Evidence on the Role of Accounting Conservatism in Corporate Governance

1. Introduction

Watts (2003) suggests that accounting conservatism plays an important role in corporate governance. We provide evidence on this expectation by empirically examining the relation between accounting conservatism and board of director characteristics that proxy for director independence and the strength of outside directors' monitoring incentives. We find strong and robust evidence of (i) a negative relation between the percentage of inside directors on the board and conservatism, and (ii) a positive relation between the percentage of a firm's shares owned by outside directors and conservatism. These findings are consistent with the notion that accounting conservatism plays an important role in corporate governance.

Conservatism is potentially useful in corporate governance in several ways. First, it helps prevent excess payments to managers (Watts, 2003). Second, it provides managers with incentives to avoid taking on negative NPV projects (Ball, 2001; Ball and Shivakumar, 2005). Third, it increases the likelihood that managers will abandon or shut down negative NPV projects because it generates timely signals that can trigger further investigation by the board (Ball, 2001; Watts, 2003). These potential benefits of conservatism in governance suggest a positive relation between the strength of governance and conservatism.

Our primary tests utilize two conservatism measures: an accrual-based measure, following Givoly and Hayn (2000), and a market-based measure following Beaver and Ryan (2000). In robustness tests, we also examine a third measure based on asymmetric timeliness of earnings following Basu (1997). We study five board characteristics that

proxy for director independence and the strength of their monitoring incentives: (i) percentage of inside directors, (ii) average number of additional directorships held by a firm's directors, (iii) CEO/chair separation, (iv) percentage of shares held by outside directors, and (v) board size.[1] Additionally, we use the G-score as defined by Gompers et al. (2003) as a measure of shareholder rights.

Our tests control for institutional ownership, percentage of shares held by inside directors, firm size, sales growth, growth opportunities (R&D and advertising), cash-based performance, and leverage. Furthermore, our primary tests use industry-adjusted variables to ensure that our results are not driven by industry differences. In additional testing, we control for unobservable firm characteristics that are constant over time by using the fixed effects regression model with firm and time-specific intercepts.

We find strong and robust evidence of (i) a negative relation between the percentage of inside directors on the board and conservatism, and (ii) a positive relation between outside director ownership and conservatism. G-score, a proxy for shareholder rights, has a weak negative effect on the accrual-based measure but is not significantly related to the market-based or the asymmetric timeliness measures of conservatism. CEO/chair separation has a positive effect in some specifications. The average number of outside directorships is negatively related to conservatism using the accrual-based measure of conservatism. Board size is generally not significantly related to conservatism after controlling for other characteristics and control variables. We examine two alternative explanations for our findings (earnings management and litigation) and conclude that our results are unlikely to be driven by either of these

[1] These characteristics are defined in detail in section 3.

explanations. Overall, the evidence is consistent with the notion that accounting conservatism plays a role in corporate governance.

While a number of prior studies examine the relation between board characteristics and financial reporting quality only one prior study, Beekes et al. (2004), examines the relation between board independence and conservatism. For example, Beasley (1996), Dechow et al. (1996), and Farber (2005) document that the percentage of outside directors is negatively related to the likelihood of fraud. Peasnell et al. (2000), Klein (2002b), and Xie et al. (2003) document a negative relation between the percentage of outside directors and proxies for earnings management. Wright (1997) documents a positive relation between outside director percentage and analyst ratings of financial reporting quality.

Our study differs from Beekes et al. (2004) in several respects. First, they focus on UK firms whereas we focus on US firms. An important difference between GAAP in the UK and US GAAP is that UK GAAP permits upward revaluations of assets whereas US GAAP does not permit upward revaluations. This accounting difference implies less cross-sectional variation in conservatism for US firms relative to UK firms. Therefore, the results of Beekes et al. (2004) may not hold for US firms due to this accounting difference.

Second, Beekes et al. (2004) use Basu's (1997) contemporaneous asymmetric timeliness measure of conservatism only whereas we use an accrual-based measure, a market-based measure, and the Basu measure estimated cumulatively over multiple years following Roychowdhury and Watts (2005). Using the contemporaneous asymmetric timeliness measure we find that the Beekes et al. (2004) results do not hold for the US

sample. Third, we examine the effects of monitoring incentives (outside director ownership) and additional governance variables that they do not examine. Fourth, they do not control for industry whereas we perform tests using industry-adjusted measures to ensure that the results are not simply a manifestation of cross-sectional variation in industry characteristics. In summary, we employ more rigorous testing on a sample of firms that is potentially quite different than the sample studied in Beekes et al. (2004).

The remainder of this paper proceeds as follows. We discuss the role of conservatism in corporate governance in Section 2. Section 3 presents the research design. Section 4 presents the evidence and a discussion of alternative explanations. Section 5 presents the conclusion.

2. Role of conservatism in corporate governance

Conflicts of interest between managers and parties to the firm arise because managers are effectively in control of firms' assets but they generally do not have significant equity holdings in their firms (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.[2]

While in practice there are a number of different governance mechanisms (such as boards, institutional shareholders, product market competition, the market for corporate control, the set of laws that govern firms, etc.) we focus on the board of directors because

[2] Zingales (1998, p. 499) defines corporate governance as "*the complex set of constraints that shape the ex-post bargaining over quasi-rents generated by a firm*."

it is one of the important governance mechanisms that *directly* monitor managers. We expect conservatism to facilitate directors' monitoring of managers as explained below.

Boards ratify and monitor top managers' decisions because it is efficient to separate decision initiation and implementation from decision ratification and monitoring (Fama and Jensen, 1983). To fulfill this role, they 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 need verifiable information in order to effectively monitor the firm. In practice, the information received by the board is often supplied by top management who have an incentive to favorably bias the information. Watts (2003) argues that conservatism has evolved as a means of offsetting this bias. More specifically, conservatism plays at least three potential roles in corporate governance.

First, accounting conservatism prevents overstatement of cumulative earnings and net assets. Watts (2003) argues that this constrains managers' opportunistic payments to themselves and prevents over-compensation. This is valuable because recovery of excess compensation is difficult as managers' tenure and liability are limited. This role of conservatism in limiting management compensation is similar to conservatism's role in preventing overpayment of dividends to shareholders at the expense of bondholders as discussed in Watts and Zimmerman (1986) and Holthausen and Watts (2001), and documented in Ahmed et al. (2002).

Second, Ball (2001) argues that without conservative accounting managers have incentives to continue to operate negative NPV investments to avoid reporting losses on sale or abandonment. Further, Watts (2003) suggests that by speeding up loss

recognition, conservatism provides the board with a signal to investigate the reasons for the losses. Such investigations can lead to termination of projects or even dismissal of managers.[3]

Third, Ball (2001) argues that the *ex ante* commitment to recognize bad news on a timely basis implicit in conservative accounting mitigates managers' incentives to undertake negative Net Present Value projects (such as pet projects, empire building, or entrenching investments) that may be in the interests of managers but not in the interest of shareholders (Ball and Shivakumar, 2005).

The above arguments imply that conservatism is a potentially useful tool for directors in fulfilling their role of ratifying and monitoring key decisions. Thus, strong boards would demand conservative accounting. On the other hand, boards that are dominated by insiders or boards with weak monitoring incentives are likely to provide managers with greater opportunity to use aggressive (or less conservative) accounting. In summary, under this view, the strength of board governance will be positively associated with accounting conservatism.[4]

Strong boards can ensure that managers don't depart from conservatism either by directly requiring the use of conservative accounting or through audit committees. Klein (2002a) argues that audit committees not only review accounting policies but also

[3] Grinstein and Tolkowsky (2004) provide evidence on the role of the board of directors in ratifying and monitoring capital expenditure decisions.

[4] Previous research has linked board of director characteristics to financial statement fraud (Beasley, 1996; Dechow et al., 1996; Farber, 2005), the extent of earnings management (Klein, 2002b; Xie et al., 2003; Bowen et al., 2005), debt ratings (Anderson et al., 2004; Ashbaugh et al., 2004), and financial statement quality (Wright, 1997).

mediate differences between managers and external auditors. Thus, the board has the means to directly monitor accounting policy decisions.[5]

While the above arguments suggest that conservatism and board governance are complements, Bushman et al. (2004) find that when earnings are less timely in general, boards substitute towards more costly governance measures (e.g. greater incentives based compensation). Although, their timeliness measure is not a direct measure of conservatism, their results suggest the possibility that conservatism and the strength of board governance are substitutes. This requires that some parties (e.g. shareholder groups or block-holders) other than the board of directors are willing to engage in costly monitoring of managers. Relying on prior studies, such as Beasley (1996), Peasnell et al. (2000), Klein (2002b), and Xie et al. (2003), that document a positive relation between the strength of board governance and other dimensions of financial reporting quality, we expect a positive relation between conservatism and the strength of board governance.[6]

3. Research Design

Our primary tests are based on regressions of conservatism measures on board characteristics and a set of control variables. This section presents a discussion of (i) the proxies we use for board independence and monitoring incentives, (ii) measures of accounting conservatism, and (iii) the empirical models and estimation methods.

[5] Ball (2001, p.139) argues that once managers commit to conservative accounting, they have incentives not to deviate from it because it "*…allows them to bond themselves ex ante to act more in the interests of the owners of the firm and thus makes their employment contract more valuable*."
[6] Bushman et al. (2004) report *insignificant* effects of their timeliness measure on Outside director ownership & Percentage of Inside Directors in Tables 4 & 5 respectively.

3.1. Proxies for Board Independence and Monitoring Incentives

3.1.1. Percentage of Inside directors on the board

Previous research documents links between the percentage of insiders on the board and financial statement fraud (Beasley, 1996; Dechow et al., 1996; Farber, 2005), earnings management (Peasnell et al., 2000; Klein, 2002b; Xie et al., 2003), debt ratings (Ashbaugh et al., 2004), and analyst ratings of financial statement quality (Wright, 1997). These findings support the use of the percentage of inside directors on the board as a proxy for board independence. Board independence decreases as the percentage of inside directors increases.

We define inside directors as directors who (i) are currently employed or have been employed by the firm for the past three years, (ii) are related to current management, and/or (iii) are related to the firm-founder. As we expect more independent boards to be associated with more conservative accounting, we predict the percentage of inside directors (Inside Director %) to be negatively related to conservatism.

