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경영학석사학위논문

Why has Financial Reporting Become  
More Conservative over Time?

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# Why has Financial Reporting Become More Conservative over Time?

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**ABSTRACT:** Accounting conservatism has significantly increased over the last several decades, but little is known about causes for these changes. I find that the overall increase in conservatism is largely driven by a subset of young firms rather than old firms in the firm population. I then examine whether the different conservatism trends between old and young firms are due to changes in accounting standards, changes in demand for conservatism, or changes in firm's economic environments. My evidence suggests that the adoption of new accounting standards is responsible for changes in conservatism as most prior studies expect, but changes in demand for conservatism driven by the passage of regulations also play an important role in explaining conservatism trends. In contrast, changes in economic environments seem to have had little effect on conservatism.

**Keywords:** *accounting conservatism, accounting standard, demand for conservatism, regulation, economic environment*

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## 1. INTRODUCTION

The literature suggests an increase in “accounting conservatism”, such that earnings increasingly reflect bad news more timely than good news (Givoly and Hayn, 2000; Ryan and Zarowin, 2003; Watts, 2003b). These studies address possible sources that might result in the observed trend in conservatism. Givoly and Hayn (2000) attribute increasing conservatism to increasing legal liability, while Ryan and Zarowin (2003) provide preliminary evidence that accounting might be the primary reason for the increasing asymmetry. Watts (2003b) also partially attributes the trend to the FASB management of standards while calling for time-series studies that might provide an answer to this question. However, these studies largely leave the task of exploring the factors to future research, and do not explicitly examine causes for the changes in conservatism. In this study, I extend the literature by identifying why conservatism has increased over time. In the paper I:

- (i) investigate who, if any, has driven the overall trend in accounting conservatism;
- (ii) examine why conservatism of subsamples has differently changed over time

Based on prior literature, I identify three non-exclusive sources that can lead to changes in conservatism: changes in the accounting standards, changes in demand for conservatism, and changes in the incidence of economic events. Considering the continued increase in conservatism, understanding the factors that are attributable to the observed increase in conservative reporting is of fundamental importance to researchers, financial statement users, and standard-setters for the following reasons.

First, conservatism is regarded as the most influential valuation principle in

accounting (Sterling, 1970; Watts, 2003a), known to affect accounting practice for a long time. Despite its importance, few studies examine the reasons why conservatism not only existed but only prospered for so long (Watts, 2003a). Therefore, answering to this question could potentially provide valuable insights into the properties of conservatism.

Second, the three possible sources of changes in conservatism have different policy implications. If firms make more conservative reporting choices due to changes in accounting standards as most prior studies expect, standard setters should consider practical impacts of GAAP and feel greater responsibility to manage GAAP requirements. Alternatively, if changes in demand for conservatism are responsible for the trend, it implies that firms effectively choose the degree of accounting conservatism in consideration of the associated benefits. Or if changes in the incidence of economic events are responsible, then changes in conservatism are natural results of the reflection of firm's underlying economic activities. If the latter two are the case, regulators who deal with agenda associated to conservatism should properly understand the effects of managerial incentive and economic events on conservative reporting.

I respond to Ryan and Zarowin (2003), who call for more research on the causes of the increasing asymmetry over time, and also respond to Watts (2003b), who call for a time-series analysis on the effects of changes in GAAP or changes in taxes and regulation on conservatism.

Motivated by Srivastava (2014) who attribute the decline in earnings quality to successive cohorts of newly listed firms into the firm population, I predict that an

increase in conservatism could also be at least partially driven by changes in the composition of firm population. Specifically, old firms (those listed before 1979) and young firms (those listed on or after 1979) are likely to have different conservatism trends for two reasons. First, Fama and French (2004) document that the profile of firms has dramatically changed since 1979. They find newly listed firms to be relatively small firms with low survival rates and poor performance, but with high growth prospects. Given the significantly different firm characteristics, two types of companies could show different conservatism trends as well. Second, the existing conservatism literature finds that accounting conservatism varies with firm age. Khan and Watts (2009) suggests that younger firms make more conservative reporting in order to mitigate agency problems associated with information asymmetry.

By estimating annual cross-sectional regression based on Basu (1997) for the period 1980-2012, I show that conservatism of young firms has increased while that of old firms shows no apparent trend. In addition, the trends of two groups are significantly different as I directly compare trend line slope of old and young firms. This result suggests that the increasing trend in conservatism documented by prior literature is largely driven by a subset of groups that consist of young, small, and growing firms.

Next, I examine whether the different conservatism trends between old and young firms are primarily driven by changes in accounting standards, changes in demand for conservatism, or changes in the incidence of economic events. I first explore the first two explanations together. I begin with identifying accounting standards that are likely to have had impact on conservatism during my study period. Among them, standards

related to restructuring activities are likely to have greater impact on old firms due to their size, while standards related to impairment loss recognition of intangible assets are likely to have greater impact on young firms due to their higher intangible intensity. I also identify changes in regulation such as PSLRA and SOX that occurred in the same period as GAAP changes as those regulation changes are also known to have affected financial reporting conservatism (Lobo and Zhou, 2006; Seetharaman et al. 2005). By comparing my conservatism measure before and after the event period, I find that the adoption of accounting standards is responsible for the increase in conservatism in 1986 and 2002. However, in 1995, PSLRA significantly reduces legal liability of managers and auditors and results in more aggressive financial reporting than before, especially for old firms who were exposed to greater litigation concern. This is surprising considering the adoption of two accounting standards that are likely to require more conservative reporting in 1995. Thus, this result provides evidence that changes in accounting standards play a role in explaining changes in conservatism as most prior studies expect, but changes in managerial reporting incentive also play an important role, even offsetting the effect of GAAP changes in 1995.

I then examine whether the different trends in the incidence of adverse economic events explain conservatism trends of old and young firms. Following Donelson et al. (2011), I identify such economic events using four variables: negative employee growth; discontinued operations; operating losses; and negative revenue growth. I construct a comprehensive index by combining four variables, and include it in the Basu (1997) regression model. The result shows that the incidence of economic events is positively

associated with conservatism, presumably because those apparent negative signals of firm's economic status force firms to report in a more conservative way. I then examine how the frequency of economic events has changed over time for old and young firms. The result shows that young firms experience more decreasing trend in *Escore* than old firms, results that are not consistent with conservatism trends. Therefore, the third explanation contributes little to the conservatism trend over the past several decades.

This study makes a number of important contributions. First, the results indicate that the significant increase in conservatism is driven primarily by newly listed firms in the firm population, rather than by existing firms. Second, I provide evidence that changes in accounting standards as well as changes in the demand for conservatism play an important role in explaining conservatism trends. To my knowledge, this is the first finer tests that make an attempt to discriminate among potential explanations of changes in conservatism. Third, the results also indicate that changes in economic environment play little role in explaining changes in conservatism.

Thus, this study provides integrated research on accounting conservatism trend. Previous time-series analysis on conservatism documents an increasing trend in conservatism but leave the task of identifying the specific reasons for future studies. On the other hand, prior cross-sectional analysis focuses on finding factors that affect conservatism but does not examine them in a time-series manner. I incorporate both time-series and cross-sectional analysis in identifying why financial reporting has become more conservative over time. In this sense, I expect this study to provide valuable insight into the mechanism by which financial reporting conservatism is

determined.

## **2. CHANGES IN THE ACCOUNTING CONSERVATISM**

In this section, I test whether accounting conservatism has increased over time by using more recent time-series data than do most prior studies. I use 126,612 firm-year observations extracted from the intersection of CRSP and Compustat for the years 1980-2012. All data definitions are presented in the appendix. Annual returns are calculated by cumulating monthly returns starting from the fourth month after the fiscal year-end to exclude the market response to the previous year's earnings (Hayn, 1995; Basu, 1997).

I delete firm years with missing data for any of the variables used in estimation. I also eliminate observations in the extreme 1 percent of the distribution each year of current earnings, current returns, size, leverage, and market-to-book ratio. Finally, I exclude all finance firms as those firms are expected to exhibit a different association between earnings and returns due to unique institutional and regulatory factors (Givoly and Hayn, 2000; Ryan and Zarowin, 2003). Thus, I exclude Fama-French industries identified by numbers 44-47.

