Principles-Based Standards and the Informativeness of Earnings

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Abstract

This study examines the relation between principles-based standards and the informativeness of earnings. To examine this question, we construct a firm-level instrument that measures the extent to which firms rely on principles-based standards. We view standards on a continuum where standards that contain few rules-based characteristics are defined as being more principles-based and standards that contain many rules-based characteristics are defined as being more rules-based. We find that earnings are more informative, are more persistent, and better predict future cash flows when the firm relies on principles-based standards. This evidence is consistent with managers using the additional discretion provided by principles-based standards to more accurately convey the underlying economics of transactions to investors.

Keywords: rules, principles, standards, earnings informativeness

1. Introduction

This study examines the relation between principles-based standards and earnings informativeness. For parsimony, we refer to standards that contain fewer rules-based characteristics as being more principles-based and standards that contain more rules-based characteristics as being more rules-based.[1] Prior academic studies (e.g., Nelson 2003, Schipper 2003, and Bartov et al. 2003), regulators (SEC 2003, FASB 2002), and practitioners (e.g., DiPiazza 2006), consistently list the following as rules-based characteristics of accounting standards: (1) bright-line tests, (2) scope and legacy exceptions, (3) large volumes of implementation guidance, and (4) a higher level of detail. The debate over whether standards should be principles-based (i.e., contain few, if any, rules-based characteristics) intensified after several large accounting scandals were revealed around 2001(e.g., Enron, Worldcom, and Adelphia). In response to these accounting scandals, Congress (Sarbanes-Oxley Act 2002) required the SEC to investigate the implications of shifting to more principles-based accounting standards. A fundamental question about such a shift is the impact of principles-based standards on the informativeness of earnings. This study provides such evidence.

Academics and standard setters debate whether principles-based accounting standards increase or decrease earnings informativeness. As outlined in the SEC (2003) and FASB (2002) reports, some argue that earnings are more informative when standards are principles-based. They contend that principles-based standards do not have bright-line thresholds or exceptions that allow managers to structure transactions that technically comply with a standard while

[1] Schipper (2003) notes that U.S. GAAP is based on principles and thus is principles-based. However, she also notes that certain characteristics create the perception that U.S. GAAP is rules-based. While we agree with Schipper (2003), for parsimony and to be consistent with the prior literature (e.g., Nelson 2003) and regulators (e.g., SEC 2003), we refer to standards that contain fewer (more) of these characteristics as being more principles-based (rules-based).

circumventing its intent. The Big Four accounting firms have stated that principles-based standards will encourage managers to utilize financial reporting as an act of communication rather than an act of compliance (DiPiazza et al. 2006). The central tenet of their statement suggests that companies using more principles-based standards will report more informative earnings than firms that use more rules-based standards. On the other hand, some argue (e.g., Herz 2003) that principles-based standards provide more opportunities for managers to use their discretion to obfuscate earnings, thereby reducing earnings informativeness. This argument suggests that rules-based standards provide guidelines that prevent management from abusing GAAP to manipulate earnings. Given the contrasting arguments regarding the impact of principles-based standards on earnings informativeness, it is unclear whether principles-based standards increase or decrease the informativeness of earnings.

We address this issue by exploring whether firms that rely more on principles-based standards have more informative earnings than firms that rely more on rules-based standards. To empirically examine this issue, we need a firm-specific measure of the extent to which individual companies rely on principles-based standards. This requires measuring both the extent to which different accounting standards are rules- or principles-based *and* estimating the extent to which firms rely on each standard. Consistent with Nelson (2003), we assert that accounting standards lie along a continuum with respect to the degree to which they exhibit rules-based characteristics. Standards with relatively few rules-based characteristics are defined as "principles-based", while those with several rules-based characteristics are defined as "rules-based".