Our definition of independence is consistent with Klein (2002b), except that she classifies directors with significant business transactions with the firm as non-independent. However, these transactions could either increase or decrease monitoring incentives based on the type of transaction. Therefore, we do not classify directors as non-independent due to related party transactions.[7]

[7] We obtain similar results when directors with "significant business relations" detailed in the proxy statements are considered non-independent directors.

3.1.2. Separation of Chairman of the Board and CEO

Jensen (1993) argues that separating the positions of chairman of the board and chief executive officer results in greater independence of the board from management. Previous research has linked the separation of the positions of CEO and chairman of the board to higher debt ratings (Ashbaugh et al., 2004), and to lower likelihood of an SEC enforcement action (Dechow et al., 1996). We therefore use a dummy variable that takes on a value of one if the CEO is not also chairman of the board, and zero otherwise, as an additional proxy for board independence. CEO/chair separation also proxies for the strength of outside director monitoring incentives because if the CEO is also chairman of the board, they are likely to have more influence on director nomination and election than if these positions are separated. We expect a positive relation between the separation of decision control and decision management (CEO/Chair Separation) and accounting conservatism.

3.1.3. Board Size

There are two competing views in the literature about the effects of board size. One view is that large boards are less effective than small boards due to the difficulties of coordinating and engaging a large group (Jensen, 1993). Larger boards can also suffer from the 'free-rider' problem in the sense that each board member relies on the other members to monitor management. Some evidence of these problems is discussed in Hermalin and Weisbach (2003) who state that there is a negative relationship between board size and firm value. A competing view is that large boards allow directors to specialize. For example, Klein (2002a) finds that audit committee independence is

positively related to board size. Thus, larger boards result in fewer committee assignments per director enabling directors to specialize. Greater specialization can lead to more effective monitoring. Given the competing effects of board size (Board Size) on board independence and effectiveness, we do not have a signed prediction for the relation between board size and conservatism.

3.1.4. Number of Directorships Held

There are competing views about the relationship between additional directorships held by directors and monitoring effectiveness. Fama and Jensen (1983) suggest that additional outside directorships held by directors will result in greater monitoring expertise, as directors will learn and adapt monitoring techniques from other boards and look to establish a reputation as an excellent director. Consistent with this theory, Ashbaugh et al. (2004) document a positive link between the percentage of directors holding an additional directorship and firm debt ratings.

Conversely, a competing view is that additional directorships distract the directors from their duty of monitoring the firm. Consistent with this view, Beasley (1996) finds that the average number of outside directorships held is positively related to the likelihood of financial statement fraud. We measure monitoring expertise/overextension as the average number of outside directorships held by the board that are available on Compustat during the sample period. The sign on the average number of additional directorships held (Avg. # of Directorships) will depend upon whether the expertise or overextension effect dominates.

3.1.5. Outside Director Ownership

Outside directors are important in ensuring the independence of the board. However, outside directors will not have sufficiently strong incentives to monitor (and if necessary confront) managers if they do not have significant equity stakes in the firm (Jensen, 1993). Previous research documents that greater director ownership is related to a lower likelihood of financial statement fraud (Beasley 1996), and positively related to firm debt ratings (Ashbaugh et al. 2004), suggesting that outside director ownership enhances monitoring incentives.

We use the percentage of outstanding shares held by outside directors as a proxy for the strength of their monitoring incentives. We predict that outside director ownership (Outside Director Ownership) will be positively related to accounting conservatism.

3.1.6. Strength of Shareholder's Rights

We expect board characteristics to have a direct effect on conservatism because boards monitor managers directly. However, another proxy for governance strength is the strength of shareholder rights. Firms with strong shareholders rights are likely to have stronger governance and this would imply a positive relation between the strength of shareholder rights and conservatism. We measure shareholder rights following Gompers et al. (2003), who construct a Governance Index (G-Score) of 24 governance provisions. They find that firms with strong shareholder rights (low G-score) have larger future stock returns than firms with weak shareholder rights (high G-score).

However, this measure has a number of limitations. First, Gompers et al. (2003) do not document significant difference in operating performance. Furthermore, Core et al. (2005) document that firms with high G-scores have low operating performance but this underperformance does not surprise the market, as indicated by analyst forecasts. Core et al. (2005) conclude that weak governance is not related to stock returns as the negative stock returns reverse after the initial sample period. Second, Brown and Caylor (2004) criticize the G-score as primarily an index of anti-takeover protection. To the extent that G-scores reflect weak governance, we predict a negative relation between accounting conservatism and the G-score.

3.2. Proxies for Accounting Conservatism

We require firm-specific conservatism measures that can be used as dependent variables in our main tests and as explanatory variables in our endogeneity test. Our primary tests are based on an accrual-based measure of conservatism, following Givoly and Hayn (2000), and a market-based measure of conservatism, following Beaver and Ryan (2000). We also perform supplementary tests based on Basu's (1997) asymmetric timeliness measure of conservatism. We discuss below how the respective measures are defined and their strengths and weaknesses.

The accrual-based measure of conservatism, CON-ACC, is income before extraordinary items less cash flows from operations plus depreciation expense deflated by average total assets, and averaged over a three-year period centered on year t, multiplied by negative one. Positive values of CON-ACC indicate greater conservatism. The intuition underlying this measure is that conservative accounting results in persistently

negative accruals (Givoly and Hayn, 2000). The more negative the average accruals over the respective periods, the more conservative the accounting. Averaging over a number of periods also ensures that the effects of any temporary large accruals are mitigated, as accruals tend to reverse within a one to two-year period (Richardson et al., 2004).

The market-based measure of conservatism, CON-MKT, is the book-to-market ratio multiplied by negative one so positive values indicate greater conservatism. As conservatism results in understating book value of equity relative to market value of equity, firms using conservative accounting should have lower book-to-market ratios. Following Beaver and Ryan (2000) we also use the current and six-years lagged security returns as additional explanatory variables in the estimation of regressions using CON-MKT as the dependent variable. Using the Beaver and Ryan (2000) bias component instead of the simple book-to-market ratio yields very similar results. Thus, we report the results based on book-to-market ratio only.

CON-ACC likely reflects income statement conservatism whereas CON-MKT likely reflects balance sheet conservatism. The justification for using these proxies is that they are firm-specific measures that intuitively capture conservatism relative to cash flows and market value of equity respectively. However, because the market value of equity reflects future economic rents that are expected to be generated by the assets-in-place as well as growth opportunities, CON-MKT will be affected by both economic rents from assets-in-place and growth opportunities. CON-ACC is also likely to be affected by realized economic rents. Further, it omits conservatism in operating cash flows. We discuss how we control for economic rents and growth opportunities in our tests in section 3.3.

Following Basu (1997), we use the coefficient that captures the difference in effects of negative returns and positive returns on earnings (a measure of asymmetric timeliness in earnings) as a conservatism measure in our supplementary tests. This measure intuitively captures asymmetric verification standards for recognition of good and bad news. However, with three years of data, it is difficult to obtain firm-specific asymmetric timeliness measures. Moreover, Givoly et al. (2004) show that the asymmetric timeliness measure can contain significant amounts of measurement error depending upon the characteristics of the information environment. For example, they document that for large firms the asymmetric timeliness is roughly one-third the size of the measure for small firms. Additionally, Dietrich et al. (2004) claim that the observed differences between good and bad news is due to the sample truncation bias and sample variance ratio.

Roychowdhury and Watts (2005) show that some of the problems with the Basu (1997) measure can be mitigated when it is estimated cumulatively over multiple years in the past with respect to the point of time that is of interest. We use their backward cumulation approach and discuss it further under additional sensitivity analyses.

3.3. Empirical Model

We estimate the following empirical model containing the six board characteristics discussed above and six control variables using OLS regression:

$$(1)\ CON_{i,t} = \beta_0 + \beta_1 \text{ Inside Director \%}_{i,t} + \beta_2 \text{ Avg. \# of Directorships}_{i,t} +$$
$$\beta_3 \text{ CEO/Chair Separation}_{i,t} + \beta_4 \text{ Outside Director Ownership}_{i,t} +$$
$$\beta_5 \text{ Board Size}_{i,t} + \beta_6 \text{ G-Score}_{i,t} + \beta_7 \text{ Institutional Ownership}_{i,t} +$$
$$\beta_8 \text{ Inside Director Ownership}_{i,t} + \beta_9 \text{ Firm Size}_{i,t} + \beta_{10} \text{ Sales Growth}_{i,t} +$$
$$\beta_{11} \text{ R\&D+ADV}_{i,t} + \beta_{12} \text{ CFO/TA}_{i,t} + \beta_{13} \text{ Leverage}_{i,t} + \epsilon$$

where *Institutional Ownership* $_{i,t}$ is the total common shares held by institutional investors divided by total common shares outstanding, *Inside Director Ownership* $_{i,t}$, is the common shares held by inside directors divided by total common shares outstanding, *Firm Size* $_{i,t}$ is the natural log of average total assets, *Sales Growth* $_{i,t}$ is the percentage of annual growth in total sales, *R&D+ADV* $_{i,t}$ is research and development expenditures plus advertising expense divided by sales, *CFO/TA* $_{i,t}$ is cash flows from operations divided by average total assets, and *Leverage* $_{i,t}$ is total long-term liabilities divided by total assets.

We use institutional ownership as a control variable because institutional investors are viewed as an alternative governance mechanism. The large stockholdings of institutional investors induce them to perform monitoring activities as their voting power allows them to significantly influence management (Schleifer and Vishny, 1986). Bhojraj and Sengupta (2003) find results consistent with the monitoring effect of institutional shareholders; where firms with greater institutional ownership have lower bond yields and higher debt ratings. Thus, monitoring by institutions can substitute for monitoring by the board. However, high institutional ownership also allows institutions to influence managers and secure private benefits at the expense of other shareholders. We use the percentage of shares outstanding owned by institutional investors as an

explanatory variable but because of the competing effects, we do not have an *a priori* prediction on the coefficient of this variable.

We control for the amount of ownership held by inside directors as insider ownership may play a significant role in the accounting choices of the firm. Under classical agency theory, larger amounts of ownership by management will lead to greater goal congruence between management and shareholders. Consistent with this theory, Warfield et al. (1995) find a negative relation between managerial ownership and abnormal accruals. Conversely, inside directors may utilize their voting power to expropriate rents from the firm. Additionally, in the extreme case that managers own 100% of equity, there is no governance problem or a role for conservatism in firm governance. Due to the competing effects, we do not have an *a priori* prediction on the coefficient of this variable.

