that losses will be recognized on a timely basis, they are (i) less likely to make negative NPV investments, and (ii) more likely to act quickly to limit economic losses from poorly performing investments. Furthermore in addition to this *ex ante* role, Watts (2003) argues that conservatism provides directors and shareholders with timely signals for investigating the existence of negative net present value projects (NPV) and taking corrective actions. However, to our knowledge, no prior study provides evidence on these specific benefits of conservatism. Our study fills this gap in the literature.

Providing evidence on the benefits of conservatism in corporate governance is important because, as noted by Watts (2003) and LaFond and Watts (2007), standard-setters don't seem to appreciate the benefits of conservatism in governance (or in contracting) and have therefore consistently opposed accounting conservatism because they view it as being inconsistent with "neutrality" (FASB , 2006, p. 26). The FASB (2006, p. 43, 56) in its Preliminary Views document on the Objective of Financial Reporting and Qualitative Characteristics states that "*Conservative or other biased financial reporting information is equally unacceptable"* and "*this framework does not include prudence or conservatism as desirable qualities of financial reporting information."* Commenting on this perception, Watts (2003, p.208) states:

> "*The long survival of conservatism and its apparent resilience to criticism strongly suggests that conservatism's critics overlook its significant benefits. If regulator and standard-setter critics try to eliminate conservatism without*

> *understanding its benefits, the resultant standards are likely to be seriously detrimental to financial reporting*."

Thus, evidence on the benefits of conservatism in monitoring firms' investments has important implications for standard setting.

Because investment decisions are not directly observable, we rely on two observable *ex post* manifestations of investment decisions, future profitability and future special items charges, to draw inferences about the benefits of conservatism in mitigating agency problems associated with managers' investment decisions. We hypothesize that if conservatism facilitates governance in the manner predicted by Watts (2003) and Ball and Shivakumar (2005), then firms that use more conservative accounting should (i) have higher future profitability, and (ii) take fewer and smaller special items charges in the future relative to firms that use less conservative accounting.

We test our predictions on a sample of 23,681 firm-year observations from 1989-2001 that have the required data items. In our primary tests, we use two conservatism measures: an asymmetric timeliness measure, following Roychowdhury and Watts (2007), and a market-value based measure. We find that firms that use more conservative accounting have higher industry-adjusted future profitability measured by (i) operating cash flows (deflated by sales revenue or cash sales) and (ii) gross profit margins, up to three-years in the future. We use these profitability measures to reduce the likelihood of any possible mechanical links between conservatism and future profitability. Furthermore, our profitability tests control for average performance over the current and past two years, standard deviation of performance, leverage, growth opportunities, and industry.

Consistent with conservatism reducing *ex ante* incentives to take on negative NPV projects and improving *ex post* monitoring of investments, we also find that firms with more conservative accounting have a significantly lower likelihood of taking a special items charge in the future and take special items charges of lower magnitudes than firms that use less conservative accounting. Our tests control for the determinants of special items charges identified in prior work including size, leverage, growth opportunities, variability of profits, and industry.

Taken together, the evidence from our profitability tests and the special items tests are consistent with conservatism playing an important role in providing managers with *ex ante* incentives to avoid negative NPV projects and in *ex post* monitoring of managers' investment decisions as predicted in Watts (2003) and Ball and Shivakumar (2005).

Our findings are important for at least three reasons. First, while prior research documents a positive relationship between conservatism and the strength of board governance (Beekes et al., 2004; Ahmed and Duellman, 2007; Garcia et al., 2007), it does not provide evidence on the specific benefits of conservatism in monitoring firms' investment policies predicted by Watts (2003) and Ball and Shivakumar (2005). Furthermore, because of the endogeneity problems inherent in such association studies, one cannot make strong inferences about the direction of causality from these studies. We not only provide evidence on the specific benefits of conservatism in mitigating agency problems associated with managers' investment decisions but also are able to draw stronger inferences by examining the relation between conservatism and *future* manifestations of investment policy.

Second, our evidence on the benefits of conservatism in corporate governance challenges standard-setters' current views that conservatism is not useful. Given that standard setters are scheduled to revisit their decisions in the Preliminary Views document on 'Financial Reporting Objectives and Qualitative characteristics', this evidence may influence some standard setters to revise their beliefs about the desirability of conservatism in accounting standards.

Third, our findings suggest that accounting choices affect managers' investment/divestment decisions and their monitoring by governance mechanisms. In other words, accounting choices have 'real' effects on firms' investment policies. This is similar to the notion in Biddle and Hilary (2006) that high quality accounting leads to greater efficiencies in the investment process.

One limitation of our study is that because we require three years of prior and three years of future data for inclusion in our sample we may have a survivorship bias. However, to assess the seriousness of this bias we repeat our tests requiring only one year of future and one year of past data and obtain similar results. Therefore, our results are unlikely to be driven solely by survivorship bias.

The remainder of this paper proceeds as follows. Section 2 presents the development of the hypotheses. Section 3 presents a discussion of the proxies for accounting conservatism and the research design. Section 4 presents the evidence. Section 5 presents a discussion of and alternative explanations and robustness tests. Section 6 presents the conclusion.

2. Hypotheses Development

2.1. Background

The separation of ownership and control in the modern corporation results in conflicts of interest arising between managers and other parties to the firm (Berle and Means, 1932; Jensen and Meckling, 1976). These conflicts cannot be resolved completely through contracts because it is costly, if not impossible, to write and enforce complete contracts (Fama and Jensen, 1983; Hart, 1995). Thus, in a world with incomplete contracts, corporate governance mechanisms arise to mitigate these conflicts (Shleifer and Vishny, 1997; Zingales, 1998; Hermalin and Weisbach, 2003). The optimal combination of governance mechanisms is chosen to maximize firm value and is likely to vary systematically across firms because these costs and benefits likely vary with firm characteristics such as the investment opportunity set, leverage, and the relative importance of external financing (Agrawal and Knoeber, 1996; Watts, 2006).

One important governance mechanism that is directly involved in monitoring managers is the board of directors (Fama and Jensen ,1983). Boards ratify and monitor top managers' decisions because it is efficient to separate decision initiation and implementation from decision ratification and monitoring. Directors are given the power to hire and fire managers, determine managers' compensation, and approve key decisions such as acceptance of major investment projects (Grinstein and Tolkowsky, 2004). Directors also advise managers on proposed strategies, provide outside expertise, and monitor the progress of major projects (Boone et al., 2007; Linck et al., 2007; Coles et al., 2007).[1]

In order to effectively monitor and advise managers, directors (particularly outside directors) need verifiable information. The accounting and financial reporting system is a critical source of verifiable information that is useful in monitoring and evaluating managers as well their decisions and strategies (Watts and Zimmerman, 1986; Bushman and Smith, 2001). Furthermore, conservatism is an important characteristic of a firm's accounting system that can help directors in reducing deadweight losses and disciplining other sources of information thereby increasing firm and equity values (Watts, 2003, 2006). Consistent with this, Beekes et al. (2004), Ahmed and Duellman (2007) and Garcia et al. (2007) document evidence of a positive relation between monitoring strength of the board and accounting conservatism.

In the next two sub-sections, we discuss the specific benefits of conservatism in monitoring firms' investments and the testable implications of these benefits.

2.2. Benefits of conservative accounting in investment monitoring

Prior studies suggest that conservatism can improve investment efficiency in at least two ways. First, Ball and Shivakumar (2005) argue that if managers know *ex ante* that losses from poorly performing projects will be recognized during their tenure because of conservative accounting, their *ex ante* incentives to take on negative NPV projects are greatly reduced (Ball, 2001). In contrast, if managers can defer losses by using aggressive accounting, they will have incentives to accept negative NPV projects.

Second, Watts (2003) argues that managers have ex post incentives to hide losses from poorly performing projects to avoid being fired before their tenure is over. He suggests that conservatism provides directors and shareholders with a signal to

investigate the reasons for the losses.[2] Such investigations can lead to corrective actions such as abandonment of a negative NPV project or even discharging of managers responsible for such projects. Similarly, Ball and Shivakumar (2005) also argue that with conservative accounting, managers have incentives to act quickly to limit economic losses from poorly-performing investments because without such action these losses would grow and be recognized during their tenure.

Taken together, the above arguments suggest that conservatism (i) provides incentives for *ex ante* efficient investment decisions and (ii) facilitates *ex post* monitoring of managers' investment decisions by the board of directors.

One question that arises is how the level of conservatism is selected and why managers don't deviate from conservatism *ex post*. Efficient contracting theory suggests that managers benefit from reducing contracting and agency costs and thereby maximizing firm value. Furthermore, the board of directors can also direct managers to use conservative accounting as well as monitor accounting choices. Beekes et al. (2004) and Ahmed and Duellman (2007), among other studies, document that strong boards are associated with the use of conservative accounting. This is consistent with boards having some influence on accounting choices. Furthermore, managers may find deviating from conservatism costly in terms of the loss of reputation and/or credibility. Ultimately, whether these mechanisms are effective in constraining managers accounting choices and whether conservatism plays an important role in monitoring investment policy is an empirical question. Thus, assuming that conservatism plays the hypothesized role in governance discussed above, we develop testable implications and see if these implications are supported empirically.