We assign individual companies a score that reflects the extent to which they rely upon principles- or rules-based standards by examining the frequency with which they mention different standards in their annual financial statements. Combining this measure of each firm's

reliance on individual standards with an assessment to which each individual standard is rules- or principles-based gives us a firm-year measure of the extent to which a company's earnings are generated more by rules- or principles-based standards. Using this combined measure, we are able to investigate how the informativeness of earnings is impacted by companies' reliance on principles-based standards. We measure earnings informativeness three ways: (1) the relation between earnings and contemporaneous returns, (2) the persistence of earnings, and (3) the association between current earnings and future cash flows.

We rely on Mergenthaler (2010) to quantify the extent to which U.S. GAAP accounting standards contain rules-based characteristics. Mergenthaler (2010) creates an instrument (*RBC1)* that measures whether U.S. GAAP accounting standards contains each of the four rules-based characteristics listed previously. He applies this methodology to an exhaustive set of standards, including SFASs, APBs, ARBs, and select EITFs and SABs. Mergenthaler (2010) and Donelson et al. (2010) further validate this measure by ensuring it (1) corresponds with the SEC's classification of a small subset of standards, (2) identifies IFRS standards as being more principles-based, and (3) represents a single underlying factor. Their analysis, which we do not repeat in this paper, suggests that *RBC1* is a reasonable proxy for capturing the presence or absence of rules-based characteristics in specific accounting standards. We therefore use *RBC1* to capture the extent to which each standard is principles-based or rules-based.

We use textual analysis to create a firm-level instrument that measures the extent to which firms rely on individual standards. Specifically, we develop keyword lists for each U.S. GAAP standard and count the number of times each firm uses these keywords in their annual 10-K report.[2] We validate our key word list by having the national office of one of the Big Four

[2] The key word list we utilize is documented in the Appendix.

auditing firms review the key word list for accuracy and completeness. We assume firms will devote more time discussing items that have a larger impact on their financial reporting. Thus, standards that are mentioned more often in the company's 10-K relative to how often the standard is mentioned in the average firm's 10-K, receive greater weights in computing a weighted average principles-continuum score for the firm. Higher values of this weighted average measure, labeled *PSCORE*, suggest the firm relies more on principles-based standards (i.e., standards containing few, if any, rules-based characteristics), while lower values suggest the firm relies more on rules-based standards (i.e., standards containing many rules-based characteristics).

We recognize that isolating rules-based characteristics in accounting standards from the underlying transactions is difficult, if not impossible using archival data. Thus, our measure, *PSCORE*, likely captures not only the extent to which firms' rely on principles-based standards, but also certain characteristics of the underlying economic transactions governed by the standard. For example, if complex transactions require additional detail and implementation guidance to ensure that firms properly account for these transactions, then an association between earnings informativeness and principles-based standards would reflect the impact of both rules-based characteristics and the complexity of the transaction. To address this issue, we control for some more obvious characteristics that may be correlated with rules-based characteristics—namely complexity and firm size. However, we recognize that parsing out the underlying transaction from the standard's characteristics may not be possible empirically, and thus our empirical tests examine the joint hypothesis that principles-based standards and their underlying transactions impact the informativeness of earnings.

Our sample includes firms with requisite Compustat, CRSP, and I/B/E/S data. Our sample period begins in 1994, when 10-K reports became electronically available on the SEC's website, and ends in 2006.[3] Our primary research question is whether firms' use of principles-based accounting standards affects the informativeness of their reported earnings. We examine this question using three different approaches. First, we investigate the earnings-response coefficient using annual earnings and contemporaneous returns. We find that the relation between earnings and returns strengthens when firms rely more on principles-based standards. Second, we examine whether principles-based standards affects the persistence of earnings. We find that earnings are more persistent when firms use more principles-based standards. Last, we investigate whether the use of principles-based standards affects the association between current earnings and future cash flows. We find that earnings have a stronger association with one-year-ahead cash flows when the firm relies more on principles-based standards. Overall, our findings are consistent with managers using the discretion provided by principles-based standards to better convey information in earnings to market participants.