Next, I estimate annual cross-sectional regression based on Basu (1997) which defines conservatism as “anticipate no profits but anticipate all losses”. To control for the expected component of earnings and returns, I include a number of additional variables in Basu (1997) regression. This is important because I try to capture how timely unexpected returns are reflected in unexpected earnings and because the possibility of biased estimates of coefficients can be avoided by adding controls

(Patatoukas and Thomas, 2011; Ball and Easton, 2013). The regression model is as follows:

$$X_{it} = \beta_0 + \beta_1 D_{it} + \beta_2 R_{it} + \beta_3 D_{it} R_{it} + controls + e_{it} \quad (1)$$

where  $X_{it}$  is current earnings for firm  $i$  for year  $t$ , divided by market value at year  $t-1$ ,  $D_{it}$  is a dummy variable for firm  $i$  in year  $t$ , equal to 1 when  $R_{it} < 0$  and equal to 0 otherwise, and *controls* includes proxies for expected earnings such as lagged sales revenue and lagged earnings, and proxies for expected returns such as log of beginning-of-year market capitalization, log of beginning-of-year share price, beginning-of-year book-to-market ratio, and beginning-of-year debt to equity ratio.  $\beta_2$  is the measure of good news timeliness, and  $\beta_3$  is the measure of accounting conservatism, representing the incremental timeliness for bad news over good news.

Annual average coefficients for the full sample are reported in Table 1 for the years 1980-2012, while results are plotted in Figure 1. To show the time trends of each coefficient, I also report the results of regression of the 33 annual coefficients on the year.  $\beta_2$ , the timeliness for good news, has dramatically decreased from 0.032 in 1980-1987 to -0.004 in 2004-2012. The time trend coefficient is significantly negative at -0.002 ( $t = -3.73$ ;  $p < 0.01$ ). On the other hand,  $\beta_3$ , the incremental response to bad news, has consistently increased from 0.223 in 1980-1987 to 0.276 in 2004-201, yielding positive time trend ( $t = 1.70$ ;  $p < 0.1$ ).

**[Insert Figure 1 about here]**

The results reported in Table 1 are consistent with those documented by prior studies. Over time, earnings reflect good (bad) news on a less (more) timely basis, resulting in

the net downward effect on the contemporaneous association between stock returns and earnings (Francis and Shipper, 1999; Lev and Zarowin, 1999; Ely and Waymire, 1999; Ryan and Zarowin, 2003; Srivastava, 2014). More importantly, the patterns indicate a significant increase in accounting conservatism.

In the next section I examine who, if any, is responsible for the significant increase in conservative reporting documented in this section.

**[Insert Table 1 about here]**

### **3. WHO DRIVES THE OVERALL TREND IN CONSERVATISM?**

Srivastava (2014) documents that overall decline in earnings quality is largely due to changes in the sample of firms in that newly listed firms increasing uncertainty in their financial reporting by using large amounts of intangible investments,. Although specific reasons may differ, the observed trend in conservatism could also be driven by changes in the composition of firm population. Specifically, I hypothesize that old and young firms are likely to exhibit different trends in conservative reporting for two reasons. First, Fama and French (2004) document that the profile of firms has dramatically changed since 1979. They find young firms who were listed on or after 1979 to be relatively small firms with low survival rates and poor performance but with high growth prospects. Second, the existing conservatism literature finds that conservatism varies with firm age. Among them, Khan and Watts (2009) documents that younger firms make more conservative reporting because they tend to have higher growth options and higher

information asymmetry and because conservatism is an efficient tool for reducing agency costs associated with information asymmetry. Taken together, old and young firms are likely to have systematically different conservatism trend owing to their different characteristics..

In my study, all firms who listed before 1979 are classified as “old firms” (Fama and French, 2004), while the remaining firms are classified as “young firms”. Table 2 reports descriptive statistics (Panel A) and industry composition (panel B) of old and young firms for comparison. In line with prior studies, young firms are relatively small and unprofitable compared to old firms (-6.4% versus 3.2% for *ROA*; 4.956 versus 5.235 for *Size*). However, average growth rate of young firms is almost three times higher than that of old firms (0.301 versus 0.102 for *Sales\_Growth*), indicating that young firms have experienced rapid growth over the last several decades. In addition, old firms (young firms) are characterized by higher capital intensity (intangible intensity) than the other group. All the variables in Panel A are significantly different between two groups at the 1% level.

Panel B in Table 2 also shows that material-intensive industries such as utilities, machinery, gas, and construction materials are the most represented industries for old firms (Panel B), while knowledge-intensive industries such as computers, electronic equipment, business services are the most represented industries for young firms (Srivastava, 2014). Taken together, the results highlight dramatically different characteristics and industry composition between old and young firms. In the next section, I examine how financial reporting conservatism of two groups has changed over

time and who, if any, is responsible for the documented increase in conservatism.

**[Insert Table 2 about here]**

### **Empirical analysis**

In this subsection, I start with an analysis of the trend in conservatism for old and young firms respectively. Each group's yearly and three sub-period results for the coefficients  $\beta_2$  and  $\beta_3$  in equation (1) are presented in Table 3, Panel A, and are depicted visually in Figure 2. I also report time trend coefficients and t-statistics to show overall change in the degree of conservatism of two groups of firms.

An inspection of Figure 2 and Table 3 reveals that the timeliness for positive news ( $\beta_2$ ) has significantly decreased over the several decades only for young firms. In case of young firms, the coefficient peaked in 1981 (at 0.081) and declined during the rest of the study period. Time trend for this group is negative and significant at the 1% level. On the other hand, in case of old firms, the coefficient decreases in the 1980s and 1990s but increases in 2000s, yielding insignificant time trend.

**[Insert Figure 2 about here]**

The proxy for the incremental timeliness for bad news relative to good news ( $\beta_3$ ) also reveals different patterns for old and young firms. For young firms, the coefficient has significantly increased, with positive time trend coefficient at 0.006 ( $t = 3.58$ ;  $p < 0.01$ ), even more dramatic increase compared to the overall trend observed in Table 1. However, the coefficient shows no apparent trend for old firms, yielding insignificant time trend coefficient. Overall, the increase in accounting conservatism is not driven by

average firms in the firm population. Only young firms are responsible for the changes in the timeliness of good and bad news toward more conservative reporting.

To evaluate whether the time trends of conservatism for old and young firms are significantly different, I estimate the following time-series regression, with one observation per year from 1980 to 2012:

$$C\_Score_t = \gamma_0 + \gamma_1 Trend_t + \gamma_2 DummyYoung_t + \gamma_3 DummyYoung_t \times Trend_t + e_t, (2)$$

where  $C\_Score_t$  is  $\beta_3$  coefficients obtained from annual regression of equation (1) for old and young firms at year  $t$  (as reported in Panel A of Table 3),  $Trend_t$  is a variable that goes from 1 (for 1980) to 33 (for 2012), and  $DummyYoung_t$  is a dummy variable in year  $t$ , equal to 1 for young firms and 0 otherwise. Thus, I use 66 group-year observations to estimate this regression, and the  $Trend_t$  variable is included to capture time trend of old firms. More importantly, I include an interaction term between dummy for young firms and time trend variable because my objective is to compare the conservatism trends between two groups, not to compare the level of conservatism. Hence, the coefficient on the interaction term represents the differences in the conservatism trend line slope between old and young firms. This coefficient is predicted to be positive because young firms exhibit increasing trend in conservatism while old firms exhibit no apparent time trend. The question is whether the difference in trends captured by this coefficient is statistically significant to make the analysis meaningful.

The results from estimating Equation (2) is presented in Table 3, Panel B. The first column shows that the coefficient on the  $Trend_t$  variable that gauges the conservatism trend for old firms is insignificant, indicating that there was no apparent trend for old

firm group as shown in Panel A.

As predicted, the  $DummyYoung_t \times Trend_t$  coefficient, which captures the difference in conservatism trend slope between the two types of company, is positive (0.006) and significant ( $t = 2.42$ ;  $p < 0.05$ ). The sum of two coefficients,  $\gamma_1 + \gamma_3$ , which represents the trend line slope for young firms, is significantly positive (0.005;  $p < 0.01$ ) as shown in F-test. The results indicate that young firms have experienced increasing conservatism trend that is significantly different from old firms', although the level of conservatism is much lower for young firms ( $\gamma_2 = -0.170$ ;  $p < 0.01$ ).

**[Insert Table 3 about here]**

Taken together, the results provide direct evidence that there are meaningful differences between young and old firms' conservatism trends over the past several decades. The upward trend in conservatism documented in Table 1 is primarily driven by younger firms in the firm population. In the next sections, I investigate what makes these two groups of firms to show different accounting conservatism trends.

## **4. EXPLANATIONS FOR THE DIFFERENT CONSERVATISM TREND BETWEEN OLD AND YOUNG FIRMS**

The results presented in the previous section indicate that young firms drive the overall increase in accounting conservatism over the last several decades. This raises the following question: Why has financial reporting of young firms become more

conservative while that of old firms has not? What drives the difference in conservatism trends between old and young firms?