2.3. Testable predictions

While the predicted benefits of conservatism discussed above are intuitively appealing, they cannot be directly tested because researchers cannot observe managers' investment decisions or directors' monitoring decisions. To draw inferences about these potential benefits of conservatism in corporate governance, we rely on two observable *ex post* manifestations of investment decisions: future profitability and future special items charges.

We choose these manifestations of investment decisions for two reasons. First, if conservatism results in *ex ante* avoidance of negative NPV projects and/or timely identification of poorly-performing projects, this should result in higher future profitability, holding other things equal. Furthermore, under conservative accounting managers' incentives to act quickly to limit economic losses from poorly-performing projects will also lead to higher future profitability relative to firms that use aggressive accounting and as a result continue operating negative NPV projects.

Second, we expect that firms using conservative accounting will be less likely to take special items charges (such as an asset write-down or restructuring charge) if under conservative accounting negative NPV projects are avoided and/or corrective actions on projects that *ex post* become unprofitable are taken on a more timely basis. Thus, under conservative accounting losses are unlikely to accumulate to a level that requires taking a special items charge or a one-time asset write-down. Furthermore, this also implies that any special items charge taken by a firm using conservative accounting will likely be for a smaller amount.

However, it should be noted that the use of conservative accounting may also cause management to forgo small positive NPV projects or prematurely terminate projects with negative cash flow realizations in early periods. This effect offsets the benefits of conservative accounting in monitoring investment policy and reduces the likelihood of observing evidence consistent with the predicted benefits. To summarize we test the following hypotheses:

H1: Firms that use more conservative accounting will have higher future profitability than firms that use less conservative accounting.

H2: Firms that use more conservative accounting will taker fewer special items charges, and charges of smaller magnitude, than firms that use less conservative accounting.

3. Research Design

3.1. Proxies for Accounting Conservatism

We use two alternative proxies for conservatism in our main tests. The first proxy is an asymmetric timeliness proxy along the lines of Basu (1997) estimated using the backward cumulation procedure in Roychowdhury and Watts (2007).[3] The rationale for the backward cumulation procedure is that although the Basu model captures the asymmetric verification standards of gains and losses it does not appropriately capture the conservatism prior to the estimation period (Pae et al., 2005; Roychowdhury and Watts, 2007). Roychowdhury and Watts (2007) suggest that cumulating earnings and returns

over the three prior years mitigates this limitation.[4] Although a firm may gradually become more or less conservative over time, Watts and Zimmerman (1986) describe conservatism as a firm characteristic that is relatively stable as it is a function of static firm components such as size, age, industry, and debt structure.

Our second proxy for conservatism is the industry-adjusted book-to-market ratio (multiplied by negative one). Intuitively, conservative accounting results in reducing book values relative to market values. Furthermore, book-to-market ratios capture the cumulative effects of conservatism since the inception of the firm.[5] However, book-to-market ratios are also likely to capture economic rents and growth opportunities (Lindenberg and Ross, 1981). To mitigate the effects of these other determinants of book-to-market ratios, we use (i) an industry adjustment to control for industry-level growth opportunities, and (ii) additional firm-specific controls for growth opportunities discussed below.

In robustness tests we also utilize an accrual-based measure of conservatism used in the literature and obtain similar results. Obtaining consistent results across different measures of conservatism reduces the likelihood of incorrect inferences (Givoly et al. 2007).

3.2. Empirical tests using the asymmetric timeliness measure of conservatism

Consistent with previous research such as Beekes et al. (2004), Ahmed and Duellman (2007), and Roychowdhury and Watts (2007) we interact our variables of interest with the measure of asymmetric timeliness to test our hypotheses. The full model to test for the relation between special items charges and future profitability and

asymmetric timeliness is provided in equation (1). Consistent with the recommendations of Ryan (2006) we estimate several different specifications of the model.

$$E_{t,\,t-3}/P_{t,\,t-4} = \alpha_0 + \beta_1 R_{t,\,t-3} + \beta_2 D_{t,\,t-3} + \beta_3 D_{t,\,t-3} * R_{t,\,t-3} + \beta_4 \text{Profitability}_{t+3} +$$
$$\beta_5 \text{Profitability}_{t+3} * R_{t,\,t-3} + \beta_6 \text{Profitability}_{t+3} * D_{t,\,t-3} +$$
$$\beta_7 \text{Profitability}_{t+3} * D_{t,\,t-3} * R_{t,\,t-3} + \beta_8 \text{Special Items}_{t+1} + \beta_9 \text{Special Items}_{t+1} * R_{t,\,t-3} +$$
$$\beta_{10} \text{Special Items}_{t+1} * D_{t,\,t-3} + \beta_{11} \text{Special Items}_{t+1} * D_{t,\,t-3} * R_{t,\,t-3} + \varepsilon \quad (1)$$

where, $E_{t,,t-3}$ is income before extraordinary items cumulative from year t-3 to year t, $P_{t,\,t-3-1}$ is the market value of equity at the end of the year t, $D_{t,t3j}$ is an indicator variable set equal to one if $Ret_{t,\,t-3}$ is less than one, zero otherwise, $Ret_{t,\,t-3}$ is the buy and hold return starting four months after the end of the fiscal year t-3 and ending four months after the end of year t, $Profitability_{t+3}$ is either three year ahead *ROE*, *PM*, or *CFO* as defined previously, $Special\ Items_{t+1}$ is amount of special items taken in year t+1 divided by sales and multiplied by negative one.

We expect future profitability ($Profitability_{t+3}$) to be positively related to the current level of asymmetric timeliness. Further, we expect $Special\ Items_{t+1}$ to be negatively related to asymmetric timeliness. Consistent with the majority of asymmetric timeliness research we report the results without controls to highlight the variables of interest. In additional untabulated testing, we find similar results after controlling for leverage, growth, size, and research and development and advertising costs and their interaction with return, dummy, and asymmetric timeliness.

3.3. Empirical tests using firm-specific measures of conservatism

3.3.1. Conservatism and future profitability

To test for the effects of conservatism on future profitability, we employ the following regression:

$$\text{Profitability}_{i,t+3} = \beta_0 + \beta_1 \text{ Conservatism}_{i,t} + \beta_2 \text{ Avg. Profitability}_{i,t} + \beta_3 \text{ Std. Dev Profitability}_{i,t} + \beta_4 \text{ Leverage}_{i,t} + \beta_5 \text{ Growth}_{i,t} + \beta_6 \text{ Size}_{i,t} + \beta_7 \text{ R\&D} + \text{ADV}_{i,t} + \beta_8 \text{ Past}_{i,t} + \epsilon \quad (2)$$

where *Profitability* $_{i,t+3}$ is either *PM* or *CFO*, *PM* $_{i,t+3}$ is one less cost of goods sold divided by total revenues, *CFO* $_{i,t+3}$ is cash flows from operations divided by total revenue, *Avg. Profitability* $_{i,t}$ is the profitability measure averaged over year t to t-2, *Std. Dev Profitability* $_{i,t}$ is the standard deviation of the profitability measure over year t to t-2, *Leverage* $_{i,t}$ is total long-term liabilities divided by total sales, *Growth* $_{i,t}$ is the percentage change in revenues from the previous year, *Size* $_{i,t}$ is the natural log of total assets, *R&D + ADV* $_{i,t}$ is research and development plus advertising expense divided by total sales, and *Past* $_{i,t}$ is one if the firm takes a special items charge greater than 1% of total revenues during the time period t through t-2, zero otherwise.

We control for industry in our tests, following Ahmed et al. (2002), by subtracting the industry median value of the variables from both the dependent and independent variables. We define industry as in Barth et al. (1999). The rationale for this is that the market-based conservatism measure reflects economic rents or growth opportunities as well as conservatism. Because the ability to earn economic rents and growth

opportunities likely vary across industries, controlling for industry reduces the likelihood that the results are driven by these economic factors.

We utilize two different measures of future profitability: Cash flows from operations divided by total revenues (*CFO*) and gross profit margin (*PM*). We deflate cash flows and profit margins by total revenue of the firm to avoid the problems associated with deflating by total assets. However, one drawback of deflating by total revenues is that firms using less conservative accounting may have less restrictive revenue recognition polices. In untabulated robustness tests, we use cash flows from revenues (total revenues less change in accounts receivable) as an alternative deflator and find qualitatively similar results. These variables reduce the likelihood of a possible mechanical link between *Conservatism* and future profitability.