This study provides at least three important contributions. First, this study complements prior literature that explores the impact of principles-based characteristics on earnings management, litigation, and fraud (see, e.g., Mergenthaler 2010, Nelson et al. 2002, and Donelson et al. 2010) by expanding the focus beyond situations that involve egregious cases of earnings management. In contrast to these studies, our study explores the impact of principles-based standards on all firms' earnings, not just firms that have committed an accounting irregularity. Second, this study develops a firm-level measure of the extent to which a firm's earnings is influenced by rules- and principles-based standards. This measure can be used to

[3] The RBC standard score is measured through 2006 in Mergenthaler (2010); hence, our sample period is constrained by this ending measurement time frame.

explore other research questions, such as the impact of principles-based standards on financial statement comparability. Third, this study provides additional relevant information that can be considered by regulators when deciding whether to adopt more principles-based standards. However, we caution that our findings are only one piece of information to be considered and recognize that standard setters should consider all of the costs and benefits in deciding whether to adopt more principles-based standards. Thus, this study is not intended to resolve the debate, but rather provide additional input that can be considered in the deliberation surrounding Congress' call to adopt more principles-based accounting standards in the U.S.

The remainder of the paper is organized as follows. Section 2 describes the related prior research in this area. Section 3 outlines our research methodology. Section 4 discusses our sample selection and presents our results. Finally, Section 5 concludes.

2. Prior Research

In this section, we discuss why principles-based standards may affect the informativeness of accounting earnings. First, we examine past literature regarding the role of managerial discretion and its potential impact on earnings informativeness. We then consider some recent arguments about how principles-based standards facilitate or hinder earnings informativeness. Finally, we discuss our empirical predictions.

2.1 Managerial Discretion and Earnings Informativeness

Prior research has debated whether managers use discretion in accounting to "reveal or conceal" information to outside stakeholders. For example, the past literature (see, Healy and Whalen 1999, Dechow and Skinner 2000, and Fields et al. 2001 for a review) is replete with evidence suggesting that managers, at times, manage earnings or conceal information to achieve

a desired financial reporting outcome (e.g., maximize compensation, circumvent debt covenant violations, avoid stock price declines, etc.). Other studies document that executives use their discretion to reveal information to investors (Subramanyam 1996; Kanagaretnam, Lobo and Yang 2004; Louis and Robinson 2005; Badertscher et al. 2010).

One prevailing belief is that principles-based standards affect executives' ability to convey information to investors via earnings. Holthausen and Verrecchia (1988) demonstrate that the uncertainty about firm value and the noise in the information signal impact the magnitude of price reactions to information. To the extent that principles-based standards introduce noise or allow management to introduce noise into earnings, then one would expect principles-based standards to impact the magnitude of stock price responses to earnings. Thus, through this mechanism, the informativeness of earnings may be impacted by principles-based standards. In the following two sections, we discuss various arguments that suggest that principles-based standards either reduce or increase the noise in earnings.

2.2 Principles-Based Standards and Increases in the Informativeness of Earnings

Some argue that principles-based standards are more informative because they do not have rules that provide executives with a roadmap showing them how to structure transactions to obfuscate poor financial performance. For example, APB 18 gives specific guidance prescribing when the equity method should be used to account for an investment. Specifically, APB 18 indicates that "an investment (direct or indirect) of 20 percent or more…should lead to a presumption" that the company has significant influence over its investment and thus should account for the investment using the equity method. In turn, the company is required to record its share of the investment's earnings. Under this standard, a firm not wishing to recognize its share of the investment's earnings could structure their investment purchases to ensure they'll be

classified as available for sale securities (i.e., ensure they own less than 20% of the investment) and thus avoid accounting for the investment under the equity method. This transaction structuring would benefit the firm because the change in value of available for sale securities only gets recognized in earnings when the investment is sold. Consistent with this argument, Comskey and Mulford (1986) find that there is an abnormal amount of firm investment just around the 20 percent threshold required by APB 18. In sum, proponents of principles-based standards argue that principles-based standards prevent executives from manipulating how they account for a transaction and thus argue that principles-based standards will produce more informative earnings.