We control for firm size by including the natural log of average total assets as an explanatory variable. Large firms likely face large political costs that induces them to use more conservative accounting (Watts and Zimmerman, 1978). We control for sales growth as proxied by the annual percentage growth in total sales because Ahmed et al. (2002) argue that sales growth is likely to affect CON-ACC and CON-MKT for three reasons. First, sales growth will affect accruals such as inventory and receivables, which in turn affects CON-ACC. Second, for firms with declining sales CON-ACC may be a poor measure of accounting conservatism. Third, large sales growth may inflate the markets expectations of future cash flows, which could affect CON-MKT. Consistent with Ahmed et al. (2002), we predict a negative effect of sales growth on CON-ACC and a positive effect on CON-MKT.

We control for research and development and advertising expenditures, as they are likely to capture economic rents generated by assets-in-place, growth opportunities, and GAAP mandated conservatism (Ahmed, 1994). We control for profitability as proxied by the cash flow from operations divided by average total assets as Ahmed et al. (2002) argue that profitable firms tend to use more conservative accounting.[8]

Finally, we include total long-term debt divided by average total assets as a control variable. Firms with high levels of leverage tend to have greater bond-holder and share-holder conflicts which in turn have been shown to affect conservatism.

We also control for industry, using industry definitions in Barth et al. (1999), by deducting the industry median values of the dependent and independent variables used in our tests. This is an additional control for economic rents and growth opportunities as rents and growth opportunities likely vary across industries. Finally, we include the current and six years lagged returns buy and hold returns in the CON-MKT regressions following Beaver and Ryan (2000).

4. Evidence

4.1. Sample and Descriptive Statistics

The sample consists of firms in the S&P 500 for fiscal years 1999 through 2001. Governance data from 1999 and 2000 was hand-collected from proxy statements in the Lexis-Nexis database.[9] Data for the year 2001 was obtained from the Corporate Library

[8] In unreported tests, we also use the accounting ROA as an alternative control for firm profitability. ROA is negatively related to the accrual-based measure of conservatism and positively related to the market-based measure of conservatism. The use of ROA as a proxy for profitability does not change the inferences regarding the governance or other control variables.

[9] The G-score was obtained from Andrew Metrick's website (http://finance.wharton.upenn.edu/~metrick/data.htm). As the G-score is only available in 1998, 2000, and

historical governance database. The Corporate Library database contains governance data from 2001 through 2003. We did not include 2002-2003 in the sample period as during this period the legal and regulatory environment drastically changed, due to legislation and high profile accounting scandals.

Differences between the classifications of the independence of directors in the hand-collected data and Corporate Library data have been corrected by referencing the proxy statements in question.[10] The top and bottom 1% of the market-based conservatism and accrual-based conservatism are winsorized to mitigate the effects of extreme observations.[11]

Table 1 Panel A presents a summary of how the final sample was obtained. Of the 1,500 S&P 500 firm-years that are in the sample we eliminate 264 firm-years in the financial services and insurance (SIC codes 6000-6999) industries. We eliminate 151 firm-years due to missing observations in Compustat and 71 firm-years due to missing observations in Thompson Financial. Twenty-three firm-years are eliminated due to missing data in the proxy statement. We also eliminate 18 firm-years that underwent significant mergers, as these mergers temporarily inflated the board of directors and skewed the governance measures. Additionally, 55 firm-years are eliminated, as their proxy statements are not available in the Lexis-Nexis database leaving a final sample of 918 firm-years.

2002, the G-score for 1999 is the average G-score for 1998 and 2000, while the G-score for 2001 is the average G-score for 2000 and 2002.

[10] The corporate library database in 2001 considered directors independent only if they were not current employees of the firm. In 2002 and beyond the corporate library expands their definition of outside directors to "outside related". Most of the discrepancies between the hand-collected and Corporate Library data was due to the differential classification of family members.

[11] Results remain unchanged when the regressions are run on the unwinsorized data. Additionally, winsorization at the 2% and 5% levels do not significantly affect the results. Furthermore, winsorization of the top and bottom 1% of independence and outside director ownership do not significantly affect the results.

Table 1 Panel B presents the industry breakdown of the sample firms. Industries are defined as in Barth et al. (1999). The industry breakdown of the S&P 500 is proportionally quite similar to the market as a whole. Each segment contains enough observations to allow for median differencing by industry to control for industry effects in the regressions.

Table 2 Panel A presents the descriptive statistics. The mean value of the accrual-based conservatism measure (CON-ACC) is 0.010. This is slightly higher than the mean value of accrual-based conservatism (0.003) reported in Ahmed et al. (2002). However, the difference is most likely due to the time periods of the studies, as Ahmed et al. (2002) use a sample of S&P 500 firms from 1993-1998 and our sample encompasses accrual data from 1998-2002. During our sample period profitability was lower and thus we can expect more negative accruals. Additionally, Givoly and Hayn (2000) find that conservatism has been increasing over time. The mean value of the book-to-market ratio multiplied by negative one (CON-MKT) is -0.369.

The average percentage of inside directors on the board is 22.7%, which is consistent with the findings of Larcker et al. (2004), Bushman et al. (2004), and Bhojraj and Sengupta (2003).[12] The average director holds 1.4 outside directorships. The most outside directorships held by any one director in the sample is 14. Approximately 31% of the sample has a chairman of the board who is not the current CEO. Consistent with Larcker et al. (2004), outside directors typically hold a small percentage of stock with a median value of .1% and a mean value of 1.3%. The board as a whole (not reported) on average holds approximately 5% of all stock. Institutional investors own approximately

[12] Although the sample periods and sample size is different in Bhojraj and Sengupta (2003), Bushman et al. (2004), and Larcker et al. (2004) we simply use these studies as a point of reference in regards to our hand-collection.

65% of the stock for S&P 500 firms. The means of Leverage, Firm Size, and Sales Growth are consistent with the findings of Ahmed et al. (2002). The level of R&D and Advertising are higher in our sample than in Ahmed et al. (2002). The median differenced descriptive statistics are presented in Table 2 Panel B.

Table 3 Panel A presents the correlations between the conservatism measures and the governance and control variables. The accrual-based measure of conservatism (CON-ACC) and the market-based measure of conservatism (CON-MKT) are positively correlated at the five percent level of significance. Several of the governance variables (Board Size, CEO/Chair Separation, and Avg. # of Directorships) are correlated with the accrual and market-based measures of conservatism. Surprisingly, the percentage of inside directors is negatively correlated with the G-Score. For the control variables, Firm Size and Leverage are negatively correlated to both the accrual and market-based measure of conservatism; while R&D+ADV and CFO/TA are positively related to accounting conservatism. The industry-adjusted correlations are presented in Table 3 Panel B. The univariate correlations should be interpreted with caution, as they do not indicate how the variables jointly affect accounting conservatism and are subject to omitted variables bias.

4.2. Accrual-based Conservatism and Board Characteristics

Table 4, Panel A presents the results of the regression of the 3-year industry-adjusted accrual-based conservatism measure on board characteristics. Column (i) presents the regression without control variables. Column (ii) presents the regression in column (i) augmented by the control variables. Column (iii) presents the results of the

regression using including G-score without control variables. Column (iv) presents the regression including G-score augmented by the control variables. The regressions are estimated separately with and without the G-score as requiring G-scores significantly reduces the number of observations with available data. All t-statistics reported are Newey-West (1987) corrected to control for heteroskedasticity and autocorrelation.[13]

Consistent with our expectation that conservatism is associated with stronger governance, the coefficient on Inside Director % is negative and significant at the 5% level in all four columns. The average number of directorships held is significantly negative in all four columns indicating that each additional directorship decreases the amount of monitoring for the central firm. The coefficient on CEO/Chair Separation is weakly positive and significant in two columns. Consistent with our expectation that monitoring incentives of outside directors will be positively associated with conservatism, the coefficient on Outside Director Ownership is positive and significant at the 5% level in all four specifications. The coefficient on Board Size is generally not significant. The coefficient on G-score is negative and significant in column (iv) at the 10% level. The coefficients on the control variables are consistent with the signs documented in prior work on cross-sectional variation in conservatism, notably Ahmed et al. (2002).

Table 4, Panel B presents the results of the fixed effects regression of the 3-year industry-adjusted accrual-based conservatism measure on board characteristics. The fixed effects regression has two advantages over OLS. First, using panel data in an OLS regression can potentially generate biased estimates, as the observations are not

[13] We calculate Newey-West test statistics based upon a lag length of one year. Results do not significantly change by assuming a lag length of two years.

completely independent. Second, the fixed firm effects pick up the effect of unobservable firm characteristics that are stable over time and correlated with the independent variables (Greene, 2000).[14]

The number of observations drops in the fixed effects regressions as we estimate the fixed effects model on balanced panel data. Therefore we require each firm to have three years of data available. Overall, the results are consistent with Table 4, Panel A, where the percentage of inside directors is negatively related to accounting conservatism and the shares held by outside directors is positively related to accounting conservatism.

4.3. Market-based Conservatism and Board Characteristics

Table 5, Panel A presents the results of the regression of the industry-adjusted market-based measure of conservatism on board characteristics. Column (i) presents the regression without control variables. Column (ii) presents the regression in column (i) augmented by the control variables. Column (iii) presents the results of the regression using including G-score without control variables. Column (iv) presents the regression including G-score augmented by the control variables. All t-statistics reported are Newey-West (1987) corrected to control for heteroskedasticity and autocorrelation.

Following Beaver and Ryan (2000), we include the current and past six year's buy and hold market return as independent variables to control for the delayed recognition component of book-to-market ratio. We obtain similar results if we exclude these returns.

[14] Due to our small sample period, one caveat of our study is the inability to control for cross-sectional correlation using Fama-MacBeth regressions. However, the firm specific intercept, along with the industry differencing, should control for a large portion of possible cross-sectional correlation.

Consistent with our expectation that conservatism is associated with stronger governance, the coefficient on Inside Director % is negative and significant at the 1% level in all four columns. Consistent with our expectation that monitoring incentives of outside directors will be positively associated with conservatism, the coefficient on Outside Director Ownership is positive and significant at the 1% level in columns (i) and (ii) and at the 5% in columns (iii) and (iv). The coefficients on G-score, Avg. # of Directorships, and Board Size are generally not significant.