We use the average *ROE* (*PM*) over year t to t-2, to control for prior profitability because firms that are profitable in the current period are likely to retain their operating edge in the short-term. We expect the sign on prior profitability to be positive. Additionally, we utilize *Avg. ROE* as a predictor of future *CFO* as Dechow et al. (1998) find that current earnings more accurately predict future operating cash flows than current operating cash flows. We deflate our earnings measure by total market equity as deflation by average total assets may cause inflated profitability ratios for firms using conservative accounting.

We control for firm risk by including the standard deviation of *ROE* (*PM*); this is consistent with the proxy of operating performance risk utilized in Core et al. (1999). Firms with greater variance in their operating performance may be more likely to report

either high or low earnings in any particular year. Therefore, we do not predict a sign on the coefficient of *Std. Dev ROE* (*Std. Dev PM*).

We control for capital structure by including *Leverage* as a control variable. Although interest expense is not included in both of the profitability measures utilized, the capital structure of the firm may affect the riskiness of investments undertaken. Firms that utilize more debt-based financing may be constrained by debt-holders from taking risky projects and therefore have lower future profitability. Furthermore, *Leverage* also controls for the investment opportunity set (Smith and Watts, 1992). We expect the coefficient on *Leverage* to be negative.

We control for firm growth, as firms in the growth stage of the business life cycle frequently have lower profitability than mature firms. Anthony and Ramesh (1992) document evidence on the effect of the firm life cycle on profitability. Therefore, we expect the coefficient on *Growth* to be negative. We control for firm size (*Size*) as Fama and French (1995) find that firm size is positively related to future accounting performance. Thus, we predict a positive coefficient on *Size*.

We control for research and development and advertising expense (*R&D + ADV*) because Lev and Sougiannis (1996) find a relation between research and development costs and future profitability. Furthermore, this variable also controls for growth opportunities (Ahmed, 1994). However, we do not predict a sign on this coefficient because firms that are R&D intensive at time t are likely R&D intensive at time t+3 which could reduce future profitability. We also include a control for prior large special items charges (*Past*) as firms that take special items charges may have greater future performance due to the divestment of poorly-performing operating segments (Atiase et

al., 2004). However, because a firm taking special items charges may be taking these charges to manage earnings we do not make a prediction about the sign of the coefficient.

3.3.2. Conservatism and the likelihood of future special items charges

To test for the effects of conservatism on the likelihood of future special items charges we employ the following logistic regression:

$$\begin{aligned}\text{Future}_{i,t} = {} & \beta_0 + \beta_1 \text{ Conservatism}_{i,t} + \beta_2 \text{ Past}_{i,t} + \beta_3 \text{ Avg. ROE}_{i,t} + \beta_4 \text{ Std. Dev ROE}_{i,t} + \\ & \beta_5 \text{ Return}_{i,t} + \beta_6 \text{ Leverage}_{i,t} + \beta_7 \text{ Growth.}_{i,t} + \beta_8 \text{ Size}_{i,t} + \beta_y \text{ Year controls} + \\ & \beta_z \text{ Industry Controls} + \epsilon \end{aligned} \quad (3)$$

where *Future* $_{i,t}$ is equal to one if the firm takes a special items charge in the time period t+1, zero otherwise[6], *Conservatism* $_{i,t}$ is the book-to-market ratio multiplied by −1, *Past* $_{i,t}$ is set equal to one if the firm has taken a special items charge in the time period t through t-2 and is zero otherwise, *Avg. ROE* $_{i,t}$ is income from operations plus special items divided by the fiscal year end market value of equity and averaged over year t to t-2, *Std. Dev ROE* $_{i,t}$ is the standard deviation of ROE over the time period t to t-2, *Return* $_{i,t}$ is the buy and hold market return for fiscal year t beginning four months after the fiscal year end, *Leverage* $_{i,t}$ is total long-term liabilities divided by total sales, *Growth* $_{i,t}$ is the percentage change in revenues from the previous year, and *Size* $_{i,t}$ is the natural log of total assets. We additionally include industry and year dummy variables to control for industry and year effects. Industry is defined consistent with Barth et al. (1999).

We control for prior special items charges in the time period t to t-2 (*Past*), because some firms take special items charges frequently (Elliott and Hanna, 1996).[7] Thus, we expect firms that have taken special items charges in the past to be more likely to take a special items charge in the future.

We control for past profitability (*Avg. ROE*) because firms that restructure have lower earnings than peer firms in the period before the charge (Brickley and Van Drunen, 1990). Therefore, we predict a negative coefficient on prior profitability. We control for the standard deviation of profitability (*Std. Dev. ROE*) because firms with more volatile profitability are more likely to have special items charges than other firms. We therefore expect a positive relation between the standard deviation of profitability and future special items charges. We control for the stock market return (*Return*) because Francis et al. (1996) find that the market return is negatively related to the size of the special items charge.

We control for leverage (*Leverage*), because it is a proxy for risk as well as the investment opportunity set. Furthermore, holders of debt may monitor the firm to ensure that assets are written-off in a timely manner. We control for firm growth (*Growth*) because firms in the growth stage should be less likely to take a special items charge. However, rapidly growing firms may need to restructure their operations due to their changing business dynamics. Therefore, we do not predict a sign on the coefficient for *Growth*. Finally, we control for firm size (*Size*) because large firms have a greater scope of operation and thus are more likely to have a special items in any given year.

3.3.3. Conservatism and the size of future special items charges

To test for the effects of conservatism on the size of the special items charges we employ the following regression:

$$\text{Special Items}_{i,t+1} = \beta_0 + \beta_1 \text{ Conservatism}_{i,t} + \beta_3 \text{ Past}_{i,t} + \beta_4 \text{ Avg. ROE}_{i,t} + \beta_5 \text{ Std. Dev ROE}_{i,t} + \beta_6 \text{ Return}_{i,t} + \beta_7 \text{ Leverage}_{i,t} + \beta_8 \text{ Growth}_{i,t} + \beta_9 \text{ Size}_{i,t} + \beta_y \text{ Year controls} + \beta_z \text{ Industry Controls} + \epsilon \quad (4)$$

where *Special Items*$_{i,t+1}$ is special items multiplied by -1 divided by total revenue and all other variables are as previously defined. Consistent with McVay (2006) we deflate special items charges by total revenues. In additional unreported robustness tests, we obtain qualitatively similar results when we deflate by beginning total assets as in Francis et al. (1996) and Elliot and Hanna (1996).

The intuition for the selection of the control variables is similar to the intuition underlying the variables in equation (3) except that we no longer predict a positive coefficient on firm size. Although larger firms are more likely to take a special items charge, we have no reason a priori to believe they will be a smaller or larger percentage of revenue.

4. Results

4.1. Sample selection and descriptive statistics

To test our predictions, we utilize a sample of Compustat firms with available data from 1987-2004. We start our sample in 1987 due to cash flows from operations not

appearing in the Compustat database until 1987. To be included in our sample, we require that a firm has all data items available for three-years before (after) year t to measure past (future) profitability and special items charges. All variables are obtained from Compustat except for *Return*, which is obtained from CRSP. We exclude financial service and insurance firms from the analysis as the classification between operating, investing, and financing activities is ambiguous for these firms (Richardson, 2006). Furthermore, we eliminate observations where income from operations plus special items divided by average total assets is less than -0.50 to control for outliers.[8]

Cohen et al. (2003) discuss the justification for restricting the data range and recommend eliminating the observation if the observation is +/-3 standard deviations from the mean. Cohen et al. (2003) contend the researcher can justify these truncations if (i) the initial sample including outliers skews the results and interpretation, or (ii) the data truncated is outside the area of interest for the study. The justification for our truncation is that the firms with very large losses are typically young growth/IPO firms with small asset bases investing their resources in research and development (Darrough and Ye, 2006). Because these firms typically have higher managerial ownership than other firms (McGuire, 2000), the benefits of conservative accounting in alleviating information asymmetry or in monitoring managers investment decisions would be reduced for such firms.[9]

After imposing the data restrictions we have a sample of 56,980 firm-years over the time period 1989-2001. We lose 8,721 firm-years because due to the profitability restriction and 24,578 firm-years due to the requirement of having seven consecutive years of data. Thus, we have a final sample of 23,681 firm-years.

Table 1 presents the descriptive statistics for the sample. We winsorize all variables at the top and bottom 1% to mitigate the effects of extreme observations. The mean and median of *Conservatism* is consistent with previous research. During the sample period, approximately 32.1% (untabulated) of the sample took a special items charge that reduced earnings during the year. Furthermore, 20.3% (12.9%) of the sample took special items charges that exceeded 1% (3%) of total revenues during the year. Despite our requirement of three years of future data, the incidence of special items in our study is similar to previous research. For example, Elliot and Hanna (1996) find approximately 21% of firms report special items greater than 1% of total assets in 1993 and McVay (2006) finds 10.5% (8.7% in our sample) of firms take a special items charge greater than 5% of total revenue between 1988 and 2003.