Others argue that principles-based standards allow managers to more accurately convey the substance of a transaction because they lack detailed and specific guidance (Dye and Sunder 2001). For example, bright-line thresholds, implementation guidance, and detailed accounting rules may force executives to record transactions in ways that obscure economic realities. Thus, in effect, executives are boxed into accounting for transactions in a prescribed way even though the required accounting method doesn't reflect the underlying economics of the transaction – which introduces noise into earnings and lowers the informativeness of earnings. On the other hand, principles-based standards allow managers the freedom to exercise their professional judgment in selecting how to account for a transaction that best conveys the underlying economics of the transaction, thus producing more informative earnings.

Finally, one could argue that principles-based standards are less complex because they do not contain exceptions, volumes of implementation guidance, and extraordinary detail. Donelson et al. (2010) find that rules-based violations are less likely to result in a class action lawsuit and argue that this may be driven by the complex nature of rules-based standards. In effect they

argue that the complexity of rules-based violations make it more difficult to demonstrate that executives acted with the intent to defraud. Sir David Tweedie (2007), former Chairman of the IASB, supports this view and states that standards "frequently baffle many accountants so much so that few audit partners can complete an audit without relying on the advice of experts within the firm." In addition, if standards "baffle" many accountants, then executives may commit more errors when standards are complex. Overall these arguments suggest that managers are more likely to commit errors and manipulate earnings in complex areas of GAAP, suggesting that less complex principles-based standards will produce less noisy and more informative earnings.

2.3 Principles-Based Standards and Decreases in the Informativeness of Earnings

In contrast to the above arguments, many contend that principles-based standards reduce the informativeness of earnings. The first of these arguments assumes that managers will use the discretion provided by principles-based standards to manipulate earnings opportunistically. Robert Herz (2003), FASB Chairman, indicates that "some point to recent events in the U.S. as evidence that preparers and auditors cannot be trusted to properly exercise professional judgment with objectivity and courage." These proponents argue that detailed implementation guidance and specific rules prevent managers from exercising opportunistic judgments in financial reporting that add noise to earnings signals. Even while acknowledging that transaction structuring may occur under rules-based standards, these proponents argue that principles-based standards allow managers to use their judgment opportunistically, leading to less informative earnings.

From a regulatory perspective, it may be more difficult to regulate principles-based standards because regulators cannot easily identify intentional GAAP violations of principles-

based standards. Schipper (2003) indicates that detailed guidance may provide auditors and companies with a "common knowledge base and a common set of assumptions." Assuming this common understanding leads companies to account for transactions in a similar fashion, identifying deviations from the behavioral norm should be easier. Thus, the lack of detailed guidance may make it more difficult to identify GAAP violations and lower the probability of detection by regulators or investors. Thus, one could argue that executives will take advantage of this reduced detection probability associated with principled-based standards and manipulate earnings more often and in greater magnitudes, leading to less informative earnings.

2.4 Predictions

In summary, proponents and critics of principles-based standards suggest that principles-based standards impact the informativeness of earnings, but they differ in whether principles-based standards augment or diminish the informativeness of earnings. Thus, we make no directional predictions. A positive relation between principles-based standards and earnings informativeness is consistent with managers using the increased discretion to reveal important, future-looking information to investors while a negative relation suggests that rules discourage executives from making opportunistic judgments.

2.5 Economic Transactions and Accounting Standards

One cannot easily parse out the effects of a standard from the effects of the underlying transaction the standard describes. Thus any empirical test using archival data examining the impact of different forms of accounting rules on reporting outcomes is a joint test of the characteristics of the standard and the characteristics of the underlying transactions. Although empirical researchers can attempt to control for some of the characteristics of the underlying

transaction (e.g., complexity of transactions), we believe disentangling these two concepts is difficult, if not impossible.