Table 5, Panel B presents the results of the fixed effects regression of the industry-adjusted market-based conservatism measure on board characteristics. In the fixed effects regression the percentage of shares held by outside directors is positive and significant in all four specifications. Based on a two-tailed test, the percentage of inside directors is significantly negative in only one specification although the coefficient in all other specifications is consistently negative. The lack of significance in a two-tailed test is likely due to the decreased variation from the firm specific intercepts and small sample size.

Overall, results using firm specific measures of conservatism of CON-ACC and CON-MKT we find robust evidence of (i) a negative relation between the percentage of inside directors on the board and conservatism, and (ii) a positive relation between the percentage of a firm's shares owned by outside directors and conservatism.

4.4. Supplementary tests based on Asymmetric Timeliness of Earnings

Our main tests discussed above are based on two firm-specific measures of conservatism. A third commonly used measure of conservatism is Basu's (1997)

asymmetric timeliness of earnings. Given three years of data, we cannot obtain reasonably precise firm-specific asymmetric timeliness coefficients. Nevertheless, as a robustness check on our earlier results, we estimate the asymmetric timeliness coefficient using pooled cross-sectional and time-series regressions and allow the coefficient to vary with variables of interest.

In addition to the general problems with the asymmetric timeliness measure discussed in section 3.2, there are particular problems with this measure for our sample of firms, which are among the top two size deciles of firms in the U.S. More specifically, Givoly et al. (2004) document that the asymmetric timeliness measure for large firms is significantly smaller than for small firms. This finding is inconsistent with prior research that predicts a negative relation between firm size and conservatism due to greater public scrutiny and political costs (Watts and Zimmerman, 1978). Furthermore, smaller magnitudes of the coefficient imply lower power to detect conservatism and thus tests based on this measure for our sample are likely to have low power. To mitigate this estimation bias, we follow the approach suggested by Rowchowdhury and Watts (2005) and cumulate returns and earnings over the past three years in estimating this measure. Rowchowdhury and Watts (2005) demonstrate that the asymmetric timeliness measure is better at capturing conservatism when estimated over several years. Rowchowdhury and Watts (2005) also argue that by increasing the time period over which the asymmetric timeliness measure is estimated the asymmetric timeliness coefficient will be less influenced by rents than the book-to-market ratio.

To test for the effects of firm governance on asymmetric timeliness we employ the following model:

$$(2)\ E_{t,\,t-j}/P_{t,\,t-j-1} = \alpha_0 + \beta_1 D_{t,\,t-j} + \beta_2 R_{t,\,t-j} + \beta_3 D_{t,\,t-j} * R_{t,\,t-j} + \beta_4 \text{in } \%_t + \beta_5 \text{in } \%_t * R_{t,\,t-j} +$$
$$\beta_6 \text{in } \%_t * D_{t,\,t-j} + \beta_7 \text{in } \%_t * D_{t,\,t-j} * R_{t,\,t-j} + \beta_8 \text{Out own}_t +$$
$$\beta_9 \text{Out own}_t * R_{t,\,t-j} + \beta_{10} \text{Out own}_t * D_{t,\,t-j} + \beta_{11} \text{Out own}_t * D_{t,\,t-j} * R_{t,\,t-j}$$

where, $E_{t,,t-j}$ is income before extraordinary items cumulative from year t-j to year t, $P_{t,\,t-j-1}$ is the market value of equity at the end of the year t, $D_{t,t-j}$ is an indicator variable set equal to one if $\text{Ret}_{t,\,t-j}$ is less than one, zero otherwise, $Ret_{t,\,t-j}$ is the buy and hold return starting four months after the end of the fiscal year t-j-1 and ending four months after the end of year t, $in\ \%_t$ is the percentage of directors who are currently employed or have been employed by the firm over the last three years, and/or are related to the firm founder, $Out\ own_t$ is the common shares held by outside directors divided by total common shares outstanding.

As $\text{in } \%_t$ is the percentage of *managerial* directors, we expect that firms with greater managerial representation on the board will result in a lower asymmetric timeliness coefficient. As Out own_t measures the incentive of directors to monitor the firm, we expect that firms with higher levels of ownership by independent directors will result in a higher asymmetric timeliness coefficient.

Table 6 presents the results of pooled regressions used to estimate the asymmetric timeliness coefficient and test for the effects of the board of director characteristics on asymmetric timeliness. We first present the standard Basu regression without backward cumulation (column i) and with backward cumulation (column ii). Consistent with the size decile results of Givoly et al. (2004), we find that the asymmetric timeliness coefficient for our sample is 0.059, which is much smaller than the asymmetric timeliness

coefficient based on large samples. When we use the backward cumulation approach suggested by Rowchowdhury and Watts (2005), the coefficient increases to 0.178, consistent with results in Rowchowdhury and Watts (2005), but it is still considerably smaller than the magnitude found in Rowchowdhury and Watts (2005) due to the large firm bias discussed above.

Contrary to the results in Beekes et al. (2004), we do not find a significant effect of inside director percentage on asymmetric timeliness when we estimate the asymmetric timeliness coefficient without backward cumulation (column iii). However, Beekes et al. (2004) use a sample that has much greater variation in firm size and much larger asymmetric timeliness coefficient (0.211 in their sample compared to 0.062 in ours). Additionally, UK firms tend to recognize bad news in earnings faster than US firms (Pope and Walker, 1999) and accounting differences between the two countries imply greater cross-sectional variation in conservatism for UK firms relative to US firms.

When we use cumulative earnings and returns to include the current and prior three year lags (column iv), we find that firms with *greater* levels of insiders on the board appear to recognize bad news slower than firms with *lower* levels of insiders on the board, consistent with the hypothesized negative relation between inside director percentage and conservatism. Overall, these results are consistent with our findings in Tables 4 and 5.

Monitoring incentives increase as the percentage of ownership in the firm increases, thus we predict a positive relation between asymmetric timeliness and outside director shareholdings. We do not find a significant effect of outside director ownership on asymmetric timeliness when we estimate the asymmetric timeliness coefficient

without backward cumulation (column v). Consistent with our expectations, when earnings and returns are cumulated over several years (column vi), outside share ownership is positively associated with *greater* asymmetric timeliness. Overall, these results are also consistent with our findings about outside director share ownership and conservatism in Tables 4 and 5.

We also provide the pooled regression with both inside director percentage and outside director ownership interacted with asymmetric timeliness in the same regression. When earnings are not cumulated over several years (column vii), we find no relation between governance and asymmetric timeliness. However, when earnings and returns are cumulated over several years (column viii), the percentage of inside directors is negatively related to asymmetric timeliness and higher levels of ownership by outside directors is positively related to asymmetric timeliness.

We also examine the effects of the G-score as calculated by Gompers et al. (2003) on asymmetric timeliness. Due to the additional data restrictions our sample drops from 802 firm-years to 746 firm-years. As a higher G-score indicates lower shareholder rights we expect a negative association between G-score and asymmetric verifiability. However, in untabulated results we do not find any evidence of an association between the G-score and asymmetric timeliness.

Overall, the inferences from the supplementary tests based on the asymmetric timeliness measure (using backward cumulation) support our earlier findings based on the accrual and market-based measures that the percentage of inside directors is negatively related to conservatism and the percentage of ownership by outside directors is positively related to conservatism.

4.5. Robustness Checks

4.5.1. Test for Consistency of OLS in the Presence of Endogeneity

Our main tests above assume that board characteristics are exogenous. However, theoretical work, such as Hermalin and Weisbach (1998), suggests that board composition may be a function of performance. More specifically, they argue that good performance increases the power of the CEO and decreases board independence. Good performance could be achieved by aggressive (or less conservative) accounting. In other words, firms with less independent boards (high inside director percentage) may be firms that are reporting good performance due to less conservative accounting. The potential endogeneity can make OLS estimates inconsistent.

To test for the consistency of OLS vs 2SLS, we perform a Durbin-Wu-Hausman test where the following two equations are simultaneously estimated:

$$(3)\ CON_{i,t} = \beta_0 + \beta_1 \text{ Inside Director \%}_{i,t} + \beta_2 \text{ Avg. \# of Directorships}_{i,t} + \beta_3 \text{ Outside Director Ownership}_{i,t} + \beta_4 \text{ Institutional Ownership}_{i,t} + \beta_5 \text{ Firm Size}_{i,t} + \beta_6 \text{ Sales Growth}_{i,t} + \beta_7 \text{ R\&D+ADV}_{i,t} + \beta_8 \text{ CFO/TA}_{i,t} + \beta_9 \text{ Leverage}_{i,t} + \beta_{10} \text{ Litigation Risk}_{i,t}$$

$$(4)\ \text{Inside Director \%}_{i,t} = \beta_0 + \beta_1 \text{ CON}_{i,t} + \beta_2 \text{ Staggered Elections}_{i,t} + \beta_3 \text{ CEO Tenure}_{i,t} + \beta_4 \text{ Inside Dir. Own}_{i,t} + \beta_5 \text{ CEO/Chair Separation}_{i,t} + \beta_6 \text{ Nom. Comm}_{i,t} + \beta_7 \text{ Insider on Nom. Comm}_{i,t} + \beta_8 \text{ G-Score}_{i,t} + \beta_9 \text{ Board Size}_{i,t} + \beta_{10} \text{ Firm Size}_{i,t} + \beta_{11} \text{ Litigation Risk}_{i,t}$$

where *Litigation Risk* $_{i,t}$ is a dichotomous variable set equal to one if the firm is in a highly litigious industry[15], *Staggered Elections* $_{i,t}$ is a dichotomous variable set equal to one if all directors do not stand for election each year, zero otherwise, *CEO Tenure* $_{i,t}$ is the number of years the CEO has been a member of the board of director, *Inside Dir. Own* $_{i,t}$ represents the common shares held by inside directors divided by total common shares outstanding, *Nom. Comm* $_{i,t}$ is a dichotomous variable set equal to one if the board of directors has established a nominating or governance committee to preside over director nominations and equal to zero otherwise, *Insider on Nom. Comm* $_{i,t}$ is a dichotomous variable set equal to one if an insider sits on either the nominating or governance committee and equal to zero otherwise.

CEO Tenure and Inside Dir. Own are measures of CEO power. Extended tenure by a CEO can lead to greater bargaining power by the CEO and hence influence the selection of directors. Increased shareholdings by executives can provide much needed votes as to the election of directors sympathetic to management. Baker and Gompers (2000) find results consistent with extended CEO tenure and higher CEO shareholdings leading to an increase in the percentage of inside directors.