The future profitability measures are also generally consistent with the levels found in Richardson et al. (2005) despite slightly different time periods.[10] However, the future profitability measures are smaller than those reported in Fairfield et al. (2003) as their study looks at future profitability between 1964 and 1993.[11] The average profit margin (*Avg. PM*) over the sample period is 35.5% (untabulated). Finally the average cash flows from operations divided by Sales (*CFO*) for the period is 9.4% (untabulated). The signs and magnitudes of the control variables are consistent with previous research.

Table 2 presents the correlations between the conservatism measure, profitability and the control variables. *Conservatism* is positively correlated with the size of a future special items charges using Spearman correlation and negatively (albeit insignificant) correlated using Pearson correlation. Consistent with expectations, *Conservatism* is positively correlated to ROE and PM consistent with Fama and French (1995). The

univariate results should be interpreted with caution as they likely suffer from an omitted variable bias.

4.2. Tests based on the asymmetric timeliness measure of conservatism

In this section we test our hypotheses using the asymmetric timeliness measure of conservatism. Consistent with Roychowdhury and Watts (2007) we estimate asymmetric timeliness cumulatively over multiple periods. Table 3 reports the results of our tests using the asymmetric timeliness of earnings as our measure of conservatism (equation 1).

Column (i) provides the basic regression as seen in Table 3 of Roychowdhury and Watts (2007). Overall, our results are qualitatively similar to their results although our cumulative asymmetric timeliness measure is slightly higher at (0.434) compared to their finding of (0.332).

Column (ii) and (iii) presents our tests of H1 for future cash flows from operations and profit margins respectively. Consistent with H1 asymmetric timeliness is positively related to future profitability as measured by cash flows from operations. However, we do not find significant results when future profitability is measured by future profit margins. In column (iv) we present our test of H2. Consistent with our prediction, the coefficient on asymmetric timeliness is smaller for firms with larger special items charges at the 5% level of significance. Columns (v) and (vi) present the simultaneous tests of H1 and H2. The inferences from the full model are consistent with those discussed in the previous paragraphs. In additional untabulated testing we control for firm leverage, growth, size, and research and development and advertising expenses by including these variables (as previously defined) in the regression as well as their interaction with market

return, negative return dummy, and asymmetric timeliness. These results are qualitatively similar to those reported in Table 3.

Overall, using the asymmetric timeliness measure of conservatism our results are consistent with the benefits of conservative accounting in corporate governance as predicted by Ball (2001), Watts (2003), and Ball and Shivakumar (2005).

4.3. Evidence on the relation between conservatism and future profitability

In the previous tests we used the asymmetric timeliness measure of conservatism. Table 4 reports the results of Fama-MacBeth regressions of future profitability on conservatism and the control variables (equation 2) on the thirteen year sample period. We find similar results when the regression is estimated on the pooled sample using Newey-West corrected t-statistics. Column (i) presents the regression of industry-adjusted three-year ahead CFO on industry-adjusted conservatism and controls. Column (ii) presents the regression of industry-adjusted three-year ahead PM on industry-adjusted conservatism and controls.

Consistent with H1, *Conservatism* is positively related to three-year ahead profitability at the 1% level of significance for both cash flows from operations and profit margins at 1% level of significance. Thus, using both the asymmetric timeliness measure of conservatism and unconditional measure of conservatism we obtain support for H1.[12] This result is consistent with the findings of Fama and French (1995) who find that the market correctly projects future growth rates based on portfolios of book-to-market. However, our study is very different in its research design as we use regression analysis and control for industry and other factors such as growth, leverage, and prior profitability.

Thus, our tests and findings are fundamentally different from those reported in Fama and French (1995).

The coefficients on the control variables are consistent with expectations. *Avg. ROE* is positively related to future profitability at the 1% level of significance in the future cash flow specification while *Avg. PM* is positively related to future profitability at the 1% level in the profit margin specification. Consistent with a difference in investment opportunity sets, *Leverage* is negatively associated with future *CFO* at the 1% level of significance for *CFO*. *Growth* is unrelated to future profitability as measured by *CFO* and negatively related to *PM*. *Size* is positively related to *CFO* and unrelated to *PM*. We find a positive and significant relation between *R&D + ADV* and future profitability for profit margin but no relation for *CFO*. Furthermore, we do not find a significant relation between future profitability and prior special items charges (*Past*) for either profitability measure.

4.4. Evidence on the relation between conservatism and future special items charges

The results of the logistic regression (equation 3) on the likelihood of future special items charges on conservatism and controls are presented in Table 5. Column (i) presents the logistic regression of future special items greater than 0% of total revenues on conservatism and controls. Column (ii) presents the logistic regression of future special items greater than 1% of total revenues on conservatism and controls. When the logistic regressions coefficients are positive it indicates a greater likelihood of future special items charges.

Consistent with H2, *Conservatism* is negatively related to the likelihood of a future special items charge at the 5% level of significance in column (i) and at the 1% level in column (ii). As in Elliot and Hanna (1996), the sign on the coefficient of previous special items charges is consistent with firms making frequent use of special items charges. The coefficient on *Avg. ROE* indicates that more profitable firms are less likely to take a future special items charge. The coefficient on Return is negative and significant at the 1% level in both columns (i) and (ii) consistent with the market anticipating bad news. *Leverage* is unrelated to future special items in column (ii) and positively related to futute special items charges in column (i). *Growth* is positively related to future special items charges in column (i) at the 5% level of significance. The coefficient on *Size* is positive and significant consistent with larger firms taking more special items charges. Overall, these results are consistent with the notion that conservatism helps prevent special items through timelier recognition of losses.

Table 6 reports the results of truncated Fama-MacBeth regressions of special items on conservatism and the control variables (equation 4). We find qualitatively similar results (not reported) when we estimate time-series cross-sectional truncated regressions. In additional analysis, we also perform non-truncated regressions with Newey-West corrected t-statistics and find similar results to those reported in Table 6. Column (i) presents the regression of special items divided by total revenues on conservatism and controls for all firms. Column (ii) presents the regression of special items divided by total revenues on conservatism and controls for firms with special items charges greater than 0% of total revenues. Column (iii) presents the regression of special items divided by total revenues on conservatism and controls for firms with special items

charges greater than 1% of total revenues. Positive coefficients represent a larger charge to special items.

Consistent with H2, *Conservatism* is negatively related to the size of the special items charge at the 5% level in columns (i) and (iii) and at the 1% level in column (ii). The effects of *Conservatism* are inconsistent with the findings of Francis et al. (1996) as they find the book to market is unrelated to the size of the special items charge.[13] Thus, even after partitioning on the size of the special items charge firms using more conservative accounting tend to have smaller charges than firms using less conservative accounting. These findings are consistent with the findings in Table 3 regarding the relation between conservative accounting and the size of future special items charges.

The coefficients on the control variables are consistent with expectations. Firms that have previously taken a special items charge, *Past*, tend to take larger special items charges than other firms. Additionally, firms that are more profitable as measured by return on equity tend to take smaller special items charges. Conditional on a firm taking a special items charge the market return is unrelated to the size of the charge. *Leverage* and *Growth* are unrelated to the size of the special items charge in all three specifications. While larger firms appear more likely to take a special items charge than smaller firms as the coefficient is positive and significant in column (i) but insignificant in columns (ii) and (iii).

Overall, in our main tests we find strong and consistent support for H1 and H2 using two distinct measures of conservatism. These results are consistent with the benefits of conservative accounting in corporate governance as predicted by Ball (2001), Watts (2003), and Ball and Shivakumar (2005).

5. Alternative explanations and additional robustness checks

5.1. Alternative Specifications of Conservatism and Profitability

In our main tests we use two measures of conservatism that are prevalent throughout the literature. However, we obtain similar results when using another widely used firm-level measure of conservatism which captures the level of conservatism through the use of negative accruals. A predominance of negative accruals over a period of time is evidence of conservatism because over the long-run earnings and cash flow are equal (Givoly and Hayn, 2000). By averaging accruals over time, we are more likely to capture the effects of conservatism rather than the effects of any potential earnings management because accruals tend to reverse within one to two-years (Richardson et al., 2005). Thus, most accruals stemming from earnings management will likely be reversed during the measurement period. However, one drawback of this measure is that it does not reflect the level of conservatism in prior periods.

This measure of conservatism, *CON-ACC*, is defined as income before extraordinary items less cash flows from operations plus depreciation expense and special items deflated by average total assets, and averaged over years t to t-2, multiplied by negative one. Positive values of *CON-ACC* indicate greater conservatism. This measure has been previously used in Givoly and Hayn (2000), Ahmed et al. (2002). Similar to market-to-book in Roychowdhury and Watts (2007) when *CON-ACC* is interacted with cumulative asymmetric timeliness the coefficient is positive and significant. Thus, it is capturing the same underlying construct as cumulative asymmetric timeliness.