Thus, our empirical tests examine the joint effects of rules- versus principles-based accounting standards and transaction characteristics on earnings informativeness. Examining this hypothesis still informs standard setters, practitioners, and accounting researchers regarding how standards affect the usefulness of accounting information. For example, standard setters facing variability in transaction complexity may continue to formulate standards that are principled-based and lacking many rules-based characteristics. SFAS 5 governing contingent liabilities is an example of a principled-based standard that governs the financial reporting for a set of complex transactions. Firm managers frequently have choices regarding the form of transactions they engage in (e.g., leasing or buying equipment) that will directly affect the type of standard governing financial reporting. Real earnings management techniques (see Roychowdhury 2006) highlight managers using their discretion in transaction choice to influence financial reporting outcomes. Managers may consider the rules-based characteristics embedded in accounting standards when making these economic decisions. Recognizing these various incentives, understanding these effects also provides academic researchers opportunity to better understand the role of accounting in informational markets.

3. Research Methodology

3.1 Measuring PSCORE

We build upon Mergenthaler's (2010) standard-level measure by developing a firm-level instrument that measures the degree to which firms rely on principles-based standards (labeled *PSCORE*). Mergenthaler identifies four key rules-based characteristics that practitioners, standard setters, and prior literature (see, e.g., FASB 2002, Nelson 2003, Schipper 2003, SEC

2003, and U.S. House of Representatives Financial Services Committee 2006) typically cite as the difference between principles-based and rules-based standards. These characteristics are: (1) the inclusion of bright-line thresholds, (2) the presence of scope and legacy exceptions allowed by the standard, (3) large volumes of implementation guidance, and (4) higher levels of detail. We utilize *RBC1* from Mergenthaler (2010) as a measure of how individual standards compare on a principles- to rules-based continuum (e.g., a lower *RBC1* score indicates a standard is relatively more principles-based). This measure identifies the occurrence of the four above characteristics. Thus, the minimum score is zero (i.e., the standard contains none of the above characteristics) and the maximum score is four (i.e., the standard contains all of the above characteristics).

We estimate firms' reliance on individual standards using a textual analysis technique. Specifically, we develop keyword lists for each U.S. GAAP standard and count the number of times each firm uses these keywords in its annual 10-K report. For example, the textual analysis search terms used for SFAS 34 - Capitalization of Interest Cost are (1) "interest" within two words (forwards or backwards) of "cost," and (2) common titles of the standard including "SFAS 34," "FAS 34," or "FASB Statement No. 34." The national office of a Big Four Auditing Firm reviewed our keyword list for accuracy and completeness, giving us some assurance our keywords are appropriate. A complete listing of the search terms used for each standard can be found in the Appendix.

Using a textual analysis programming language, we count the number of times the key word search terms are mentioned in the company's 10-K filing.[4] Then, we measure the relative importance of the standard to the firm by standardizing the firm count ($firm\_count_{its}$). Thus, we

[4] We remove any tables and exhibits from the 10-K and parse just the text for html filers.

subtract the average firm count of standard *s* in year *t* from the count for firm *i* in year *t* for standard *s*. We then divide this demeaned word count by the standard deviation of the firm count for standard *s* in year *t*:

$$REL\_IMP_{its} = \frac{(firm\_count_{its} - avg\_firm\_count_{ts})}{\text{std\_dev}\ (firm\_count_{ts})} \quad (1)$$

This process yields a standardized score that measures the importance of each standard to the firm relative to that of other firms. This is important for several reasons. First, certain search terms may be mentioned more often than others due to the precision of the search terms. The above-mentioned process standardizes the firm count to remove the impact of more prolific word counts. Second, the process outlined in formula (1) above creates a standardized weight that captures the importance of the standard to the firm as compared to other firms. This is important because our tests investigate cross-sectional difference in earnings informativeness; therefore, it is important to have a measure that also captures cross-sectional differences in the importance of standards across firms. Finally, to ensure all weights are positive and to give a zero weight to any standard a firm does not rely upon (e.g., zero keyword counts for a standard), we add back the minimum standardized score for standard *s* in year *t*.