#### **4.1 Three possible sources of the changes in conservatism**

In general there are three potential reasons for the changes in accounting conservatism over time. First, changes in accounting standards could increase accounting conservatism either by requiring firms to more timely record certain costs in response to bad news or by providing more specific guidance than before to ensure compliance with the standards. For example, a standard that first requires firms to disclose material restructuring activities coupled with a later statement that provides specific guidance for the recognition result in a dramatic increase in the recognition of restructuring liabilities and costs in the 1980s and 1990s. I discuss accounting standards that are likely to be related to conservatism below.

Second, changes in demand for conservatism could either increase or decrease conservatism even when there is no change in the accounting standards. It is impossible for accounting standards to cover every practical case. Thus, financial reporting choice inevitably involves a subjective judgment to an extent and incentives of managers and auditors play critical role in making such judgments. For example, if corporate debt increases, managers may choose to make more conservative reporting in order to avoid debt covenant violations. Also, if auditor's litigation burden linked to financial reporting declines, he/she may allow firm manager to report more aggressively.

Third, changes in the firm's economic environments could affect financial reporting

even when there has been neither change in GAAP nor change in the demand for conservatism. For example, when there is not only bad news but also negative signals about firm's underlying economics such as operating losses or sales declines, managers and auditors are more likely to be forced to report conservatively under the GAAP requirements regardless of their intentions.

Ex *ante*, it is not clear which sources, among these three factors, are primarily responsible for the trends in conservatism documented in Table 3. To discriminate among these explanations, I sequentially examine three non-exclusive explanations for the conservatism trends in the following sections.

#### **4.2 Changes in accounting standards and changes in the demand for conservatism**

Prior time-series studies on conservatism suggest that the significant increase in conservatism is primarily, or at least partially attributable to accounting standards (Ryan and Zarowin, 2003; Watts, 2003b). However, none of the studies explicitly investigate the effect of GAAP changes on conservatism (Watts, 2003b). This study differs from Donelson et al. (2011) who document that a decline in the revenue-expense relation is attributable to an increase in special items which is in turn attributable to more frequent economic events. Accounting conservatism includes the recognition of special items in response to bad news, but is more comprehensive concept that also includes early recognition of general expenses (i.e. R&D expense), delayed recognition of revenue, etc. Furthermore, Donelson et al. (2011) examine only large firms and do not consider the

effect of newly listed firms.

Although accounting standards that can lead to more conservative reporting are adopted, not all standards have equal impact on each firm. How much influence accounting standards have on financial reporting depends on each firm's business structure and accounting method choice. To examine whether changes in accounting standards has contributed to the different trend in conservatism for old and young firms, I first identify the newly adopted or amended standards that are likely to have had impact on financial reporting conservatism during my sample period.

First, SAB 67 and EITF 94-3, standards that are related to corporate restructuring, were adopted in 1986 and 1995 respectively. SAB 67 requires that restructurings be disclosed separately if material, while EITF 94-3 provides guidance for the first time on the recognition of a liability and expense associated with restructuring activities. Because restructuring is perceived to improve corporate governance mechanism (John et al., 1992), reporting restructuring as a separate line item becomes popular in 1980s and 1990s. Considering that restructuring is often motivated by market pressures to change poor organizations (Brickley and Drunen, 1990), it is likely to increase conditional conservatism by lowering reported earnings in negative returns period. The literature on corporate restructuring documents that many large public firms frequently undertook restructuring during the 1980s by downsizing or divesting major lines of business (Bowman and Singh, 1990; Bethel and Liebeskind, 1993). Thus, I hypothesize that these standards might have had greater impact on old firms relative to young firms.

Next set of accounting standards related to conservatism are those require an

estimation of assets. Among them, SFAS 121 is the first standard to explicitly mention asset write-offs that was effective in 1996 with early adoption in 1995 “encouraged”, requiring long-lived assets and certain intangibles to be reviewed for recoverability if there is any indication of impairment and to be reported at the lower value amount. Later, SFAS 142 (effective in 2002) eliminated goodwill amortization, requiring instead that goodwill be evaluated yearly for possible impairment (Ramanna, 2008; Jarva, 2010). Before the adoption of SFAS 142, goodwill was evenly amortized over a set period regardless of the incidence of economic events. In contrast, under SFAS 142, firms recognize no expenses during the good news period, but they have to recognize impairment costs if goodwill is evaluated to be impaired during the bad news period, resulting in the increase in conditional conservatism.

Since both SFAS 121 and 142 become operative when negative economic events such as a current period or a history of operating loss occur, high-technology firms are affected to a greater degree by these standards (Chandra, 2011). In this sense, I predict conservatism of young firms may increase more than that of old firms after the adoption of these two standards because young firms experience operating losses much more frequently as shown in Table 2. In sum, I identify the adoption and the amendment of accounting standards occurred in 1986, 1995, and 2002.

However, accounting standards provide only general guidance for how firms should make financial reporting, rather than providing customized guidance for every case firms face. Thus, subjective judgments of firm managers and auditors are unavoidable in making practical accounting method choice. For example, even if SFAS 142 requires

firms to conduct annual impairment testing of goodwill, it leaves an estimation of fair values for goodwill to the firm's discretions to an extent, enabling managers to adjust the timing of impairment recognition or even avoid such recognition (Rockness et al., 2001; Watts, 2003a). Thus, managers may choose to recognize impairment costs if they have incentives to report conservatively due to high litigation risk or high leverage that is linked to agency conflicts. In contrast, managers may not recognize impairment costs if they have incentives to adjust earnings upward. Hence, manager's and auditor's demand for conservatism can either strengthen or weaken the effects of accounting standards on actual financial reporting.

The conservatism theory in Watts (2003a) and related empirical studies (e.g., Lafond and Watts, 2008) suggest that conservatism varies with four types of demand: contracting, litigation, taxation, and regulation demand. For example, firms have greater demand for conservatism if they have many debt and compensation contracts that are associated with accounting numbers, a high probability of litigation, high present value of taxes to be paid, and high potential political costs (Watts, 2003a). Therefore, it is important to consider not only the effects of accounting standards but also the effects of changes in the demand for conservatism in order to properly examine the causes for the observed conservatism trend.

However, it is difficult to constitute a reliable measure of the demand for conservatism. Although Khan and Watts (2009) use a set of firm characteristics including size, leverage, and the market-to-book ratio as proxies for the demand for conservatism in constructing a firm-year measure of conservatism, these firm

characteristics are subject to potential endogeneity problems that are difficult to address. Thus, rather than tracing the trend of each firm's demand for conservatism, I examine the effects of exogenous shocks that are known to have had impact on conservatism. To do so, I additionally identify two such regulation changes that occur during my study period.

First, the Private Securities Litigation Reform Act (PSLRA) of 1995 eliminated joint and several liabilities under which auditors and other related parties could be named to lawsuits. Seetharaman et al. (2005) provide evidence that accounting conservatism decreased after the passage of PSLRA, presumably due to the reduced litigation risk imposed on managers and auditors. Second, there's evidence that financial reporting becomes more conservative following the Sarbanes-Oxley Act (SOX) and the resulting certification requirement by SEC of 2002 (Lobo and Zhou, 2006). Since larger firms are generally exposed to higher litigation risk (Khan and Watts, 2009), the impact of these two regulation changes on conservatism is expected to be more salient for old firms than young firms.

Table 4, Panel A, summarizes the descriptions of each accounting standard and regulation along with its hypothesized effect on conservatism. Across 1986 and 2002, accounting conservatism is predicted to increase because both accounting standards and regulation changes are likely to result in more conservative reporting. However, in a period where accounting standards and regulation are expected to have opposite impact on conservatism, how conservatism changes is an empirical question. Thus, it will allow me to investigate the relative importance of GAAP changes and PSLRA in 1995.

[Insert Table 4 about here]

### **Empirical analysis**

To examine whether the implementation of the standards and the passage of laws described above explain the documented trend in conservatism of old and young firms, I first estimate pooled cross-sectional regressions of equation (1) over four sub-periods, 1980-1985, 1986-1994, 1995-2001, and 2002-2012. The results are reported in Table 4, Panel B. Following the adoption of SAB 67 in 1986, accounting conservatism increases for both old and young firms. The magnitude of an increase is greater for old firms (0.097) than young firms (0.067), indicating that the standard on restructuring has greater impact on large firms as expected.

The results for the changes in conservatism around 1995 are somewhat surprising. From the second to the third sub-period, the old firms' coefficient that captures the incremental response to bad news than good news declines by nearly one-third, from 0.335 to 0.227. In contrast, the coefficient of young firms remains almost the same, from 0.209 for the second sub-period to 0.210 for the third sub-period. This result is interesting given that two accounting standards that are likely to increase conservative reporting were also adopted in 1995. Thus, the reduced litigation risk following PSLRA seems to play an important role in accounting conservatism, even to the extent of offsetting the effect of GAAP that requires more conservative reporting. The impact of PSLRA is more pronounced for old firms who have greater litigation concerns consistent with my prediction.