As *CON-ACC* is a firm specific measure of conservatism we estimate equations 2-4 including *CON-ACC* as an explanatory variable. Consistent with H1, we find *CON-*

ACC is positively related to future profitability at the 1% level for both cash flows from operations and profit margin. Consistent with firms using conservative accounting taking fewer special items charges we find that *CON-ACC* is negative and significant at the 1% level of significance for both specifications in Table 5. Additionally, we find CON-ACC is negatively related to the size of the special items charge at the 1% level of significance for all three columns in Table 6. Overall, this second measure of firm-specific conservatism is consistent with our reported results. Thus, we find support for H1 and H2 using three different measures of conservatism.

However, we relegate tests of *CON-ACC* to robustness tests as an alternative explanation for the negative relation between our accrual-based measure of conservatism (*CON-ACC*) and future special items charges is that firms that have previously written down assets in the current and prior two years may be less likely to take a special items charge because their assets are already written-down.

To address this issue, we compare the level of average accruals before special items charges and depreciation expense deflated by total revenues for firms taking an income decreasing special items charge in year t+1 with firms not taking an income decreasing special items charge in year t+1.[14] Positive (negative) values on the accruals measure indicate income increasing (decreasing) accruals. Of the 7,609 firm-years that take an income decreasing special items charge, the average amount of accruals per year before special items and depreciation is 1.29% of total revenue. In comparison, of the 16,072 firm-years that do not take an income decreasing special items charge in year t+1 the mean is 0.97% of total revenue. The difference between these two means, 0.32%, is significant at the 1% level consistent with H2. However, the average size of the write

down for firms taking an income decreasing special items charge is 3.23% of total revenue. Therefore, the magnitude of the difference in accruals is not large enough to generate the size of the special items charges documented. This evidence is inconsistent with the *CON-ACC* results being driven by a mechanical link.

Our tests are also not sensitive to the choice of profitability. As discussed in Section 3 we select profitability measures that are unlikely to have a mechanical link between our measures of conservatism. Thus, we did not report results using return on assets as conservative firms may have both understated earnings and assets which could bias the results. However, in untabulated results we use net income in year t+3 divided by market capitalization at the beginning of year t+3 (*ROE*) as a measure of future profitability.

In our asymmetric timeliness tests *ROE* is positively related to asymmetric timeliness at the 1% level of significance. Additionally, in our firm-specific test of future profitability *ROE* is positively related to our book-to-market based measure of conservatism as well as *CON-ACC*.

Overall, our evidence is robust to using various measures of conservatism (book-to-market, asymmetric timeliness, and CON-ACC), profitability (return on market equity, cash flows from operations divided by revenue, and profit margin), and special items charges (special items deflated by either revenue or total assets).

5.2. Managerial incentives for special items charges

In our main tests regarding the size and likelihood of special items charges we control for the extent of asset impairment via profitability, market return, and industry

controls. However, we do not control for management's incentive to record a special items charge. In additional testing we include two controls for management's incentive to take special items charges consistent with Francis et al. (1996). These controls are profitability before the special items charge in year t+1 and management turnover. Firms that are underperforming expectations may take special items charges and shift future charges into the current period (Francis et al., 1996, McVay, 2006). To control for future profitability we use the return on equity before the special items charge in year t+1 consistent with Francis et al. (1996). Additionally, management turnover may cause increased asset write downs as the new management team may want to change the strategic focus of the firm and rid themselves of negative NPV projects (Francis et al., 1996). To control for management turnover we include a dummy variable that takes the value of one if the CEO has been replaced in the previous two fiscal years.

We obtain the CEO turnover data from Execucomp which provides executive compensation data on S&P 1,500 firms. The inclusion of the Executive turnover variable significantly reduces our sample size to 3,933 firm-years from 1997-2001. The addition of these explanatory variables does not qualitatively change our findings. Furthermore, we find that management turnover is positively related to the likelihood of a special items charge while future profitability is unrelated to the likelihood of a special items charge. Both management turnover and future profitability are unrelated to the size of the charge.

5.3. Survivorship bias

A potential limitation of our study is that we require seven years of consecutive data and therefore our results may be affected by a survivorship bias. To alleviate these

concerns we repeat our tests using the firm specific measures of conservatism on a less restrictive sample requiring only three years of consecutive data (t-1 thru t+1).[15] Under these specifications we have a sample of 45,765 firm-years. Overall, the results based on this less restrictive are qualitatively similar to those reported in the paper.

5.4. Special items charges beyond year t+1

Our reported results focus on the relation between conservatism and one-year ahead special items charges. As an additional robustness test we test if conservatism is related to two-year (t+2) and three-year (t+3) ahead special items charges. Our book-to-market measure of conservatism is unrelated to the likelihood of future special items charges in year t+2 and t+3. However, we find that *CON-ACC* is negatively related to the likelihood special items charges in year t+2 and t+3. Similarly, *CON-ACC* is negatively related to the size of special items charges in year t+2 and t+3 while our book-to-market measure is insignificant in these regressions.

The future special items charges in year t+2 is negatively related to the asymmetric timeliness of earnings. However, the asymmetric timeliness of earnings is unrelated to future special items charges in year t+3. Overall, our results are consistent with conservatism assisting directors in terminating negative NPV projects in a timelier manner.

6. Conclusion

Relying on two observable *ex post* manifestations of investment decisions, future profitability and future special items charges, we provide evidence on the potential

benefits of conservatism in mitigating agency problems associated with managers' investment decisions predicted by Watts (2003) and Ball and Shivakumar (2005). We find that relative to firms with less conservative accounting, firms with more conservative accounting have significantly higher profitability up to three-years in the future. Furthermore, we find that firms with more conservative accounting have a significantly lower likelihood of taking a special items charge in the future and take special items charges of significantly lower magnitudes than firms that use less conservative accounting. Our tests control for the determinants of future profitability and special items charges identified in prior work including size, leverage, growth opportunities, variability of profits, and industry. Taken together, the evidence is consistent with the role of conservatism in corporate governance predicted in Watts (2003) and Ball and Shivakumar (2005).

Endnotes

1. Recent theoretical work on boards includes Gillette et al. (2003), Harris and Raviv (2005), Raheja (2005), and Adams and Ferreira (2007).
2. Grinstein and Tolkowsky (2004) provide evidence on the role of the board of directors in ratifying and monitoring capital expenditure decisions. They find that the board of directors in S&P 500 firms play an active role in monitoring the performance of previously approved investments.
3. Ryan (2006, p. 511) claims that "despite its limitations documented in the literature, asymmetric timeliness is the most direct implication of conditional conservatism."
4. We do not estimate firm-specific Basu coefficients because Givoly et al. (2007) find that the asymmetric timeliness coefficients estimated from successive non-overlapping periods are not correlated, while other measures of conservatism (such as market-to-book) are highly correlated over the same period.
5. Roychowdhury and Watts (2007) demonstrate that the asymmetric timeliness measure of conservatism estimated cumulatively is positively correlated with market-to-book.
6. We focus on time period t+1 as our conservatism measures reflects conservatism over the life of the firm. Therefore, focusing on a one-year ahead *Special Items* reduces the likelihood of changes in other factors that could bias our results. However, we report the effects of conservative accounting on the size of future special items charges in years t+2 and t+3 in the robustness tests.
7. Firms may frequently take special items charges since analysts and investors tend to treat these items as transitory earnings charges (Lipe, 1986; Fairfield et al., 1996).

8. Darrough and Ye (2006) report that the frequency of loss firms reported on Compustat has grown from 3% in 1963 to 40% in 2001.
9. A discussion on how inclusion of these firms can skew tests involving profitability may be found in Hawawini et al. (2003) and McNamara et al. (2005).
10. Richardson et al. (2005) use a sample of Compustat firms from 1962-2001 while we use a sample of Compustat firms' form 1989-2001.
11. Due to the expansion of Compustat, the inclusion of more recent data typically results in lower profitability measures.
12. The significant difference in R-square between column (i) and (ii) is due to the use of *Avg. ROE* as a predictor of future *CFO* rather than *Avg. CFO* (*ROA*). The variable of interest (*Conservatism*) remains positive and significant at the 1% level if *Avg. CFO* (*ROA*) is used to predict future *CFO*.
13. Differences between our results and Francis et al. (1996) may be due to the samples utilized. Francis et al. (1996) use a sample of 674 write-offs from 1988-1992 while we utilize a sample from 1990-2001. Furthermore, Francis et al. (1996) hand-collect their sample and constrict it to asset write-downs while we use all special items charges in our sample as well as industry difference our variables.
14. The average amount of accruals is equal to net income before extraordinary items plus depreciation expense and special items charges less cash flows from operations, where all variables are scaled by total revenues and averaged over year t to t-2.
15. We cannot run our measure of asymmetric timeliness due to the Roychowdhury and Watts methodology requiring three years of cumulative data prior to year t. We also adjust our conservatism and control variables to adjust for the shorter lead/lag time.

References

Adams, R., Ferreira, D., 2007. A theory of friendly boards. *Journal of Finance* 62, 217-250.