The existence of a nominating or governance committee is also a reflection of CEO power, as the nominating and governance committees can also affect the composition of the board. A board consisting of a nominating process that is completely independent of management leads to a lower percentage of inside directors on the board (Shivdasani and Yermack, 1999). However, if the CEO or other managerial director is

[15] Litigation risk is discussed further in Section 4.6. As Field et al. (2005) find firms in the technology sector industry have a higher than average litigation risk. Therefore, if the firm operates in a technology sector as defined by Francis and Schipper (1999) we classify them as having high litigation risk.

part of the nominating process the impact of the nominating committee in selecting independent directors is reduced.

We utilize the Durbin-Wu-Hausman (DWH) test to identify if ordinary least squares is yielding consistent estimates of the parameters of the model. The DWH test checks for the consistency of least squares by analyzing a vector of contrasts (defined as differences between two vectors of OLS estimates and 2SLS estimates).[16] A quadratic form in the vector of contrasts, scaled by the precision matrix, produces a chi-square test statistic where the null hypothesis is that OLS is consistent and efficient.[17] This test statistic is often interpreted as a test of exogeneity. However, this is a rather strong interpretation as the test provides evidence on whether OLS or instrumental variable estimation yields more consistent results (Davidson and MacKinnon, 1993). The chi-square statistics for the DWH test using the three-year accrual based measure of conservatism and the market-based measure of conservatism are 10.23 ($p>0.9898$) and 10.40 ($p>0.9885$) respectively.[18] Therefore, we do not reject the null hypothesis that OLS is producing consistent and efficient estimates.

4.5.2. Additional Robustness Checks

We perform a number of additional robustness tests. First, instead of using the simple book-to-market ratio to construct a market-based conservatism measure, we

[16] For a more detailed description of the DWH test please see Davidson and MacKinnon (1993, p. 237-242).
[17] Davidson and MacKinnon (1993) also discuss a regression based DWH test, where residuals from a regression of each endogenous variable (percentage of insiders and accounting conservatism) on all exogenous variables are included in the original models. If the coefficient on the residuals is significantly different from zero, then OLS is not consistent. Utilizing the regression based form of the DWH test we find similar results and cannot reject the null hypothesis that OLS is giving consistent estimates.
[18] Based on the 23 degrees of freedom of our simultaneous equations, it would take a chi-square of 35.17 (41.64) to reject the null hypothesis at the 5% (1%) level.

estimate a firm-specific bias component in the book-to-market ratio as in Beaver and Ryan (2000) and construct a conservatism measure based on this bias component. The results (not reported) are qualitatively similar to those reported in Table 5.

Second, we also conduct tests utilizing a five-year measure of CON-ACC. Where CON-ACC, is income before extraordinary items less cash flows from operations plus depreciation expense deflated by average total assets, and averaged over a five-year period centered on year t, multiplied by negative one. Results are generally comparable with the findings reported in Table 4, however, the percentage of independent directors and percentage shares owned by outside directors are often significant at the 10% level.

Third, we repeat our tests using year-by-year annual data. The regressions for the accrual-measure of conservatism show consistent results in all years regarding shares held by outside directors. However, in 2001 the coefficient on percentage of inside directors is negative but insignificant. The lack of significance on director independence may be due to the changing legal and regulatory environment in 2001 and 2002. During this time period executive directors may have adapted their financial accounting policies to avoid regulation. We find consistent results in each year between 1999 and 2001 when we use the market-based measure of conservatism.

Fourth, we proxy for the wealth effects of ownership rather (price multiplied by shares owned) than the control aspect of ownership (percentage of shares owned) and find the amount outside directors have invested in the firm is positively related to accounting conservatism.

4.6. Alternative Explanations

Our tests discussed above control for a number of observable firm characteristics, unobservable firm characteristics that are constant over time, and industry. In this sub-section, we discuss two possible alternative explanations for our results.

First, a potential explanation of our results is that firms that face high litigation risk choose both more conservative accounting and more independent boards to mitigate the risk. Field et al. (2005) find that firms in the technology sector have a higher than average litigation risk. To assess whether technology firms with high litigation risk drive our results, we repeat our tests after dropping technology firms, as defined by Francis and Schipper (1999), from our sample. If technology firms drive the results, we would not expect to find any relation between conservatism and board independence for the remaining firms. Dropping technology firms results in reducing our sample to 685 firm-years for the accrual-based measure and 640 firm-years for the market-based measure. Despite the smaller sample size, the results (not reported) are qualitatively similar to those reported in Table 4 and Table 5. Thus, our results are unlikely to be driven by high litigation risk firms.

A second potential explanation of our results is earnings management. Previous studies, such as Klein (2002b), Xie et al. (2003), and Bowen et al. (2004), find that the percentage of inside directors on the board is related to income increasing earnings management. However, this is unlikely for two reasons. First, the studies examining earnings management and board characteristics use accruals or discretionary accruals for a single period as a proxy for earnings management in that period. To the extent that accruals or discretionary accruals reflect earnings management, they are likely to reverse

in the next period. Because we use operating accruals averaged over a 3-year period to measure conservatism, the managed portion of accruals will very likely reverse within the 3-year window. Second, we obtain similar results when we use a market-based measure of conservatism or the asymmetric timeliness measure (based on backward cumulation). Both of these measures are unlikely to be affected significantly by earnings management reducing the likelihood of our results reflecting earnings management rather than conservatism.

5. Conclusion

We provide evidence on the role of conservatism in corporate governance. Conservatism is potentially useful in corporate governance for at least three reasons. First, conservatism reduces the likelihood of over-compensation of management by constraining possible overstatements of assets and earnings. Second, conservatism allows directors to more readily identify negative-NPV projects and take corrective actions to limit losses. Third, conservatism reduces managers ex ante incentives to engage in negative Net Present Value projects. These arguments suggest that conservatism will be positively related to the strength of board independence and monitoring incentives.

Using three different proxies for conservatism, we find robust evidence of (i) a negative relation between the percentage of inside directors on the board and conservatism, and (ii) a positive relation between the percentage of a firm's shares owned by outside directors and conservatism. Our results hold after controlling for industry, firm size, leverage, growth opportunities, institutional ownership, inside director

ownership, and unobservable firm characteristics that are stable over time. We also examine two alternative explanations and explore whether conservatism and governance are jointly determined. Overall, our findings are consistent with the notion that accounting conservatism plays an important role in corporate governance.

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Table 1, Panel A
Sample Selection

Number of firm years in the S&P 500 1999-2001	1,500
Financial Services and Insurance Firms	(264)
Missing Compustat data	(151)
Missing Thompson Financial data	(71)
Missing data in the proxy sheet	(23)
Significant merger inflating board size	(18)
Proxy statements not listed in Lexis Nexis	(55)
Final Sample	918

Table 1, Panel B
Sample Breakdown Based on Industry

	SIC CODES	Firm Years	Distinct Firms
Mining and Construction	1000-1199, 1400-1499	14	6
Food	2000-2111	47	17
Textiles, Printing, and Publishing	2200-2780	67	25
Chemicals	2800-2824, 2840-2899	47	16
Pharmaceuticals	2830-2836	44	16
Extractive Industries	2900-2999, 1300-1399	47	19
Durable Manufacturers	3000-3569, 3580-3669, 3680-3999	224	84
Computers	7370-7379, 3570-3579, 3670-3679	135	51
Transportation	4000-4899	44	19
Utilities	4900-4999	93	35
Retail	5000-5999	109	40
Service	7000-7369, 7380-8999	47	17

Table 2, Panel A
Descriptive Statistics (Without Industry Adjustment)

	Mean	Std. Dev	Min	25%	Median	75%	Max
CON ACC	0.010	0.035	-0.084	-0.009	0.007	0.025	0.140
CON MKT	-0.369	0.289	-2.087	-0.508	-0.302	-0.157	0.253
Inside Director %	0.227	0.120	0.000	0.143	0.200	0.286	0.714
Avg # of Directorships	1.434	0.684	0.000	0.900	1.400	1.889	4.333
CEO/Chair Separation	0.306	0.461	0.000	0.000	0.000	1.000	1.000
Outside Director Ownership	0.013	0.051	0.000	0.000	0.001	0.004	0.765
Board Size	2.351	0.248	1.386	2.197	2.398	2.485	3.135
G-Score	9.739	2.526	3.000	8.000	10.000	11.500	16.000
Institutional Ownership	0.644	0.152	0.000	0.544	0.663	0.753	0.994
Inside Director Ownership	0.033	0.071	0.000	0.001	0.006	0.024	0.571
Firm Size	8.770	1.132	5.694	7.873	8.767	9.619	12.688
Sales Growth	0.151	0.084	-0.611	0.000	0.084	0.190	7.110
R&D+ADV / Total Sales	0.053	0.073	0.000	0.000	0.024	0.073	0.386
CFO/TA	0.125	0.078	-0.264	0.071	0.115	0.169	0.477
Leverage	0.221	0.160	0.000	0.098	0.220	0.317	0.987

Table 2, Panel B
Descriptive Statistics (With Industry Adjustment)

	Mean	Std. Dev	Min	25%	Median	75%	Max
CON ACC	0.002	0.034	-0.098	-0.017	0.000	0.018	0.138
CON MKT	-0.052	0.269	-1.768	-0.155	0.000	0.100	0.705
Inside Director %	0.016	0.117	-0.209	-0.068	0.000	0.073	0.523
Avg # of Directorships	0.055	0.673	-1.698	-0.418	0.000	0.464	2.875
CEO/Chair Separation	0.033	0.484	0.000	0.000	0.000	0.000	1.000
Outside Director Ownership	0.012	0.050	-0.012	-0.001	0.000	0.003	0.765
Board Size	-0.003	0.226	-0.875	-0.134	0.000	0.154	0.629
G-Score	-0.044	2.400	-7.500	-1.500	0.000	1.500	6.000
Institutional Ownership	-0.013	0.142	-0.684	-0.095	0.000	0.077	0.443
Inside Director Ownership	0.025	0.070	-0.033	-0.003	0.000	0.013	0.564
Firm Size	0.056	1.036	-2.588	-0.661	0.000	0.705	4.306
Sales Growth	0.057	0.385	-0.780	-0.074	0.000	0.091	6.583
R&D+ADV / Total Sales	0.009	0.054	-0.159	-0.010	0.000	0.026	0.283
CFO/TA	0.005	0.072	-0.398	-0.036	0.000	0.041	0.326
Leverage	0.019	0.138	-0.413	-0.060	0.000	0.091	0.770