In the last sub-period, the coefficient increases from the preceding sub-period for both

old and young firms. This result is attributable to both SFAS 145 and SOX, though I cannot separate the effect of each event on conservatism. The increase in conservatism is slightly greater for young firms, likely due to more frequent negative economic events that result in recognizing asset impairment.

I next perform the multivariate regression analysis using the following extended model of Basu (1997):

$$\begin{aligned}
X_{it} = & \beta_0 + \beta_1 D_{it} + \beta_2 R_{it} + \beta_3 D_{it} \times R_{it} + \beta_4 D86 + \beta_5 D95 + \beta_6 D86 \\
& + \beta_7 D86 \times D_{it} + \beta_8 D95 \times D_{it} + \beta_9 D02 \times D_{it} \\
& + \beta_{10} D86 \times R_{it} + \beta_{11} D95 \times R_{it} + \beta_{12} D02 \times R_{it} \\
& + \beta_{13} D86 \times DR_{it} \times R_{it} + \beta_{14} D95 \times DR_{it} \times R_{it} + \beta_{15} D02 \times DR_{it} \times R_{it} \\
& + \text{controls} + e_{it}
\end{aligned} \tag{4}$$

where  $D86$ ,  $D95$ , and  $D02$  are indicator variables that take the value of 1 for all years from 1986, 1995, 2002 and later, and 0 otherwise, while other variables are as defined earlier in Equation (1). This regression model allows the coefficients to differ across pre- and post-event periods, enabling me to test for changes in conservatism around these periods. As presented in Table 4, Panel A, I predict the coefficients on  $D86 \times DR_{it} \times R_{it}$  and  $D02 \times DR_{it} \times R_{it}$  to be positive, while provide no sign prediction for the coefficient on  $D95 \times DR_{it} \times R_{it}$  considering the opposite effect GAAP changes and PSLRA have on accounting conservatism in 1995.

The results for the estimation of above equation are presented in Table 5. The first two columns show that the coefficient on  $D86 \times DR_{it} \times R_{it}$  is significantly positive while that on  $D95 \times DR_{it} \times R_{it}$  is significantly negative. It suggests that accounting

conservatism of the full sample increases after the adoption of SAB 67 in 1986 but decreases by almost the same amount after 1995, presumably due to the effect of PSLRA. Following 2002, overall conservatism increases as shown in the positive and significant coefficient on  $D02 \times DR_{it} \times R_{it}$ , indicating that newly adopted accounting standards along with the passage of SOX lead firms to report more conservatively as intended.

**[Insert Table 5 about here]**

To examine whether old and young firms exhibit different patterns across the event periods, I estimate equation (3) using two groups of samples respectively and report the results in the next four columns. The coefficient on  $D86 \times DR_{it} \times R_{it}$  is significantly positive for both groups, but the magnitude and significance of the coefficient are more pronounced for old firms. It indicates that conservatism of both group increases following 1986, but the effect is greater for old firms than young firms consistent with prior studies that show large firm's greater tendency to engage in restructuring activities (Bowman and Singh, 1990; Bethel and Liebeskind, 1993).

The coefficient on  $D95 \times DR_{it} \times R_{it}$  is negative and significant at the 1% level (-0.108 with  $t = -6.120$ ) for old firms, but is statistically insignificant for young firms. It indicates that following 1995, financial reporting of old firms becomes significantly less conservative than before while that of young firms does not change much. Thus, despite the adoption of two accounting standards that likely to result in more conservative reporting, conservatism decreases with the passage of PSLRA that considerably reduces the legal liability of managers and auditors. Stronger result for old firms is plausible

given that large firms tend to have higher litigation risk (Khan and Watts, 2009) and that SFAS 121 is likely to have greater impact on young and high-tech firms whose economic condition is relatively unstable (Chandra, 2011)

Finally, I find that the coefficient on  $D02 \times DR_{it} \times R_{it}$  of old firms is 0.042 ( $t = 2.21$ ;  $p < 0.05$ ), which is significantly positive but insufficient to cover the decline in conservatism across 1995. The coefficient of young firms is also positive and significant at the 1% level (0.064 with  $t = 6.38$ ), with greater magnitude and significance compared to those of old firms. This result suggests that changes in GAAP along with the passage of SOX in 2002 play a role in increasing reporting conservatism, especially for young firms who are likely to be more affected by accounting standard (SFAS 142) that requires annual impairment test of goodwill and certain intangible assets.

Taken together, changes in accounting standards are responsible for changes, especially increases, in conservatism, as most prior studies expect. However, changes in the demand for conservatism captured by regulation changes also play an important role in explaining conservatism trends, even to the extent of offsetting the effect of GAAP changes in 1995.

### **4.3 Changes in firm's economic environments**

In addition to the two explanations examined in the previous section, changes in the firm's economic environments can be responsible for the observed conservatism trend as well. Given that my conservatism measure captures the incremental response to bad news where negative stock returns represent bad news, the existence of negative signals

about firm's economic environments such as operating losses and/or negative revenue growth may lead to more timely recognition of bad news. That is, if those events and negative stock returns are together regarded as an obvious indication of firm's bad economic condition that is not going to be recovered in the near future, it may force managers and auditors to immediately recognize expenses in accordance with accounting standards. Contrastingly, managers may delay the recognition of expenses if there are no adverse economic events other than temporary negative stock returns. Thus, even when there's no change in accounting standards or change in the demand for conservatism, changes in the firm's economic environments can affect accounting conservatism.

In this subsection, I cross-sectionally examine whether the incidence of economic events which represent firm's bad economic environment is associated with the degree of reporting conservatism as I hypothesize. I then investigate whether the difference in conservatism trends between old and young firms is explained by different trends in the frequency of economic events that might lead to more conservative reporting. Following Donelson et al. (2011), I identify negative indicators of the firm's economic environments using four variables: negative employee growth (*Neg\_Emp*); discontinued operations (*Disc*); operating losses (*Loss*); negative revenue growth (*Neg\_Rev*). These variables are likely to capture economic environment that is related to accounting conservatism, rather than to be affected by changes in accounting variables or by changes in the demand for conservatism (Donelson et al., 2011). I assign the value of 1 for each indicator variable if an observation has experienced each of four economic

events. To construct a comprehensive index that represents overall incidence of economic events, I add all four variables and label it *Escore* that ranges from 0 to 4.

### **Empirical analysis**

To examine whether the existence of negative signals about firm's economic environments reinforces accounting conservatism, I estimate the following cross-sectional regression model:

$$\begin{aligned}
 X_{it} = & \beta_0 + \beta_1 D_{it} + \beta_2 R_{it} + \beta_3 D_{it} \times R_{it} + \beta_4 Escore + \beta_5 Escore \times D_{it} \\
 & + \beta_6 Escore \times R_{it} + \beta_{15} Escore \times DR_{it} \times R_{it} + controls + e_{it}
 \end{aligned} \tag{5}$$

where *Escore* is calculated as described above, while other variables are as defined earlier. I predict the coefficient on  $Escore \times DR_{it} \times R_{it}$  to be positive if earnings more timely reflect bad news with the firm's negative economic events.

Table 6, Panel A, shows the estimation results using full sample and each of two subsamples, old and young firms. The coefficient on  $Escore \times DR_{it} \times R_{it}$  is significantly positive in any cases, indicating that the existence of negative economic events forces firms to make more conservative reporting. In addition, the coefficient of old firms is almost two times higher than that of young firms, suggesting that old firms are more responsive to the bad economic signals. Because old firms consist of large firms that are subject to more scrutiny from investors and creditors (Lobo and Zhou, 2006), they are likely to report more conservatively when there are evident indications that the firm is in worse condition, presumably in order to avoid unnecessary conflicts.

I next examine how *Escore* has changed over the last several decades. If the incidence

of negative economic events account for the changes in conservatism, *Escore* trend of young firms should show more increasing or less decreasing patterns over the study period compared to that of old firms. Table 6, Panel A, reports yearly average percentage of old and young firms that undergo each economic event and time trends of each event. In case of old firms, frequency of firms reporting discontinued operations has significantly increased, with positive and significant time trends ( $t = 6.03$ ;  $p < 0.01$ ), but frequency of firms reporting operating losses has significantly decreased ( $t = -3.64$ ;  $p < 0.01$ ), thereby yielding no apparent trend in *Escore* over the last 33 years.