Agrawal, A., Knoeber, C., 1996. Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of Financial and Quantitative Analysis* 31, 377-396.

Ahmed, A.S., 1994. Accounting earnings and future economic rents: an empirical analysis. *Journal of Accounting and Economics* 17, 377-400.

Ahmed, A.S., Billings, B.K., Morton, R.M., Stanford-Harris, M., 2002. The role of accounting conservatism in mitigating bondholder-shareholder conflicts over dividend policy and in reducing debt costs. *The Accounting Review* 77, 867-890.

Ahmed, A., Duellman, S., 2007. Accounting conservatism and board of director characteristics: An empirical analysis. *Journal of Accounting and Economics* 43, 411-437.

Anthony, J., Ramesh, K., 1992. Association between accounting performance measures and stock prices: a test of the life cycle hypothesis. *Journal of Accounting and Economics* 15, 203-227.

Atiase, R., Platt, D., Tse, S., 2004. Operational restructuring charges and post-restructuring performance. *Contemporary Accounting Research* 21, 493-522.

Ball, R., 2001. Infrastructure requirements for an economically efficient system of public financial reporting and disclosure. Brookings–Wharton Papers on Financial Services, pp. 127–169.

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

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

Barth, M.E., Beaver, W.H., Hand, J.R.M., Landsman, W.R., 1999. Accruals, cash flows, and equity values. *Review of Accounting Studies* 4, 205-229.

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

Beaver, W.H., Ryan, S.G., 2000. Biases and lags in book value and their effects on the ability of the book-to-market ratio to predict book return on equity. *Journal of Accounting Research* 38, 127-148.

Beekes, W., Pope, P., Young, S., 2004. The link between earnings timeliness, earnings conservatism and board composition: evidence from the UK. *Corporate Governance: An International Review* 12, 47-59.

Bens, D., 2002. The determinants on the amount of information disclosed about corporate restructurings. *Journal of Accounting Research* 40, 1-20.

Berle, A.A., Means, G.C., 1932. The Modern Corporation and Private Property. MacMillan, New York.

Biddle, G., Hillary, G., 2006. Accounting quality and firm-level capital investment. *The Accounting Review* 81, 963-982.

Boone, A., Field, L., Karpoff, J., Raheja, C., 2007. The determinants of corporate board size and composition: An empirical analysis. *Journal of Financial Economics* 85, 66-101.

Brickley, J., VanDrunen, L., 1990. Internal corporate restructurings: an empirical analysis. *Journal of Accounting and Economics* 12, 251-280.

Bushman, R., Smith, A., 2001. Financial accounting information and corporate governance. *Journal of Accounting and Economics* 32, 237-333.

Carter, M.E., 1998. Operating performance following restructuring charges. Working Paper, Columbia University.

Cohen, J., Cohen, P., West, S.G., Aiken, L.S., 2003. Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences. Erlbaum, Mahwah, NJ.

Coles, J., Daniel, N., Naveen, L., 2007. Boards: does one size fit all? *Journal of Financial Economics*, Forthcoming.

Core, J., Holthausen, R., Larcker, D., 1999. Corporate governance, chief executive compensation, and firm performance. *Journal of Financial Economics* 51, 371-406.

Darrough, M., Ye, J. 2007. Valuation of loss firms in a knowledge based economy. *Review of Accounting Studies* 12, 61-93.

Dechow, P., Kothari S.P., Watts R., 1998. The relation between earnings and cash flows. *Journal of Accounting and Economics* 25, 131-214.

Elliott, J., Hanna, J., 1996. Repeated write-offs and the information content of earnings. *Journal of Accounting Research* 34 (Supplement), 135-155.

Fairfield, P., Sweeney, R., Yohn, T., 1996. Accounting classification and the predictive content of earnings. *The Accounting Review* 71, 337-355.

Fairfield, P., Whisenant, J., Yohn, T., 2003. Accrued earnings and growth: implications for future profitability and market mis-pricing. *The Accounting Review* 71, 353-371.

Fama, E., French, K., 1995. Size and book-to-market Factors in earnings and returns. *The Journal of Finance* 50, 131-155.

Fama, E.F., Jensen, M.C., 1983. Separation of ownership and control. *Journal of Law and Economics* 26, 301-325.

Financial Accounting Standards Board (FASB), 2006. Conceptual framework for financial reporting: objective of financial reporting and qualitative characteristics of decision of useful financial reporting information. July 6, 2006. FASB, Norwalk, CT.

Francis, J., Hanna, J., Vincent, L., 1996. Causes and effects of discretionary asset write-offs. *Journal of Accounting Research* 34 (Supplement), 117-134.

Garcia Lara, J.M., Garcia Osma, B., Penalva, F., 2007. Accounting conservatism and corporate governance. *Review of Accounting Studies*, Forthcoming.

Gillette, A., Noe, T., Rebello, M., 2003. Corporate board composition, protocols, and voting behavior: experimental evidence. *Journal of Finance* 58, 1997-2031.

Givoly, D., Hayn, C., 2000. The changing time-series properties of earnings, cash flows and accruals: has financial reporting become more conservative? *Journal of Accounting and Economics* 29, 287-320.

Givoly, D., Hayn, C., Natarajan, A., 2007. Measuring reporting conservatism. *The Accounting Review* 82, 65-106.

Grinstein, Y., Tolkowsky, E., 2004. The role of the board of directors in the capital budgeting process – evidence from S&P 500 firms. Working Paper, Cornell University.

Harris M., Raviv, A., 2005. A theory of board control and size. Working Paper, University of Chicago.

Hawawini, G., Subranyanian, V., Verdin, P., 2003. Is performance driven by industy- or firm-specific factors? A new look at the evidence. *Strategic Management Journal* 24, 1-16.

Hart, O., 1995. Corporate governance: some theory and implications. *The Economic Journal* 105, 678-689.

Hermalin, B., Weisbach, M., 2003. Boards of directors as an endogenously determined institution: a survey of the economic literature. *Economic Policy Review* 9, 2-26.

Holderness, C., Kroszner, R., Sheehan, D., 1999. "Were the good old days that good? Changes in managerial stock ownership since the Great Depression," *Journal of Finance* 54, 435-470.

Jensen, M.C., Meckling, W., 1976. Theory of the firm: managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics* 3, 305-360.

LaFond, R., Watts, R., 2007. The information role of conservative financial statements. *The Accounting Review*, forthcoming..

Linck, J., Netter, J., Yang, T., 2007. The determinants of board structure. *Journal of Financial Economics*, Forthcoming.

Leftwich, R., Watts, R., Zimmerman, J., 1981. Voluntary corporate disclosure: the case for interim reporting. *Journal of Accounting Research* 19, 50-77.

Lev, B., Sougiannis, T., 1996. The capitalization, amortization, and value relevance of R&D. *Journal of Accounting and Economics* 21, 107-138.

Lindenberg B., Ross, S., 1981. Tobin's q ratio and industrial organization. *Journal of Business* 51, 1-32.

Lipe, R. 1986. The information contained in the components of earnings. *Journal of Accounting Research* 24 (Supplement), 37-64.

McGuire, 2000. Corporate governance and growth potential: an empirical analysis. *Corporate Governance: An International Review* 8, 32-42.

McNamara, G., Aime, F., Vaaler, P., 2005. Is performance driven by industry-or firm-specific factors? A response to Hawawini, Subramanian, and Verdin. *Strategic Management Journal* 26, 1075-1081.

McVay, S. 2006. Earnings management using classification shifting: An examination of core earnings and special items. *The Accounting Review* 81, 501-531.

Pae, J., Thornton, D.B., Welker, M., 2005. The link between earnings conservatism and the price-to-book ratio. *Contemporary Accounting Research* 22, 693-717.

Penman, S. 1991. An evaluation of accounting rate of return. *Journal of Accounting, Auditing, and Finance* 6, 233-255.

Raheja, C. 2005. Determinants of board size and competition: a theory of corporate boards. *Journal of Financial and Qualitative Analysis* 40, 283-306.

Richardson, S. 2006. The overinvestment of free cash flows. *Review of Accounting Studies* 11, 1159-1189.

Richardson, S.A., Sloan, R.G., Soliman, M.T., Tuna, I.A., 2005. Accrual reliability, earnings persistence and stock prices. *Journal of Accounting and Economics* 39, 437-485.

Roychowdhury, S., Watts, R., 2007. Asymmetric timeliness of earnings, market-to-book and conservatism in financial reporting. *Journal of Accounting and Economics* 44, 2-31.

Ryan, S., 2007. Identifying conditional conservatism. *European Accounting Review* 15, 511-525.

Shliefer, A., Vishny, R., 1997. A survey of corporate governance. *The Journal of Finance* 52, 737-783.

Smith, C.W., Watts, R.L., 1992. The investment opportunity set and corporate financing, dividend and compensation policies. *Journal of Financial Economics* 32, 263-292.