CON-ACC $_{i,t}$ = (Net income before extraordinary items plus depreciation expense less cash flows from operations, where all variables are scaled by average total assets and averaged over three years centered around year t) multiplied by −1. **CON-MKT** $_{i,t}$ = Book-to-market ratio multiplied by −1. **Inside Director %** $_{i,t}$ = Percentage of directors who are currently employed or have been employed by the firm for the past three years, are related to current management, and/or are related to the firm-founder. **G-Score** $_{i,t}$ = Governance index of 24 governance provisions as calculated in Gompers et al. (2003), the G-score increases as shareholder rights decrease**. Avg. # of Directorships** $_{i,t}$ = Total directorships held by the board of directors divided by the total number of directors. **CEO/Chair Separation** $_{i,t}$ = Dummy variable equal to one if the CEO is not chairman of the board, zero otherwise. **Board Size** $_{i,t}$ = Natural log of the number of directors. **Institutional Ownership** $_{i,t}$ = Total common shares held by institutional investors divided by total common shares outstanding. **Outside Director Ownership** $_{i,t}$ = The common shares held by outside directors divided by total common shares outstanding. **Firm Size** $_{i,t}$ = Natural log of average total assets. **Sales Growth** $_{i,t}$ = Percentage of annual growth in total sales. **R&D+ADV** $_{i,t}$ = Research and development costs plus advertising expense divided by sales. **CFO/TA** $_{i,t}$ = Cash flows from operations divided by average total assets. **Leverage** $_{i,t}$ = Total long-term liabilities divided by average total assets.

Table 3, Panel A
Correlations Table (Without Industry Adjustment)

Spearman (Pearson) Correlations are Above (Below) the Diagonal

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 CON ACC	1	**0.07**	0.03	**-0.07**	0.09	-0.02	**-0.09**	0.01	0.06	0.00	**-0.08**	**-0.12**	**0.14**	**0.29**	-0.06
2 CON MKT	**0.08**	1	0.02	-0.05	**0.07**	**0.07**	**-0.10**	**-0.17**	-0.01	0.08	**-0.23**	**0.15**	**0.42**	**0.53**	**-0.31**
3 Inside Director %	0.02	0.02	1	**-0.29**	**0.23**	0.00	**-0.20**	**-0.18**	-0.03	**0.51**	**-0.28**	**0.14**	**0.11**	**0.16**	**-0.21**
4 Avg # of Directorships	**-0.07**	-0.06	**-0.30**	1	**-0.12**	**-0.17**	**0.24**	**0.13**	0.05	**-0.23**	**0.36**	**-0.16**	0.02	**-0.08**	0.06
5 CEO/Chair Separation	**0.10**	0.04	**0.24**	**-0.12**	1	0.01	**-0.07**	-0.03	0.00	0.06	-0.06	**-0.07**	0.06	0.04	-0.03
6 Outside Director Ownership	0.05	0.06	-0.03	-0.02	0.02	1	-0.02	-0.01	0.04	0.38	**-0.30**	**0.10**	-0.04	-0.01	**-0.07**
7 Board Size	**-0.09**	**-0.10**	**-0.24**	**0.25**	-0.05	**0.10**	1	**0.21**	**-0.18**	**-0.21**	**0.48**	-0.05	**-0.21**	**-0.09**	**0.22**
9 G-Score	-0.05	**-0.11**	**-0.17**	**0.09**	-0.02	-0.02	**0.23**	1	**0.16**	**-0.12**	0.02	**-0.10**	**-0.07**	-0.01	**0.19**
9 Institutional Ownership	0.01	-0.02	-0.05	0.05	0.01	**-0.07**	**-0.17**	**0.16**	1	-0.01	**-0.21**	0.03	0.00	0.01	0.05
10 Inside Director Ownership	0.01	0.06	**0.39**	**-0.18**	**0.07**	0.04	**-0.14**	**-0.16**	**-0.27**	1	**-0.36**	**0.15**	-0.01	0.06	**0.16**
11 Firm Size	**-0.08**	**-0.21**	**-0.26**	**0.33**	-0.05	-0.04	**0.49**	-0.01	**-0.21**	**-.013**	1	0.01	**-0.25**	**-0.28**	**0.34**
12 Sales Growth	0.03	**0.07**	0.04	**-0.13**	-0.05	0.02	-0.03	**-0.09**	0.04	-0.01	**0.07**	1	**-0.12**	**0.09**	0.03
13 R&D+ADV / Total Sales	**0.24**	**0.31**	**0.13**	-0.06	0.06	-0.05	**-0.26**	**-0.13**	-0.04	-0.03	**-0.22**	0.00	1	**0.29**	**-0.46**
14 CFO/TA	**0.33**	**0.46**	**0.13**	**-0.08**	0.04	0.02	**-0.14**	-0.04	0.01	0.04	**-0.26**	0.04	**0.27**	1	**-0.33**
15 Leverage	**-0.08**	**-0.20**	**-0.16**	0.05	-0.01	**0.07**	**0.20**	**0.17**	0.06	-0.07	**0.30**	**0.12**	**-0.41**	**-0.30**	1

Correlations in **bold** represent significance at the 5% using a two-tailed test.

CON-ACC $_{i,t}$ = (Net income before extraordinary items plus depreciation expense less cash flows from operations, where all variables are scaled by average total assets and averaged over three years centered around year t) multiplied by −1. **CON-MKT** $_{i,t}$ = Book-to-market ratio multiplied by −1. **Inside Director %** $_{i,t}$ = Percentage of directors who are currently employed or have been employed by the firm for the past three years, are related to current management, and/or are related to the firm-founder. **Avg. # of Directorships** $_{i,t}$ = Total directorships held by the board of directors divided by the total number of directors. **CEO/Chair Separation** $_{i,t}$ = Dummy variable equal to one if the CEO is not chairman of the board, zero otherwise. **Outside Director Ownership** $_{i,t}$ = The common shares held by outside directors divided by total common shares outstanding. **Board Size** $_{i,t}$ = Natural log of the number of directors. **G-Score** $_{i,t}$ = Governance index of 24 governance provisions as calculated in Gompers et al. (2003), the G-score increases as shareholder rights decrease. **Institutional Ownership** $_{i,t}$ = Total common shares held by institutional investors divided by total common shares outstanding. **Inside Director Ownership** $_{i,t}$ = The common shares held by inside directors divided by total common shares outstanding. **Firm Size** $_{i,t}$ = Natural log of average total assets. **Sales Growth** $_{i,t}$ = Percentage of annual growth in total sales. **R&D+ADV** $_{i,t}$ = Research and development costs plus advertising expense divided by sales. **CFO/TA** $_{i,t}$ = Cash flows from operations divided by average total assets. **Leverage** $_{i,t}$ = Total long-term liabilities divided by average total assets.

Table 3, Panel B
Correlations Table (With Industry Adjustment)

Spearman (Pearson) Correlations are Above (Below) the Diagonal

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 CON ACC	1	0.04	-0.02	-0.06	0.00	0.01	-0.04	0.01	0.01	0.01	**-0.07**	**-0.07**	**0.14**	**0.30**	0.02
2 CON MKT	**0.06**	1	0.02	**-0.07**	**0.09**	0.05	-0.04	**-0.13**	-0.06	0.05	**-0.12**	**0.21**	**0.23**	**0.46**	**-0.14**
3 Inside Director %	-0.02	0.02	1	**-0.31**	**0.23**	-0.02	**-0.14**	**-0.16**	**-0.10**	**0.49**	**-0.22**	**0.16**	**0.07**	**0.10**	**-0.12**
4 Avg # of Directorships	**-0.07**	-0.06	**-0.32**	1	**-0.12**	**-0.20**	**0.25**	**0.11**	0.06	**-0.31**	**0.42**	**-0.13**	-0.03	**-0.09**	0.06
5 CEO/Chair Separation	0.01	0.06	**0.22**	**-0.13**	1	**0.07**	-0.04	-0.04	0.01	**0.12**	**-0.10**	0.06	**0.08**	**0.07**	-0.04
6 Outside Director Ownership	**0.07**	**0.07**	-0.02	-0.03	0.03	1	-0.04	**-0.07**	-0.04	**0.29**	**-0.23**	**0.11**	0.01	-0.03	-0.05
7 Board Size	0.01	0.00	**-0.19**	**0.24**	-0.03	0.05	1	**0.19**	**-0.15**	**-0.21**	**0.44**	**-0.09**	**-0.11**	-0.05	0.06
8 G-Score	-0.02	**-0.08**	**-0.17**	**0.08**	-0.03	-0.07	**0.22**	1	**0.09**	**-0.16**	0.06	-0.06	-0.03	0.00	**0.17**
9 Institutional Ownership	-0.02	-0.05	**-0.11**	0.05	0.01	-0.06	**-0.15**	**0.10**	1	**-0.14**	**-0.11**	**0.07**	-0.05	**-0.07**	**0.13**
10 Inside Director Ownership	0.01	0.04	**0.38**	**-0.20**	**0.07**	0.04	**-0.11**	**-0.17**	**-0.33**	1	**-0.30**	**0.13**	0.01	0.03	**-0.11**
11 Firm Size	**-0.07**	**-0.11**	**-0.22**	**0.38**	**-0.08**	-0.05	**0.46**	0.01	**-0.14**	**-0.12**	1	-0.05	**-0.11**	**-0.23**	**0.21**
12 Sales Growth	0.06	**0.10**	**0.07**	**-0.09**	0.03	0.03	-0.04	-0.06	0.06	-0.00	0.02	1	-0.03	**0.13**	0.03
13 R&D+ADV / Total Sales	**0.20**	0.14	0.06	-0.06	0.05	0.00	-0.06	-0.04	-0.06	-0.03	**-0.10**	0.05	1	**0.19**	**-0.18**
14 CFO/TA	**0.34**	0.39	**0.09**	**-0.07**	0.04	0.03	-0.06	-0.02	-0.05	0.04	**-0.22**	0.05	**0.15**	1	**-0.23**
15 Leverage	**0.00**	-0.05	-0.06	0.06	-0.01	0.03	0.04	**0.16**	**0.16**	-0.03	**0.17**	**0.11**	**-0.17**	**-0.20**	1

Correlations in **bold** represent significance at the 5% using a two-tailed test.