**[Insert Table 6 about here]**

In case of young firms, frequency of firms reporting discontinued operations has increased similar to old firms, but the incidence of other three negative events have significantly declined over time, resulting in decreasing trend in *Escore* over time (Time Trend of *E-Score*,  $-0.011$  with  $t = -2.73$ ;  $p < 0.01$ ). Changes in *Escore* are also graphically presented in Figure 3. Level of *Escore* is much higher for young firms in the 1980s, but it shows similar patterns in the later period. Overall, young firms exhibit more decreasing trend in *Escore* than old firms, trends that are inconsistent with changes in conservatism. Thus, changes in the incidence of negative economic events do not seem to play an important role in explaining accounting conservatism trend.

**[Insert Figure 3 about here]**

## **5. CONCLUSION**

This study examines why financial reporting has become more conservative in U.S.

over the last several decades. I first find that young firms who were listed after 1979 show increasing trend in conservatism while old firms do not, suggesting that the increase in conservatism is primarily driven by newly listed firms into the firm population.

I then examine why conservatism trends of old and young firms are different by discriminating between three potential explanations. The first is that changes in accounting standards are attributable to different conservatism trends between two groups, while the second is that changes in the demand for conservatism are attributable. By comparing conservatism measure before and after the event periods, I find that changes in accounting standards play a role in explaining increasing conservatism across 1986 and 2002. More importantly, the effects of changes in accounting standards vary with firm characteristics. Specifically, the adoption of GAAP related to restructuring costs has greater impact on old firms while the adoption of GAAP related to impairment loss recognition of intangible assets has greater impact on young firms. However, in 1995, the effect of reduced liability of managers and auditors following the passage of PSLRA offsets the effect of accounting standards, resulting in the decline in conservatism of old firms who are exposed to greater litigation costs. Although most prior studies largely focus on the role of accounting standards, my results suggest that changes in managerial reporting incentive are also important sources not to be underestimated.

Finally, I examine whether the different trends in negative signals about firm's economic environments are also attributable to different conservatism trends between

old and young firms. The incidence of *Escore*, the proxy for negative economic environments, is positively associated with accounting conservatism, implying that it forces firms to report in a more conservative way. However, an investigation of trends in *Escore* shows that young firms exhibit more decreasing patterns than old firms, results that are not consistent with conservatism trends. Thus, changes in firm's economic environments do not seem to be a primary reason for changes in conservatism in contrast with the former two explanations.

My inferences are subject to several limitations. First, while the evidence provided in this study suggests that changes in GAAP and changes in the economic events contribute little to the increase in conservatism, my results do not necessarily mean that accounting standards and economic events play no role in the degree of conservatism. The three explanations are not mutually exclusive, and changes in the demand for conservatism do not fully explain the conservatism trend. Thus, it is possible that future study will develop stronger tests that are able to detect a role of real economic events.

Second, since I estimate Basu (1997) conservatism measure using a cross-section of old versus young firms for each year, I assume that all firms in the same age group in year  $t$  are homogeneous. Thus, extreme observations could distort the annual conservatism measure, though I eliminate observations in the extreme 1 percent of the distribution each year in order to reduce the effects of outliers.

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## APPENDIX

### DETAILED VARIABLE DEFINITIONS

#### Earnings and Returns Variables and Components

Earnings ( $X$ )	= IB, scaled by lagged market value
Annual Returns ( $R$ )	= Annual returns compounded from monthly returns beginning the fourth month after fiscal year end.
Dummy ( $D$ )	= Indicator variable that equals 1 if annual returns are negative, 0 otherwise
Return-on-Assets ( $ROA$ )	= IB, scaled by total assets
Intangible Intensity ( $Intan$ )	= Selling, General, and Administrative expenses, scaled by average total assets
Capital Intensity ( $Capital$ )	= Property, Plant and Equipment, scaled by total assets
Growth ( $Growth$ )	= (Total assets – lagged total assets) / lagged total assets
Loss dummy ( $Loss$ )	= 1 if operating income is negative, 0 otherwise
Special Items ( $SI$ )	= Special items, scaled by average total assets
$C$ -Score	= $\beta_3$ coefficients obtained from annual regression of equation (1) for old and young firms
$Trend$	= 1 for 1980 to 33 for 2012
$Dummy\_Young$	= 1 for young firms (who listed on or after 1979), 0 Otherwise

Size ( <i>Size</i> )	= Annual average of the natural log of market value of equity across firms
Leverage ( <i>Lev</i> )	= Annual average leverage across firms, where leverage is long-term debt plus short term debt deflated by market value of equity
M/B ratio ( <i>M/B</i> )	= Annual average M/B across firms, where M/B is the ratio of market value of equity to book value of equity

#### **Accounting Standard Variables**

*Dxx* = 1 in 19xx or 20xx and beyond, and 0 prior to 19xx or 20xx.

#### **Economic Event Variables**

Negative Employee Growth ( <i>Neg_Emp</i> )	= 1 if the firm had negative employee growth
Discontinued Operations ( <i>Disc</i> )	= 1 if the firm had discontinued operations
Operating Loss ( <i>Loss</i> )	= 1 if the firm had negative operating income
Negative Revenue Growth ( <i>Neg_Rev</i> )	= 1 if the firm had negative revenue growth
<i>Escore</i>	= Sum of the four indicator variables Neg_Emp, Disc, Loss, and Neg_Rev
<i>EscoreAvg</i>	= Annual Cross-sectional average of <i>Escore</i>

**TABLE 1**  
**Annual OLS Estimation of Regression Equations with Annual Earnings**

Year	No. of Firms	Coefficients		Subperiod	Coefficients	
		$\beta_2$	$\beta_3$		$\beta_2$	$\beta_3$
$X_{it} = \beta_0 + \beta_1 D_{it} + \beta_2 R_{it} + \beta_3 D_{it} R_{it} + controls + e_{it}$						
<b>Full Sample</b>						
1980	3053	0.034	0.234			
1981	3092	0.105	0.133			
1982	3328	0.021	0.093			
1983	3442	0.013	0.231			
1984	3691	0.057	0.216			
1985	3707	0.030	0.307			
1986	3716	0.007	0.297			
1987	3899	-0.011	0.274	1980-1987	0.032	0.223
1988	3990	0.040	0.309			
1989	3920	0.027	0.362			
1990	3584	0.002	0.275			
1991	3582	0.001	0.386			
1992	3633	0.032	0.170			
1993	3879	0.028	0.147			
1994	4206	0.016	0.182			
1995	4407	-0.004	0.211	1988-1995	0.018	0.255
1996	4618	0.025	0.175			
1997	4903	0.017	0.164			
1998	4736	-0.046	0.188			
1999	4443	-0.024	0.192			
2000	4656	0.012	0.201			
2001	4525	0.007	0.353			
2002	4210	0.022	0.301			
2003	3968	-0.035	0.564	1996-2003	-0.003	0.267
2004	3856	0.020	0.223			
2005	3779	-0.003	0.230			
2006	3714	-0.009	0.275			
2007	3608	0.013	0.238			
2008	3585	0.018	0.258			
2009	3391	-0.057	0.373			
2010	3255	0.004	0.256			
2011	3217	-0.030	0.250			
2012	3019	0.006	0.382	2004-2012	-0.004	0.276
Time Trend						
Coeff		-0.002***	0.003*			
t-stat		-3.73	1.70			

\*\*\*, \*\*, \* denote significance at the 0.01, 0.05, and 0.10 levels, respectively, in a two-tailed test. Variables of interest and their statistics are indicated in bold typeface. Time Trend is coefficient and t-statistics are obtained by regressing 33 annual coefficients on the year.

*Controls* include lagged sales revenue, lagged earnings, log of beginning-of-year market capitalization, log of beginning-of-year share price, beginning-of-year book-to-market ratio, and beginning-of-year debt to equity ratio. All main variables are defined in the Appendix.