Watts, R.L., 2003. Conservatism in accounting part I: explanations and implications. *Accounting Horizons* 17, 207-221.

Watts, R.L., 2006. What has the invisible hand achieved. Working Paper, Massachusetts Institute of Technology.

Watts, R.L., Zimmerman, J.L., 1986. Positive Accounting Theory. New Jersey, Prentice Hall.

Zingales, L., 1998. Corporate Governance. In: P. Newman (eds), The New Palgrave Dictionary of Economics and the Law, MacMillan, NY pp.497-503.

Table 1
Descriptive Statistics on Conservatism, Profitability, Special Items Charges, and Control Variables over 1989-2001
N = 23,681

	Mean	Std. Dev.	Min	25%	Median	75%	Max
Conservatism	-0.124	0.514	-2.651	-0.297	0.000	-0.195	1.051
Avg. ROE	-0.031	0.124	-0.714	0.394	0.000	0.024	0.212
Avg. CFO	0.006	0.092	-0.553	-0.040	0.000	0.045	0.496
Avg. PM	-0.007	0.105	-0.523	-0.036	0.000	0.036	0.415
Std. Dev ROE	0.055	0.155	-0.147	-0.018	0.000	0.055	0.966
Std. Dev PM	0.034	0.054	-0.098	-0.002	0.025	0.060	0.425
Return	0.091	0.527	-1.276	-0.221	0.000	0.266	2.737
Leverage	0.033	0.166	-0.347	-0.090	0.000	0.126	0.749
Growth	0.035	0.240	-1.051	-0.082	0.000	0.107	1.339
Size	0.097	1.937	-5.646	-1.279	0.000	1.355	6.464
R&D + ADV	0.018	0.056	-0.094	-0.002	0.000	0.027	0.323
Past	0.399	0.490	0.000	0.000	0.000	1.000	1.000
Special Items $_{t+1}$	0.007	0.030	-0.105	0.000	0.000	0.004	0.154

We utilize a sample of Compustat and CRSP firms over 1989-2001. We require that the firm has all data items available for three-years before (after) year t to measure past (future) profitability and special items charges. We exclude financial service firms due to the difference in reporting requirements and profitability. We also exclude observations where income from operations plus special items divided by average total assets is less than -0.50. All variables are obtained from Compustat except for *Return*, which is obtained from CRSP.

Conservatism $_{i,t}$ is the book-to-market ratio multiplied by –1, **Avg. ROE** $_{i,t}$ is income from operations plus special items divided by the fiscal year end market value of equity and averaged over year t to t-2, **Avg. CFO** $_{i,t}$ is cash flows from operations divided by sales averaged over year t to t-2, **Avg. PM** $_{i,t}$ is one less cost of goods sold divided by sales averaged over year t to t-2, **Std. Dev ROE** $_{i,t}$ is the standard deviation of ROE over year t to t-2, **Std. Dev PM** $_{i,t}$ is the standard deviation of PM over year t to t-2, **Return** $_{i,t}$ is the buy and hold market return for fiscal year t beginning four months after the fiscal year end, **Leverage** $_{i,t}$ is total long-term liabilities divided by total sales, **Growth** $_{i,t}$ is the percentage change in revenues from the previous year, **Size** $_{i,t}$ is the natural log of total assets, **R&D + ADV** $_{i,t}$ is research and development plus advertising divided by total sales, **Past** $_{i,t}$ is one if the firm takes a special items greater than 1% of total revenues during the time period t through t-2, zero otherwise**,** and **Special Items** $_{i,t}$ is special items multiplied by -1 divided by total revenues.

Table 2
Correlations between Conservatism, Profitability, Special Items Charges, and Control Variables
Spearman (Pearson) Correlations are Above (Below) the Diagonal

		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Conservatism	1	0.04	0.23	0.21	-0.34	-0.02	0.34	0.01	0.27	0.24	0.16	-0.01	0.01
2	Avg. CFO	0.15	1	0.25	0.01	-0.44	-0.11	0.11	-0.05	0.09	0.08	-0.12	-0.47	-0.06
3	Avg. ROE	0.15	0.22	1	0.35	-0.32	-0.03	0.10	-0.03	0.03	0.33	0.02	-0.02	0.02
4	Avg. PM	0.17	0.07	0.36	1	-0.18	0.18	0.03	-0.07	0.06	0.01	0.30	0.11	0.08
5	Std. Dev ROE	-0.31	-0.73	-0.19	-0.12	1	0.09	-0.13	0.12	-0.23	-0.19	-0.01	0.40	0.00
6	Std. Dev PM	-0.06	-0.12	-0.02	0.16	0.14	1	-0.02	0.01	-0.01	-0.10	0.00	0.13	0.09
7	Return	0.28	0.06	0.04	0.05	-0.04	0.04	1	-0.02	0.24	0.06	0.01	-0.07	-0.04
8	Leverage	0.05	-0.10	-0.01	-0.05	0.11	0.02	-0.01	1	0.05	0.28	-0.15	0.10	0.05
9	Growth	0.21	0.12	0.00	0.06	-0.15	0.06	0.20	0.09	1	0.03	0.04	-0.11	0.00
10	Size	0.22	0.11	0.27	0.01	-0.14	-0.09	-0.01	0.23	0.01	1	-0.02	0.11	0.10
11	R&D + ADV	0.12	-0.05	-0.03	0.33	-0.01	0.03	0.03	-0.15	0.01	-0.07	1	0.06	0.04
12	Past	-0.02	-0.38	-0.02	0.11	0.31	0.12	-0.04	0.10	-0.05	0.12	0.05	1	0.12
13	Special Items $_{t+1}$	-0.02	-0.03	0.04	0.10	0.01	0.08	-0.03	0.02	0.01	0.07	0.03	0.12	1

We utilize a sample of Compustat and CRSP firms from 1989-2001. **Conservatism $_{i,t}$** is the book-to-market ratio multiplied by –1, **Avg. ROE $_{i,t}$** is income from operations plus special items divided by the fiscal year end market value of equity and averaged over year t to t-2, **Avg. CFO $_{i,t}$** is cash flows from operations divided by sales averaged over year t to t-2, **Avg. PM $_{i,t}$** is one less cost of goods sold divided by sales averaged over year t to t-2, **Std. Dev ROE $_{i,t}$** is the standard deviation of ROE over year t to t-2, **Std. Dev PM $_{i,t}$** is the standard deviation of PM over year t to t-2, **Return $_{i,t}$** is the buy and hold market return for fiscal year t beginning four months after the fiscal year end, **Leverage $_{i,t}$** is total long-term liabilities divided by total sales, **Growth $_{i,t}$** is the percentage change in revenues from the previous year, **Size $_{i,t}$** is the natural log of total assets, **R&D + ADV $_{i,t}$** is research and development plus advertising divided by total sales, **Past $_{i,t}$** is one if the firm takes a special items greater than 1% of total revenues during the time period t through t-2, zero otherwise**,** and **Special Items $_{i,t}$** is special items multiplied by -1 divided by total revenues.

Table 3
Relation between Asymmetric Timeliness, Future Profitability, and Future Special Items Charges

Dependent Variable: Cumulative income before extraordinary items during the years t-3 to t deflated by the market value of equity at t-4.

		(i)	(ii)	(iii)	(iv)	(v)	(vi)
Profitability Measure			CFO_{t+3}	PM_{t+3}		CFO_{t+3}	PM_{t+3}
Intercept	?	0.227 (46.09)***	0.203 (31.03)***	0.259 (23.98)***	0.228 (44.91)***	0.203 (30.72)***	0.260 (24.02)***
Return	+	0.122 (46.93)***	0.139 (40.55)***	0.185 (31.71)***	0.124 (45.54)***	0.141 (40.12)***	0.185 (31.71)***
Dummy	?	0.058 (4.63)***	0.062 (3.44)***	0.048 (1.51)	0.059 (4.58)***	0.063 (3.48)***	0.050 (1.56)
Dummy * Return	+	0.434 (31.51)***	0.487 (23.81)***	0.444 (14.91)***	0.442 (31.14)***	0.495 (23.83)***	0.452 (15.11)***
Profitability	?		0.229 (5.70)***	-0.104 (-3.88)***		0.229 (5.69)***	-0.103 (-3.81)***
Profitability * Return	?		-0.159 (-7.90)***	-0.150 (-11.45)***		-0.158 (-7.83)***	-0.149 (-11.26)***
Profitability * Dummy	?		-0.028 (-0.18)	0.011 (0.12)		-0.035 (-0.22)	0.010 (0.11)
Profitability * Dummy * Return	+		0.348 (2.39)**	-0.087 (-0.93)		0.354 (2.43)**	-0.082 (-0.88)
Special Items	?				-0.147 (-0.92)	-0.170 (-1.07)	-0.142 (-0.89)
Special Items * Return	?				-0.155 (-2.08)**	-0.136 (-1.82)*	-0.023 (-0.30)
Special Items * Dummy	?				-0.226 (-0.49)	-0.221 (-0.48)	-0.296 (-0.65)
Special Items * Dummy * Return	-				-1.304 (-2.54)**	-1.355 (-2.65)***	-1.441 (-2.82)***
Sample Period		1989-2001	1989-2001	1989-2001	1989-2001	1989-2001	1989-2001
N		23,681	23,681	23,681	23,681	23,681	23,681
Adjusted R^2		0.2000	0.2104	0. 2024	0.2008	0.2107	0.2027

Regression coefficients are presented in the same row as the variable name and Newey-West corrected t-statistics are reported in parentheses. Significance is based on two-tailed t-tests. */**/*** represents significance at the 10/5/1% level. **$ROE_{i,t+3}$** is income from operations plus special items divided by the fiscal year end market value of equity, **$CFO_{i,t+3}$** is cash flows from operations divided by sales, **$PM_{i,t+3}$** is one less cost of goods sold divided by sales, **Return** is the cumulative buy and hold return during the years t-3 to t beginning four months after the fiscal year end, **Dummy** is a dichotomous variable equal to one (zero) if the cumulative buy and hold return is less (greater) than zero, **Profitability** is the profitability measure listed at the top of the column, and **Special Items** is special items from year t+1 multiplied by -1 divided by total revenues.