CON-ACC $_{i,t}$ = (Net income before extraordinary items plus depreciation expense less cash flows from operations, where all variables are scaled by average total assets and averaged over three years centered around year t) multiplied by −1. **CON-MKT** $_{i,t}$ = Book-to-market ratio multiplied by −1. **Inside Director %** $_{i,t}$ = Percentage of directors who are currently employed or have been employed by the firm for the past three years, are related to current management, and/or are related to the firm-founder. **Avg. # of Directorships** $_{i,t}$ = Total directorships held by the board of directors divided by the total number of directors. **CEO/Chair Separation** $_{i,t}$ = Dummy variable equal to one if the CEO is not chairman of the board, zero otherwise. **Outside Director Ownership** $_{i,t}$ = The common shares held by outside directors divided by total common shares outstanding. **Board Size** $_{i,t}$ = Natural log of the number of directors. **G-Score** $_{i,t}$ = Governance index of 24 governance provisions as calculated in Gompers et al. (2003), the G-score increases as shareholder rights decrease. **Institutional Ownership** $_{i,t}$ = Total common shares held by institutional investors divided by total common shares outstanding. **Inside Director Ownership** $_{i,t}$ = The common shares held by inside directors divided by total common shares outstanding. **Firm Size** $_{i,t}$ = Natural log of average total assets. **Sales Growth** $_{i,t}$ = Percentage of annual growth in total sales. **R&D+ADV** $_{i,t}$ = Research and development costs plus advertising expense divided by sales. **CFO/TA** $_{i,t}$ = Cash flows from operations divided by average total assets. **Leverage** $_{i,t}$ = Total long-term liabilities divided by average total assets.

Table 4, Panel A
Regression of Industry-Adjusted 3 –year Accrual-Based Conservatism Measure on Industry-Adjusted Governance Characteristics & Control Variables

Dependent Variable: Industry Adjusted 3-Year Accrual Conservatism

		(i)	(ii)	(iii)	(iv)
Intercept	?	0.001 (0.81)	-0.001 (-1.01)	-0.000 (-0.29)	-0.002 (-1.90)*
Board Characteristics					
Inside Director %	–	-0.038 (-2.18)**	-0.049 (-2.58)***	-0.029 (-2.18)**	-0.038 (-2.84)***
Avg. # of Directorships	?	-0.007 (-2.37)**	-0.006 (-2.36)**	-0.005 (-2.25)**	-0.004 (-2.09)**
CEO/Chair Separation	+	0.004 (1.58)*	0.003 (1.38)	0.005 (1.86)**	0.004 (1.70)*
Outside Director Ownership	+	0.022 (2.43)***	0.019 (2.35)**	0.021 (2.32)**	0.013 (2.12)**
Board Size	?	0.004 (0.62)	0.001 (0.11)	0.011 (1.65)*	0.010 (1.50)
G-Score	–	– –	– –	-0.001 (-1.47)*	-0.001 (-1.92)*
Control Variables					
Institutional Ownership	?		-0.014 (-0.88)		-0.002 (-0.20)
Inside Director Ownership	?		0.001 (0.41)		0.013 (0.64)
Firm Size	+		0.002 (1.66)*		0.001 (1.06)
Sales Growth	–		0.008 (0.83)		-0.008 (-1.73)*
R&D+ADV	+		0.138 (2.39)**		0.053 (2.20)**
CFO/TA	+		0.132 (3.58)**		0.166 (7.09)***
Leverage	+		0.010 (0.69)		0.0232 (2.51)**
Sample Period		1999-2001	1999-2001	1999-2001	1999-2001
N		918	918	833	833
Adjusted R-Square		0.0126	0.0862	0.0185	0.1321

The t-statistics in columns (i)-(iv) are Newey-West corrected. Significance is based on two-tailed tests. */**/*** represents significance at the 10/5/1% level.

CON-ACC $_{i,t}$ = (Net income before extraordinary items plus depreciation expense less cash flows from operations, where all variables are scaled by average total assets and averaged over three years centered around year t) multiplied by −1. **CON-MKT** $_{i,t}$ = Book-to-market ratio multiplied by −1. **Inside Director %** $_{i,t}$ = Percentage of directors who are currently employed or have been employed by the firm for the past three years, are related to current management, and/or are related to the firm-founder. **Avg. # of Directorships** $_{i,t}$ = Total directorships held by the board of directors divided by the total number of directors. **CEO/Chair Separation** $_{i,t}$ = Dummy variable equal to one if the CEO is not chairman of the board, zero otherwise. **Outside Director Ownership** $_{i,t}$ = The common shares held by outside directors divided by total common shares outstanding. **G-Score** $_{i,t}$ = Governance index of 24 governance provisions as calculated in Gompers et al. (2003), the G-score increases as shareholder rights decrease. **Institutional Ownership** $_{i,t}$ = Total common shares held by institutional investors divided by total common shares outstanding. **Inside Director Ownership** $_{i,t}$ = The common shares held by inside directors divided by total common shares outstanding. **Board Size** $_{i,t}$ = Natural log of the number of directors. **Firm Size** $_{i,t}$ = Natural log of average total assets. **Sales Growth** $_{i,t}$ = Percentage of annual growth in total sales. **R&D+ADV** $_{i,t}$ = Research and development costs plus advertising expense divided by sales. **CFO/TA** $_{i,t}$ = Cash flows from operations divided by average total assets. **Leverage** $_{i,t}$ = Total long-term liabilities divided by average total assets.

Table 4, Panel B
Fixed Effects Regression of Industry-Adjusted 3 –year Accrual-Based Conservatism Measure on Industry-Adjusted Governance Characteristics & Control Variables

Dependent Variable: Industry Adjusted 3-Year Accrual Conservatism

		(i)	(ii)	(iii)	(iv)
Intercept	?	0.008 (0.79)	0.019 (1.94)*	0.008 (0.79)	0.020 (1.98)**
Board Characteristics					
Inside Director %	–	-0.030 (-1.97)**	-0.033 (-2.20)**	-0.033 (-2.11)**	-0.038 (-2.42)**
Avg. # of Directorships	?	0.003 (1.17)	0.002 (0.95)	0.004 (1.34)	0.003 (1.00)
CEO/Chair Separation	+	-0.001 (-0.71)	-0.001 (-0.33)	-0.002 (0.85)	-0.001 (-0.48)
Outside Director Ownership	+	0.070 (1.68)*	0.072 (1.74)*	0.081 (1.88)*	0.083 (1.97)**
Board Size	?	-0.011 (-1.26)	-0.008 (-0.90)	-0.013 (-1.44)	-0.010 (-1.15)
G-Score	–	– –	– –	-0.000 (-0.07)	0.000 (0.12)
Control Variables					
Institutional Ownership	?		-0.019 (-1.61)		-0.016 (-1.17)
Inside Director Ownership	?		-0.020 (-0.81)		-0.016 (-0.53)
Firm Size	+		0.012 (2.94)***		0.013 (3.00)***
Sales Growth	–		-0.005 (-2.08)**		-0.006 (-2.19)**
R&D+ADV	+		0.071 (1.64)		0.075 (1.69)*
CFO/TA	+		0.007 (0.41)		0.009 (0.53)
Leverage	+		0.012 (0.92)		0.012 (0.84)
Sample Period		1999-2001	1999-2001	1999-2001	1999-2001
N		712	712	678	678
Adjusted R-Square		0.7683	0.7777	0.7668	0.7765

The t-statistics in columns (i)-(iv) are Newey-West corrected. Significance is based on two-tailed tests. */**/*** represents significance at the 10/5/1% level.

CON-ACC $_{i,t}$ = (Net income before extraordinary items plus depreciation expense less cash flows from operations, where all variables are scaled by average total assets and averaged over three years centered around year t) multiplied by −1. **CON-MKT** $_{i,t}$ = Book-to-market ratio multiplied by −1. **Inside Director %** $_{i,t}$ = Percentage of directors who are currently employed or have been employed by the firm for the past three years, are related to current management, and/or are related to the firm-founder. **Avg. # of Directorships** $_{i,t}$ = Total directorships held by the board of directors divided by the total number of directors. **CEO/Chair Separation** $_{i,t}$ = Dummy variable equal to one if the CEO is not chairman of the board, zero otherwise. **Outside Director Ownership** $_{i,t}$ = The common shares held by outside directors divided by total common shares outstanding. **G-Score** $_{i,t}$ = Governance index of 24 governance provisions as calculated in Gompers et al. (2003), the G-score increases as shareholder rights decrease. **Institutional Ownership** $_{i,t}$ = Total common shares held by institutional investors divided by total common shares outstanding. **Inside Director Ownership** $_{i,t}$ = The common shares held by inside directors divided by total common shares outstanding. **Board Size** $_{i,t}$ = Natural log of the number of directors. **Firm Size** $_{i,t}$ = Natural log of average total assets. **Sales Growth** $_{i,t}$ = Percentage of annual growth in total sales. **R&D+ADV** $_{i,t}$ = Research and development costs plus advertising expense divided by sales. **CFO/TA** $_{i,t}$ = Cash flows from operations divided by average total assets. **Leverage** $_{i,t}$ = Total long-term liabilities divided by average total assets.

Table 5, Panel A
Regression of Industry-Adjusted Market-Based Conservatism Measure on Industry-Adjusted Governance Characteristics & Control Variables

Dependent Variable: Industry Adjusted Book-to-Market Ratio * -1

		(i)	(ii)	(iii)	(iv)
Intercept	?	-0.082 (-9.05)***	-0.089 (-9.75)***	-0.082 (-8.67)***	-0.085 (-9.21)***
Board Characteristics					
Inside Director %	–	-0.260 (-2.89)***	-0.220 (-2.65)***	-0.259 (-2.96)***	-0.224 (-2.73)***
Avg. # of Directorships	?	-0.007 (-0.51)	-0.000 (-0.00)	-0.019 (-1.30)	-0.007 (-0.48)
CEO/Chair Separation	+	0.025 (1.42)*	0.021 (1.23)	0.009 (0.57)	0.008 (0.52)
Outside Director Ownership	+	0.425 (3.65)***	0.339 (3.25)***	0.376 (2.31)**	0.247 (2.18)**
Board Size	?	0.022 (0.64)	0.023 (0.58)	0.027 (0.72)	0.041 (0.94)
G-Score	–	– –	– –	-0.001 (-0.22)	-0.002 (-0.52)
Control Variables					
Institutional Ownership	?		-0.075 (-1.25)		-0.149 (-2.51)***
Inside Director Ownership	?		0.039 (0.36)		0.058 (0.56)
Firm Size	+		0.003 (0.30)		-0.008 (-0.90)
Sales Growth	–		0.004 (0.23)		-0.001 (-0.12)
R&D+ADV	+		0.256 (1.94)*		0.178 (1.36)
CFO/TA	+		1.133 (9.62)***		0.968 (8.60)***
Leverage	+		0.000 (0.01)		0.006 (0.09)
Included Lagged Returns		YES	YES	YES	YES
Sample Period		1999-2001	1999-2001	1999-2001	1999-2001
N		850	850	786	786
Adjusted R-Square		0.1918	0.2904	0.2453	0.3279

Significance is based on two-tailed tests. */**/*** represents significance at the 10/5/1% level.