TABLE 2

Descriptive Statistics and Industry Composition

Panel A: Descriptive Statistics – Old vs. Young Firms

Variable	Old Firms					Young Firms				
	Mean	Std Dev	Q1	Median	Q3	Mean	Std Dev	Q1	Median	Q3
Returns	0.162	0.485	-0.130	0.101	0.364	0.105	0.693	-0.331	-0.017	0.357
Earnings	0.046	0.152	0.026	0.067	0.107	-0.028	0.198	-0.066	0.026	0.069
ROA	0.032	0.146	0.014	0.043	0.073	-0.064	0.408	-0.074	0.023	0.069
Size	5.235	2.308	3.458	5.195	6.971	4.956	2.104	3.418	4.862	6.388
Leverage	0.664	0.955	0.115	0.355	0.826	0.462	1.007	0.005	0.128	0.480
M/B	1.990	2.000	0.986	1.510	2.349	2.892	3.240	1.168	2.005	3.536
Intan	0.243	2.341	0.127	0.204	0.297	0.350	4.346	0.155	0.283	0.455
Capital	0.370	0.233	0.188	0.315	0.533	0.280	0.247	0.083	0.194	0.419
Growth	0.102	0.637	-0.024	0.064	0.161	0.301	1.688	-0.062	0.093	0.285
Loss	0.126	0.332	0.000	0.000	0.000	0.329	0.470	0.000	0.000	1.000
SI	-0.005	0.036	0.000	0.000	0.000	-0.017	0.086	-0.009	0.000	0.000

Panel B: Industry Composition – Old vs. Young Firms

Fama-French industry code	Industry name	Old Firms		Young Firms	
		n	weight	n	weight
1	Agriculture	208	0%	286	0%
2	Food Products	1,371	3%	1,094	1%
3	Candy and Soda	82	0%	237	0%
4	Beer Liquor	205	0%	284	0%
5	Tobacco Products	74	0%	43	0%
6	Recreation	493	1%	675	1%
7	Entertainment	552	1%	1,525	2%
8	Printing and Publishing	696	1%	491	1%
9	Consumer Goods	1,538	3%	1,131	1%
10	Apparel	973	2%	1,022	1%
11	Healthcare	356	1%	1,982	3%
12	Medical Equipment	893	2%	3,500	5%
13	Pharmaceutical Products	885	2%	5,933	<b>8%</b>
14	Chemicals	1,487	3%	1,277	2%
15	Rubber and Plastic Products	737	1%	681	1%
16	Textiles	610	1%	325	0%
17	Construction Materials	2,124	<b>4%</b>	1,021	1%
18	Construction	836	2%	846	1%
19	Steel Works Etc	1,144	2%	967	1%
20	Fabricated Products	369	1%	212	0%
21	Machinery	2,794	<b>6%</b>	2,399	3%
22	Electrical Equipment	1,275	3%	1,115	1%
23	Automobiles and Trucks	1,104	2%	1,023	1%

24	Aircraft	581	1%	176	0%
25	Shipbuilding, Railroad Equipment	139	0%	113	0%
26	Defense	148	0%	122	0%
27	Precious Metals	332	1%	1,099	1%
28	Non and &sic le Metallic and Industrial Metal Mining	340	1%	657	1%
29	Coal	59	0%	176	0%
30	Petroleum and Natural Gas	2,603	<b>5%</b>	4,127	<b>5%</b>
31	Utilities	4,857	<b>10%</b>	748	1%
32	Communication	1,043	2%	2,855	4%
33	Personal Services	472	1%	987	1%
34	Business Services	2,678	5%	11,505	<b>15%</b>
35	Computers	1,346	3%	4,286	<b>6%</b>
36	Electronic Equipment	3,052	6%	5,579	<b>7%</b>
37	Measuring and Control Equipment	1,346	3%	1,949	3%
38	Business Supplies	1,524	3%	622	1%
39	Shipping Containers	274	1%	171	0%
40	Transportation	1,326	3%	2,369	3%
41	Wholesale	2,354	5%	2,968	4%
42	Retail	2,849	<b>6%</b>	4,382	<b>6%</b>
43	Restaraunts, Hotels, Motels	970	2%	1,765	2%
48	Almost Nothing	640	1%	1,513	2%
<hr/>					
	Total	49,739	100%	76,238	100%

**Table 3**  
**Difference in Conservatism Trends between Old and Young Firms**

**Panel A: Annual OLS Estimation of Regression Equations with Annual Earnings - Old vs. Young firms**

Year	Old Firms			Young Firms		
	No. of Firms	Coefficients		No. of Firms	Coefficients	
		$\beta_2$	$\beta_3$		$\beta_2$	$\beta_3$
$X_{it} = \beta_0 + \beta_1 D_{it} + \beta_2 R_{it} + \beta_3 D_{it} R_{it} + controls + e_{it}$						
1980	3,005	0.033	0.240	48	0.076	0.049
1981	2,925	0.105	0.145	167	0.081	-0.019
1982	2,907	0.030	0.100	421	0.018	0.068
1983	2,857	0.024	0.231	585	-0.027	0.196
1984	2,698	0.069	0.285	993	0.032	0.142
1985	2,504	0.045	0.405	1,203	0.025	0.200
1986	2,309	0.020	0.430	1,407	0.023	0.195
1987	2,130	0.014	0.328	1,769	-0.008	0.211
1988	1,959	0.048	0.413	2,031	0.048	0.246
1989	1,829	0.043	0.428	2,091	0.046	0.270
1990	1,656	0.016	0.269	1,928	0.018	0.212
1991	1,593	0.009	0.515	1,989	0.010	0.312
1992	1,540	0.060	0.201	2,093	0.025	0.171
1993	1,472	0.041	0.181	2,407	0.030	0.124
1994	1,453	0.016	0.246	2,753	0.023	0.145
1995	1,428	0.027	0.289	2,979	-0.002	0.180
1996	1,357	0.021	0.256	3,261	0.028	0.146
1997	1,281	0.040	0.131	3,622	0.016	0.153
1998	1,206	0.007	0.135	3,530	-0.047	0.178
1999	1,121	-0.031	0.205	3,322	-0.019	0.181
2000	1,064	0.008	0.269	3,592	0.018	0.184
2001	985	0.009	0.462	3,540	0.015	0.309
2002	949	0.036	0.393	3,261	0.042	0.243
2003	906	-0.008	0.289	3,062	-0.026	0.584
2004	877	0.054	0.175	2,979	0.016	0.212
2005	838	0.029	0.213	2,941	-0.002	0.208
2006	814	0.028	0.147	2,900	-0.004	0.255
2007	757	0.055	0.197	2,851	0.007	0.226
2008	725	0.100	0.164	2,860	-0.001	0.267
2009	702	-0.027	0.154	2,689	-0.057	0.287
2010	682	0.041	0.464	2,573	0.008	0.233
2011	663	0.034	0.252	2,554	-0.033	0.234
2012	637	0.081	0.378	2,382	-0.007	0.363
Time Trend						
Coeff		0.000	-0.001		-0.002***	0.006***
t-stat		-0.42	-0.34		-3.76	3.58

\*\*\*, \*\*, \* denote significance at the 0.01, 0.05, and 0.10 levels, respectively, in a two-tailed test. Variables of interest and their statistics are indicated in bold typeface. Time Trend is coefficient and t-statistics are obtained by regressing 33 annual coefficients on the year. *Controls* include lagged sales revenue, lagged earnings, log of beginning-of-year market capitalization, log of beginning-of-year share price, beginning-of-year book-to-market ratio, and beginning-of-year debt to equity ratio. All main variables are defined in the Appendix.

**Panel B: Differences in Conservatism Trends between Old and Young Firms**

	Coeff.	t-stat.
$C\_Score_t = \gamma_0 + \gamma_1 Trend_t + \gamma_2 Dummy\_Young_t + \gamma_3 Dummy\_Young_t \times Trend_t + e_t$		
Intercept	0.285 ***	7.820
Trend	-0.001	-0.380
Dummy_Young	-0.170 ***	-3.310
Dummy_Young * Trend	0.006 **	2.420
N	66	
Adjusted R-square (%)	16.00%	

\*\*\*, \*\*, \* denote significance at the 0.01, 0.05, and 0.10 levels, respectively, in a two-tailed test. Variables of interest and their statistics are indicated in bold typeface. All main variables are defined in the Appendix.

**Table 4**

**Summary of accounting standards and other regulation changes  
and their hypothesized effects on conservatism**

Year	Event	Description	Effects on conservatism	
			Old Firm	Young Firm
1986	SAB 67	requires restructurings to be disclosed separately if material	(++)	(+)
1995	SFAS 121	requiring long-lived assets and certain intangibles to be reviewed for recoverability if there is any indication of impairment and to be reported at the lower value amount	(+)	(++)
	EITF 94-3	provides guidance for the first time on the recognition of a liability and expense associated with restructuring activities	(++)	(+)
	PSLRA	eliminates joint and several liabilities under which auditors and other related parties could be named to lawsuits	(--)	(-)
2002	SFAS 142	eliminates goodwill amortization and requires that goodwill be evaluated yearly for possible impairment	(+)	(++)
	SOX	imposes significant criminal penalties on CEOs/CFOs for knowingly certifying financial statements that do not meet the requirements of SOX	(++)	(+)

**Table 5**

**The Role of Accounting Standards and Demand for Conservatism**

**Panel A: Pooled regression of Basu (1997) model for 4 periods**

Period	Average of Yearly $\beta_3$ of Old Firms	Diff.	Average of Yearly $\beta_3$ of Young Firms	Diff.
1980-1985	0.239		0.143	
1986-1994	0.335	0.097	0.209	0.067
1995-2001	0.227	-0.108	0.210	0.001
2002-2012	0.279	0.052	0.275	0.065

$\beta_3$  is annual coefficient from estimations of the following model:\

$$X_{it} = \beta_0 + \beta_1 D_{it} + \beta_2 R_{it} + \beta_3 D_{it} R_{it} + controls + e_{it}$$

The models are OLS annual cross-sectional regressions from 1980-2012.