Table 4
Fama-MacBeth Regressions of Industry-Adjusted Future Profitability on Industry-Adjusted Conservatism and Controls
Dependent Variable: Industry adjusted future profitability

		(ii)	(iii)
Dependent Variable		CFO_{t+3}	PM_{t+3}
Intercept	?	0.026 (9.17)***	-0.288 (-33.78)***
Conservatism $_t$	+	0.022 (8.00)***	0.014 (4.61)***
Avg. ROE $_t$	+	0.044 (3.99)**	- -
Std. Dev ROE $_t$	?	-0.019 (-2.20)**	- -
Avg. PM $_t$	+	- -	0.809 (71.49)***
Std. Dev PM $_t$	?	- -	0.330 (7.85)***
Leverage $_t$	–	-0.021 (-4.21)***	-0.010 (-1.78)
Growth $_t$	–	-0.001 (-0.23)	-0.017 (-5.28)***
Size $_t$	+	0.010 (19.10)***	0.000 (0.08)
R&D + ADV $_t$	?	-0.036 (-0.98)	0.185 (7.41)***
Past $_t$	?	0.000 (0.58)	0.001 (0.36)
Included Industry Dummies		YES	YES
Sample Period		1989-2001	1989-2001
N		23,681	23,681
Avg. Adjusted R^2		0.086	0.6682

Fama-MacBeth regression coefficients are presented in the same row as the variable name and t-statistics are reported in parentheses. Significance is based on two-tailed t-tests. */**/*** represents significance at the 10/5/1% level. **ROE** $_{i,t+3}$ is income from operations plus special items divided by the fiscal year end market value of equity, **CFO** $_{i,t+3}$ is cash flows from operations divided by sales, **PM** $_{i,t+3}$ is one less cost of goods sold divided by sales, **Conservatism** $_{i,t}$ is the book-to-market ratio multiplied by –1, **Avg. ROE** $_{i,t}$ is income from operations plus special items divided by the fiscal year end market value of equity and averaged over year t to t-2, **Std. Dev ROE** $_{i,t}$ is the standard deviation of ROE over year t to t-2, **Avg. PM** $_{i,t}$ is one less cost of goods sold divided by sales averaged over year t to t-2, **Std. Dev ROE** $_{i,t}$ is the standard deviation of ROE over year t to t-2, **Std. Dev PM** $_{i,t}$ is the standard deviation of PM over year t to t-2, **Leverage** $_{i,t}$ is total long-term liabilities divided by total sales, **Growth** $_{i,t}$ is the percentage change in revenues from the previous year, **Size** $_{i,t}$ is the natural log of total assets, **R&D + ADV** $_{i,t}$ is research and development plus advertising divided by total sales, and **Past** $_{i,t}$ is one if the firm takes a special items greater than 1% of total revenues during the time period t through t-2, zero otherwise.

Table 5
Logistic Regressions of Future Special Items on Conservatism and Control Variables

Dependent Variable: Dichotomous variable equal to one if the firm took a special items charge greater than the specified percentage of total revenues, zero otherwise

		(i)	(ii)
Future $_{t+1}$		0% of Total Revenues	1% of Total Revenues
Intercept	?	-2.135 (709.72)***	-2.639 (817.24)***
Conservatism $_t$	–	-0.071 (4.89)**	-0.124 (11.60)***
Past $_t$	+	0.750 (532.73)***	0.658 (315.09)***
Avg. ROE $_t$	–	-0.512 (8.20)***	-0.632 (9.26)***
Std. Dev ROE $_t$	+	-0.078 (0.29)	-0.300 (3.05)*
Return $_t$	–	-0.141 (22.47)***	-0.202 (33.30)***
Leverage $_t$	?	0.259 (8.01)***	0.073 (0.48)
Growth $_t$	?	0.152 (5.87)**	0.161 (5.20)**
Size $_t$	+	0.150 (491.99)***	0.156 (236.03)***
Industry & Year Dummies		YES	YES
Sample Period		1989-2001	1989-2001
# of Firms with Special Items > the Specified %		7,609	4,803
N		23,681	23,681
Pseudo R^2		0.1299	0.1004

Regression coefficients are presented in the same row as the variable name and chi-squares are reported in parentheses. Significance is based on two-tailed Chi-squares. */**/*** represents significance at the 10/5/1% level. **Future $_{i,t}$** is one if the firm takes a special items charge greater than the amount specified in the column during the time period t+1**, Conservatism $_{i,t}$** is the book-to-market ratio multiplied by –1, **Past $_{i,t}$** is one if the firm takes a special items greater than the amount specified in the column during the time period t through t-2, zero otherwise, **Avg. ROE $_{i,t}$** is income from operations plus special items divided by the fiscal year end market value of equity and averaged over year t to t-2, **Std. Dev ROE $_{i,t}$** is the standard deviation of ROE over year t to t-2, **Return $_{i,t}$** is the buy and hold market return for fiscal year t beginning four months after the fiscal year end, **Leverage $_{i,t}$** is total long-term liabilities divided by total sales, **Growth $_{i,t}$** is the percentage change in revenues from the previous year, and **Size $_{i,t}$** is the natural log of total assets.

Table 6
Fama-MacBeth Truncated Regressions of Special Items on Conservatism and Control Variables when special items divided by total revenues exceeds a specified percentage

Dependent Variable: Special items divided by total revenues

		(i)	(ii)	(iii)
Special Items $_{t+1}$		All Firms	0% of Total Revenues	1% of Total Revenues
Intercept	?	-0.001 (-1.67)	0.038 (7.67)***	0.045 (10.10)***
Conservatism $_t$	–	-0.003 (-2.64)**	-0.004 (-3.15)***	-0.004 (-2.38)**
Past $_t$	+	0.006 (8.82)***	0.000 (0.39)	0.006 (4.44)***
Avg. ROE $_t$	–	-0.007 (-2.67)**	-0.013 (-2.49)**	0.000 (0.02)
Std. Dev ROE $_t$	?	-0.009 (-4.77)***	0.002 (0.32)	0.005 (0.58)
Return $_t$	–	-0.001 (-3.98)***	-0.001 (-0.43)	0.001 (0.27)
Leverage $_t$	?	-0.002 (-1.81)	-0.006 (-1.49)	-0.002 (-0.31)
Growth $_t$	?	0.002 (1.30)	0.004 (1.81)	0.003 (0.92)
Size $_t$	?	0.001 (5.83)***	-0.000 (-1.04)	-0.000 (-0.75)
Industry Dummies		YES	YES	YES
Sample Period N		1989-2001 23,681	1989-2001 7,609	1989-2001 4,803

Fama-MacBeth regression coefficients are presented in the same row as the variable name and t-statistics are reported in parentheses. Significance is based on two-tailed t-tests. */**/*** represents significance at the 10/5/1% level. **Special Items $_{i,t}$** is special items multiplied by -1 divided by total revenues. **Conservatism $_{i,t}$** is the book-to-market ratio multiplied by –1, **Past $_{i,t}$** is one if the firm takes a special items greater than the amount specified in the column during the time period t through t-2, zero otherwise, **Avg. ROE $_{i,t}$** is income from operations plus special items divided by the fiscal year end market value of equity and averaged over year t to t-2, **Std. Dev ROE $_{i,t}$** is the standard deviation of ROE over year t to t-2, **ROE $_{i,t+1}$** is income from operations plus special items divided by average total assets, **Return $_{i,t}$** is the buy and hold market return for fiscal year t beginning four months after the fiscal year end, **Leverage $_{i,t}$** is total long-term liabilities divided by total sales, **Growth $_{i,t}$** is the percentage change in revenues from the previous year, and **Size $_{i,t}$** is the natural log of total assets.