CON-ACC $_{i,t}$ = (Net income before extraordinary items plus depreciation expense less cash flows from operations, where all variables are scaled by average total assets and averaged over three years centered around year t) multiplied by −1. **CON-MKT** $_{i,t}$ = Book-to-market ratio multiplied by −1. **Inside Director %** $_{i,t}$ = Percentage of directors who are currently employed or have been employed by the firm for the past three years, are related to current management, and/or are related to the firm-founder. **Avg. # of Directorships** $_{i,t}$ = Total directorships held by the board of directors divided by the total number of directors. **CEO/Chair Separation** $_{i,t}$ = Dummy variable equal to one if the CEO is not chairman of the board, zero otherwise. **Outside Director Ownership** $_{i,t}$ = The common shares held by outside directors divided by total common shares outstanding. **G-Score** $_{i,t}$ = Governance index of 24 governance provisions as calculated in Gompers et al. (2003), the G-score increases as shareholder rights decrease. **Institutional Ownership** $_{i,t}$ = Total common shares held by institutional investors divided by total common shares outstanding. **Inside Director Ownership** $_{i,t}$ = The common shares held by inside directors divided by total common shares outstanding. **Board Size** $_{i,t}$ = Natural log of the number of directors. **Firm Size** $_{i,t}$ = Natural log of average total assets. **Sales Growth** $_{i,t}$ = Percentage of annual growth in total sales. **R&D+ADV** $_{i,t}$ = Research and development costs plus advertising expense divided by sales. **CFO/TA** $_{i,t}$ = Cash flows from operations divided by average total assets. **Leverage** $_{i,t}$ = Total long-term liabilities divided by average total assets.

Table 5, Panel B
Fixed Effects Regression of Industry-Adjusted Market-Based Conservatism Measure on Industry-Adjusted Governance Characteristics & Control Variables

Dependent Variable: Industry Adjusted Book-to-Market Ratio * -1

		(i)	(ii)	(iii)	(iv)
Intercept	?	-0.222 (-3.64)***	-0.267 (-4.25)***	-0.220 (-3.57)***	-0.263 (-4.62)***
Board Characteristics					
Inside Director %	–	-0.239 (-1.53)	-0.237 (-1.65)*	-0.233 (-1.43)	-0.226 (-1.46)
Avg. # of Directorships	?	0.001 (0.70)	0.012 (0.70)	0.006 (0.34)	0.007 (0.43)
CEO/Chair Separation	+	0.011 (0.99)	0.007 (0.60)	0.012 (0.96)	0.007 (0.59)
Outside Director Ownership	+	0.070 (1.72)*	0.074 (1.71)*	0.083 (1.80)*	0.082 (1.85)*
Board Size	?	0.084 (1.67)	0.072 (1.43)	0.086 (1.65)	0.076 (1.46)
G-Score	–	– –	– –	0.008 (0.80)	0.011 (-1.03)
Control Variables					
Institutional Ownership	?		0.078 (1.09)		0.014 (0.17)
Inside Director Ownership	?		0.069 (0.45)		0.133 (0.75)
Firm Size	+		-0.055 (-2.24)**		-0.053 (-2.15)**
Sales Growth	–		-0.002 (-0.13)		-0.004 (-0.27)
R&D+ADV	+		0.367 (1.41)		0.417 (1.58)
CFO/TA	+		0.187 (1.94)*		0.197 (1.99)**
Leverage	+		0.062 (0.79)		0.051 (0.62)
Included Lagged Returns		YES	YES	YES	YES
Sample Period		1999-2001	1999-2001	1999-2001	1999-2001
N		714	714	678	678
Adjusted R-Square		0.8929	0.8966	0.8929	0.8959

Significance is based on two-tailed tests. */**/*** represents significance at the 10/5/1% level.

CON-ACC $_{i,t}$ = (Net income before extraordinary items plus depreciation expense less cash flows from operations, where all variables are scaled by average total assets and averaged over three years centered around year t) multiplied by −1. **CON-MKT** $_{i,t}$ = Book-to-market ratio multiplied by −1. **Inside Director %** $_{i,t}$ = Percentage of directors who are currently employed or have been employed by the firm for the past three years, are related to current management, and/or are related to the firm-founder. **Avg. # of Directorships** $_{i,t}$ = Total directorships held by the board of directors divided by the total number of directors. **CEO/Chair Separation** $_{i,t}$ = Dummy variable equal to one if the CEO is not chairman of the board, zero otherwise. **Outside Director Ownership** $_{i,t}$ = The common shares held by outside directors divided by total common shares outstanding. **G-Score** $_{i,t}$ = Governance index of 24 governance provisions as calculated in Gompers et al. (2003), the G-score increases as shareholder rights decrease. **Institutional Ownership** $_{i,t}$ = Total common shares held by institutional investors divided by total common shares outstanding. **Inside Director Ownership** $_{i,t}$ = The common shares held by inside directors divided by total common shares outstanding. **Board Size** $_{i,t}$ = Natural log of the number of directors. **Firm Size** $_{i,t}$ = Natural log of average total assets. **Sales Growth** $_{i,t}$ = Percentage of annual growth in total sales. **R&D+ADV** $_{i,t}$ = Research and development costs plus advertising expense divided by sales. **CFO/TA** $_{i,t}$ = Cash flows from operations divided by average total assets. **Leverage** $_{i,t}$ = Total long-term liabilities divided by average total assets.

Table 6
Relation Between Asymmetric Timeliness and Corporate Governance

Dependent Variable: Income Before Extraordinary Items Divided by the Market Value of Equity at the Beginning of the Year

		(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
	Predicted Sign	j=0	j=3	j=0	j=3	j=0	j=3	j=0	j=3
Intercept	?	0.046 (11.52)***	0.237 (26.04)***	0.047 (1.76)***	0.170 (2.29)**	0.053 (2.21)**	0.178 (2.72)***	0.046 (1.71)*	0.180 (2.77)**
D	-	-0.002 (-0.31)	-0.073 (-3.52)***	-0.026 (-1.97)	0.008 (0.25)	-0.004 (-0.64)	-0.070 (-3.28)***	-0.024 (-1.78)*	0.002 (0.55)
R	+	0.009 (1.08)	0.032 (5.69)***	0.006 (0.30)	0.031 (2.48)***	0.009 (1.01)	0.047 (7.64)***	0.008 (0.43)	0.003 (2.67)***
D*R	+	0.059 (3.12)***	0.178 (2.91)***	0.030 (0.47)	0.476 (3.69)***	0.039 (1.98)**	0.137 (2.27)**	0.035 (0.88)	0.455 (3.52)***
in %	?			0.013 (-0.35)	-0.066 (-0.88)			-0.013 (-0.34)	-0.075 (1.01)
in % *R	?			0.00 (0.15)	0.022 (0.60)**			0.009 (0.13)	0.041 (1.14)
in % *D	?			0.091 (1.71)*	-0.353 (-1.99)**			0.089 (1.69)*	-0.332 (-1.89)*
in % *D*R	-			0.017 (0.12)	-1.449 (-2.72)***			0.012 (0.08)	-1.441 (-2.74)***
Out own	?					0.957 (0.97)	0.151 (0.63)	0.098 (1.00)	0.129 (0.54)
Out own *R	?					-0.142 (-0.77)	-0.695 (-3.96)***	-0.144 (-0.79)	-0.692 (-3.93)***
Out own *D	?					-0.135 (-0.99)	0.079 (0.20)	-0.128 (-0.94)	0.021 (0.05)
Out own *D*R	+					-0.082 (-0.30)	2.044 (1.97)**	-0.066 (-0.24)	1.914 (1.85)*
Controls		NO	NO	YES	YES	YES	YES	YES	YES
Sample Period		1999-2001	1999-2001	1999-2001	1999-2001	1999-2001	1999-2001	1999-2001	1999-2001
N		802	802	802	802	802	802	802	802
Adj. R-Square		0.0472	0.1978	0.0522	0.2742	0.0975	0.2845	0.1026	0.2972

Significance is based on two-tailed tests. */**/*** represents significance at the 10/5/1% level.

The regression being estimated is:

$$E_{t,\,t-j}/P_{t,\,t-j-1} = \alpha_0 + \beta_1 D_{t,\,t-j} + \beta_2 R_{t,\,t-j} + \beta_3 D_{t,\,t-j} * R_{t,\,t-j} + \beta_4 \text{in \%}_t + \beta_5 \text{in \%}_t * R_{t,\,t-j} + \beta_6 \text{in \%}_t * D_{t,\,t-j} + \beta_7 \text{in \%}_t * D_{t,\,t-j} * R_{t,\,t-j} + \beta_8 \text{Out own}_t + \beta_9 \text{Out own}_t * R_{t,\,t-j} + \beta_{10} \text{Out own}_t * D_{t,\,t-j} + \beta_{11} \text{Out own}_t * D_{t,\,t-j} * R_{t,\,t-j}.$$

Where: $E_{t,,t-j}$ = Cumulative income before extraordinary items. $P_{t,\,t-j-1}$ = Market value of equity at the end of the year. $D_{t,t-j}$ = Indicator variable set equal to one if $R_{t,\,t-j}$ is less than one, zero otherwise. $R_{t,\,t-j}$ = Buy and hold return starting four months after the end of the fiscal year t-j-1 and ending four months after the end of year t. in $\%_t$ = Percentage of directors who are currently employed or have been employed by the firm over the last three years, and/or are related to the firm/founder. Out own $_{t}$ = the common shares held by outside directors divided by total common shares outstanding. Control variables are Institutional Ownership, Inside Director Ownership, Firm Size, Sales Growth, R&D+ADV, CFO/TA, and Leverage as defined in previous regressions. Controls also include industry and year dummy variables.