**Panel B: Regressions Comparing Conservatism Measure across Event Periods**

	All Firms			Old Firms			Young Firms		
	Coeff.		t-stat.	Coeff.		t-stat.	Coeff.		t-stat.
Intercept	0.083	***	37.640	0.093	***	48.140	0.005		0.790
<b>D<sub>t</sub></b>	-0.027	***	-6.640	-0.019	***	-5.290	-0.031	***	-2.850
<b>R<sub>t</sub></b>	0.019	***	6.220	0.025	***	9.180	0.003		0.390
<b>R<sub>t</sub> x D86</b>	-0.012	***	-2.700	-0.005		-1.000	0.013		1.420
<b>R<sub>t</sub> x D95</b>	-0.027	***	-6.970	-0.018	***	-2.610	-0.030	***	-6.010
<b>R<sub>t</sub> x D02</b>	-0.032	***	-12.360	-0.023	***	-3.670	-0.034	***	-11.150
<b>D<sub>t</sub> x R<sub>t</sub></b>	0.236	***	22.840	0.247	***	24.050	0.143	***	6.580
<b>D<sub>t</sub> x R<sub>t</sub> x D86</b>	0.038	***	2.960	0.097	***	6.430	0.069	***	2.880
<b>D<sub>t</sub> x R<sub>t</sub> x D95</b>	-0.037	***	-3.890	-0.108	***	-6.120	-0.001		-0.070
<b>D<sub>t</sub> x R<sub>t</sub> x D02</b>	0.064	***	7.540	0.042	**	2.210	0.064	***	6.380
<b>D86</b>	-0.048	***	-16.890	-0.041	***	-14.480	-0.006		-0.810
<b>D95</b>	-0.006	**	-2.400	0.005		1.420	-0.007	*	-1.790
<b>D02</b>	0.001		0.420	-0.005		-1.290	0.006	**	2.030
<b>D<sub>t</sub> x D86</b>	0.024	***	4.730	0.027	***	5.380	0.030	**	2.540
<b>D<sub>t</sub> x D95</b>	-0.004		-1.040	0.001		0.160	-0.005		-0.820
<b>D<sub>t</sub> x D02</b>	-0.004		-0.940	-0.003		-0.390	-0.007		-1.450
N	126,612			49,829			76,783		
Adjusted R-square (%)	12.73%			13.72%			10.66%		

\*\*\*, \*\*, \* denote significance at the 0.01, 0.05, and 0.10 levels, respectively, in a two-tailed test.

Variables of interest and their statistics are indicated in bold typeface.

This table presents results from estimations of the following model:

$$\begin{aligned}
 X_{it} = & \beta_0 + \beta_1 D_{it} + \beta_2 R_{it} + \beta_3 D_{it} \times R_{it} + \beta_4 D86 + \beta_5 D95 + \beta_6 D86 + \beta_7 D86 \times D_{it} \\
 & + \beta_8 D95 \times D_{it} + \beta_9 D02 \times D_{it} + \beta_{10} D86 \times R_{it} + \beta_{11} D95 \times R_{it} + \beta_{12} D02 \times R_{it} \\
 & + \beta_{13} D86 \times DR_{it} \times R_{it} + \beta_{14} D95 \times DR_{it} \times R_{it} + \beta_{15} D02 \times DR_{it} \times R_{it} + controls + e_{it}
 \end{aligned}$$

All main variables are defined in the Appendix.

Table 6

The Role of Economic Events

Panel A: Association between *Escore* and conservatism measure

	All Firms			Old Firms			Young Firms		
	Coeff.		t-stat.	Coeff.		t-stat.	Coeff.		t-stat.
Intercept	0.079	***	68.560	0.092	***	62.670	0.049	***	28.640
D	-0.004	**	-1.970	-0.002		-0.770	-0.000		-0.170
R	0.019	***	12.800	0.047	***	19.930	0.017	***	8.860
R x <i>Escore</i>	-0.036	***	-39.070	-0.028	***	-18.100	-0.033	***	-29.160
D x R	0.099	***	19.160	0.039	***	4.580	0.092	***	14.000
<b>D x R x <i>Escore</i></b>	<b>0.072</b>	<b>***</b>	<b>25.460</b>	<b>0.109</b>	<b>***</b>	<b>23.300</b>	<b>0.054</b>	<b>***</b>	<b>15.130</b>
<i>Escore</i>	-0.041	***	-52.400	-0.030	***	-29.040	-0.051	***	-45.820
D x <i>Escore</i>	-0.012	***	-9.230	-0.008	***	-4.660	-0.007	***	-3.810
N	126,612			49,829			76,783		
Adjusted R-square (%)	24.21%			23.94%			24.15%		

\*\*\*, \*\*, \* denote significance at the 0.01, 0.05, and 0.10 levels, respectively, in a two-tailed test.

Variables of interest and their statistics are indicated in bold typeface.

This table presents results from estimations of the following model:

$$X_{it} = \beta_0 + \beta_1 D_{it} + \beta_2 R_{it} + \beta_3 D_{it} \times R_{it} + \beta_4 \text{Escore} + \beta_5 \text{Escore} \times D_{it} + \beta_6 \text{Escore} \times R_{it} + \beta_{15} \text{Escore} \times DR_{it} \times R_{it} + \text{controls} + e_{it}$$

All main variables are defined in the Appendix.

**Panel B: Changes in the Incidence of Economic Events for Old and Young Firms**

Year	% of Negative employee growth firms ( <i>Neg_Emp</i> )		% of Discontinued operations firms ( <i>Disc</i> )		% of Loss firms ( <i>Loss</i> )		% of Negative revenue growth firms ( <i>Neg_Rev</i> )		<i>E-ScoreAvg</i>	
	Old	Young	Old	Young	Old	Young	Old	Young	Old	Young
1980	0.45	0.67	0.14	0.04	0.08	0.27	0.25	0.75	0.93	1.73
1981	0.44	0.58	0.16	0.05	0.10	0.37	0.23	0.62	0.94	1.62
1982	0.58	0.56	0.11	0.04	0.17	0.46	0.46	0.60	1.32	1.66
1983	0.38	0.41	0.10	0.04	0.16	0.46	0.33	0.46	0.98	1.37
1984	0.34	0.44	0.11	0.05	0.14	0.43	0.20	0.42	0.79	1.35
1985	0.41	0.43	0.14	0.07	0.17	0.41	0.38	0.39	1.09	1.30
1986	0.44	0.40	0.14	0.07	0.18	0.43	0.38	0.39	1.13	1.30
1987	0.38	0.36	0.13	0.06	0.17	0.40	0.28	0.36	0.96	1.18
1988	0.37	0.35	0.14	0.07	0.16	0.36	0.23	0.31	0.89	1.09
1989	0.42	0.36	0.14	0.08	0.15	0.38	0.26	0.31	0.97	1.12
1990	0.47	0.39	0.12	0.06	0.14	0.33	0.31	0.33	1.03	1.11
1991	0.51	0.40	0.11	0.05	0.15	0.31	0.44	0.39	1.21	1.15
1992	0.48	0.35	0.09	0.05	0.12	0.29	0.32	0.34	1.01	1.03
1993	0.44	0.35	0.10	0.05	0.11	0.29	0.29	0.33	0.93	1.02
1994	0.42	0.33	0.09	0.05	0.10	0.28	0.22	0.28	0.82	0.94
1995	0.41	0.36	0.11	0.05	0.10	0.29	0.24	0.29	0.86	0.98
1996	0.38	0.30	0.11	0.05	0.08	0.28	0.24	0.29	0.80	0.92
1997	0.35	0.33	0.13	0.05	0.08	0.31	0.24	0.32	0.80	1.02
1998	0.35	0.32	0.11	0.06	0.11	0.32	0.31	0.32	0.88	1.01
1999	0.39	0.34	0.13	0.07	0.10	0.32	0.30	0.30	0.93	1.02
2000	0.40	0.34	0.14	0.08	0.10	0.40	0.24	0.29	0.88	1.11
2001	0.55	0.49	0.14	0.08	0.14	0.46	0.50	0.46	1.33	1.50
2002	0.55	0.49	0.22	0.10	0.13	0.39	0.53	0.44	1.43	1.43
2003	0.51	0.44	0.26	0.12	0.11	0.33	0.25	0.29	1.13	1.17
2004	0.37	0.30	0.30	0.14	0.09	0.28	0.16	0.20	0.92	0.93
2005	0.37	0.32	0.33	0.16	0.08	0.29	0.19	0.26	0.98	1.03
2006	0.36	0.33	0.37	0.16	0.07	0.29	0.20	0.24	1.00	1.03
2007	0.35	0.33	0.35	0.16	0.09	0.32	0.25	0.28	1.04	1.10
2008	0.47	0.43	0.30	0.15	0.13	0.34	0.34	0.35	1.24	1.28
2009	0.68	0.53	0.25	0.15	0.16	0.33	0.76	0.59	1.84	1.61
2010	0.39	0.29	0.24	0.15	0.08	0.25	0.24	0.24	0.96	0.93
2011	0.31	0.29	0.26	0.13	0.06	0.24	0.21	0.25	0.84	0.90
2012	0.35	0.34	0.26	0.15	0.06	0.26	0.37	0.34	1.05	1.10
Time Trend										
Coeff	0.000	-0.004	0.006	0.004	0.002	-0.003	0.001	-0.007	0.005	-0.011
t-stat	-0.34	-2.83	6.03	8.49	-3.64	-3.39	0.40	-3.44	1.21	-2.73

Time Trend is coefficient and t-statistics are obtained by regressing 33 annual variables on the year. All main variables are defined in the Appendix.

**Figure 1**  
**Trend in Conservatism – Full Sample**  
**33 annual coefficients, 1980-2012**

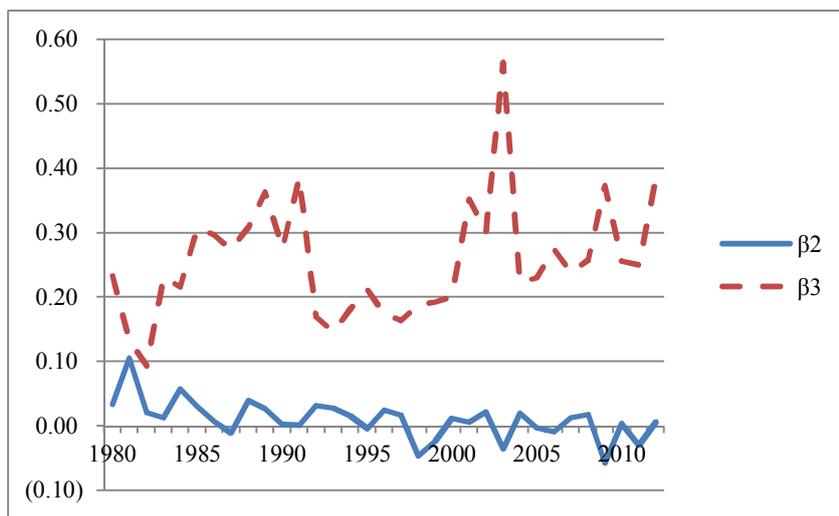
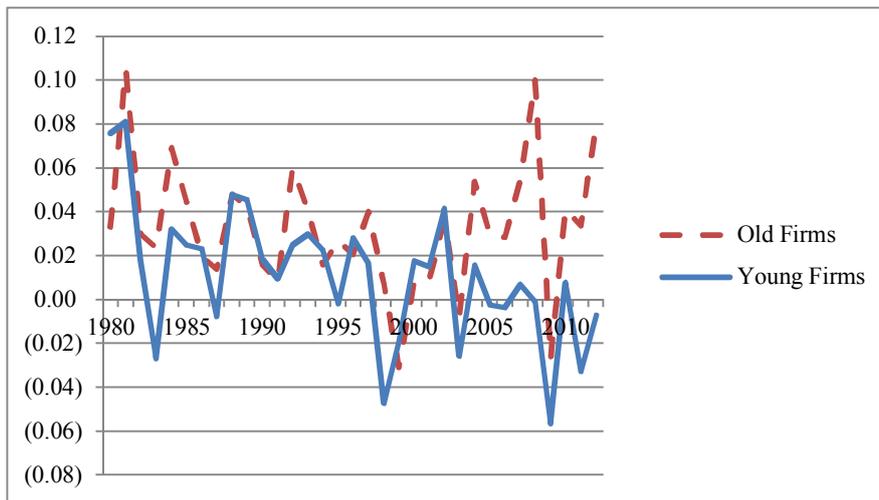


Figure 2

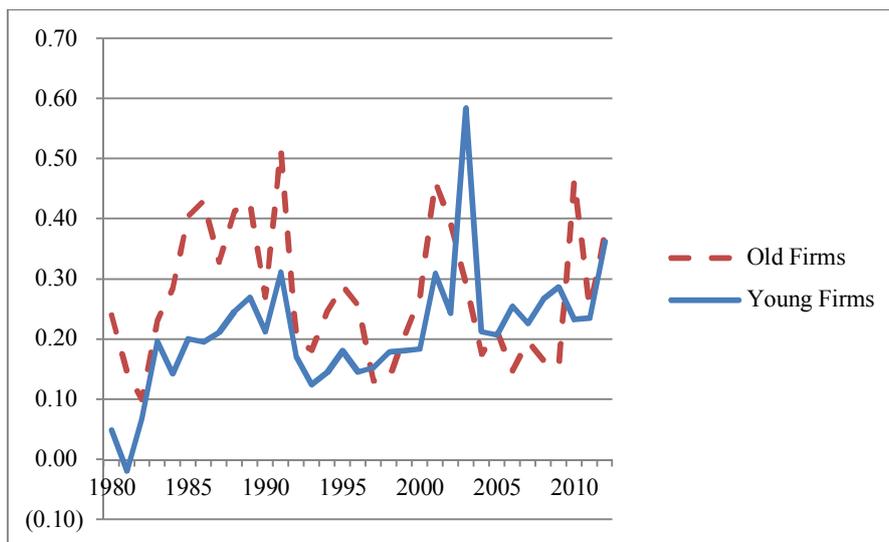
Trend in Conservatism – Old vs. Young Firms

33 annual coefficients, 1980-2012

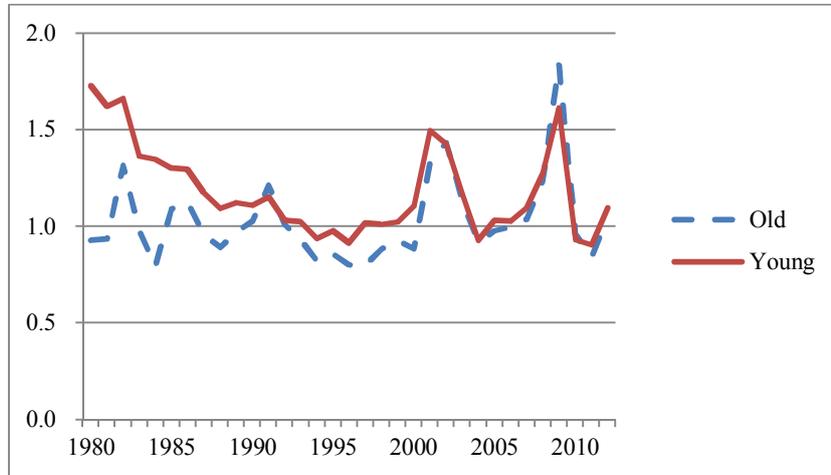
Panel A: Positive News Timeliness ( $\beta_2$ )



Panel B: Negative News Timeliness ( $\beta_3$ )



**Figure 3**  
**The Incidence of Economic Events – Old vs. Young Firms**  
**33 annual *E-ScoreAvg*, 1980-2012**



## 국문초록

회계보수주의는 지난 수십년 간 증가하는 추세를 보이는데, 이러한 변화가 왜 발생한 것인지에 대해서는 아직 명확히 알려진 바가 없다. 나는 이러한 회계보수주의의 증가추세가 시장에 새로이 진출한 젊은 기업들에 의해 견인되었음을 발견했다. 또한 나는 성숙한 기업과 젊은 기업 간의 보수주의 추세가 서로 다른 양상을 보이는 것이 회계기준의 변화 때문인지, 보수주의에 대한 수요의 변화 때문인지, 혹은 회사의 경제환경 변화에 따른 것인지 분석하였다. 연구결과에 따르면, 대부분의 기존연구에서 예상했듯이 새로운 회계기준의 도입 전후로 보수주의가 증가했다. 그러나 이뿐 아니라 보수주의에 대한 수요 변화 역시 보수주의의 변화를 설명하는 주요 요인으로 작용했다. 반면 회사의 경제환경 변화는 보수주의와는 직접적 관련이 적은 것으로 판단된다.

**주요어:** 회계보수주의, 회계기준, 보수주의에 대한 수요, 규제, 경제환경

**학번:** 2013-20492