After creating this standardized relative importance weight (REL_IMP_{its}), we calculate the *PSCORE* by multiplying the standardized relative importance weight (REL_IMP_{its}) by the corresponding standard's principle-based score (RBC_{ts}) and sum this weighted individual standard score across all standards as follows:

$$PSCORE_{it} = -1 * \Sigma_{s=1}^{S}(REL\_IMP_{its} \times RBC1_{ts})/S \quad (2)$$

where *i* is firm, *t* is year, *s* is the particular standard, *REL_IMP* is described above, and *RBC1* is obtained from Mergenthaler (2010). We multiply the score by negative one so that higher values

of the instrument reflect increased reliance on principles-based standards (i.e., standards containing few rules-based characteristics) while lower values reflect greater reliance on rules-based standards. Finally, we scale *PSCORE* by the number of standards the firm relies upon (*S*). This ensures that the magnitude of the *PSCORE* isn't mechanically higher for firms that rely on more standards, regardless of the extent to which their standards are principles-based. Overall, our measure reflects the extent to which the firms' average standard is principles-based relative to the average standard of other firms.

3.2 Empirical Test Design

Recognizing no single model or construct perfectly captures earnings informativeness, we use multiple models to test our hypotheses (Dechow et al 2010). Specifically, we employ models of the association between earnings and contemporaneous returns, an earnings persistence model, and the association between earnings and future cash flows to capture the informativeness of earnings. By triangulating across these models, we can best test our hypotheses that firms' reliance on principles- or rules-based standards affects how informative accounting earnings are to investors.

The concurrent relation between accounting earnings and returns is a traditional measure for the informativeness of earnings (for examples see Francis et al. 2005, Altamuro et al. 2005, Hanlon et al. 2008, and the discussion in Dechow et al. 2010). Theoretical support for using this model can be found in Holthausen and Verrecchia (1988) who demonstrate that the magnitude of investor-driven price reactions to new information (i.e. earnings news) is increasing in prior (pre-news) ambiguity about firm value, and decreasing in the amount of noise in the information signal. We test whether the reliance on more principles-based or rules-based standards in calculating a firm's earnings affects the credibility of that earnings signal (i.e. reducing or

increasing the noise in the signal), thereby influencing the price reaction to earnings news. We implement this model empirically in the following regression specification:

$$RET_{it} = \beta_0 + \beta_1 EARN_{it} + \beta_2 PSCORE_{it} + \beta_3 EARN_{it} \times PSCORE_{it} + \beta_{4-11} CONTROLS + \beta_{12-19} EARN_{it} \times CONTROLS + \varepsilon_{it} \quad (3)$$

where *i* is firm, *t* is the fiscal year, *RET* is the 12-month cumulative market-adjusted return for fiscal year *t*, *EARN* is earnings before extraordinary items scaled by the beginning market value of equity, *PSCORE* is as described above, and *CONTROLS* is a vector of control variables described in the next section. If firms with greater reliance on principles-based standards have increased (decreased) earnings informativeness, we expect the coefficient estimates β_3 to be positive (negative).

Models of earnings persistence are also commonly used to identify increased earnings informativeness (for examples see Kormendi and Lipe 1987, Riedl and Srinivasan 2010, Li 2010, and Atwood et al. 2010). We employ the following regression model to examine if reliance upon more principles- or rules-based standards affects the persistence of earnings:

$$EARN_{it+1} = \beta_0 + \beta_1 EARN_{it} + \beta_2 PSCORE_{it} + \beta_3 EARN_{it} \times PSCORE_{it} + \beta_{4-11} CONTROLS + \beta_{12-19} EARN_{it} \times CONTROLS + \varepsilon_{it} \quad (4)$$

where *i* is firm, *t* is the fiscal year, and *EARN* is earnings before extraordinary items scaled by average total assets. If a firm's greater reliance upon principles-based (rules-based) accounting standards is associated with increased earnings persistence, we expect a positive (negative) coefficient estimate for β_3.

The final model of earnings informativeness we employ is the association between current earnings and future cash flows. FASB Concept Statement One states that "the decisions [of potential users of financial information] relate to amounts, timing, and uncertainties of

expected cash flows" (pg 9, FASB Concept Statement One, emphasis added). Thus, current earnings association with future cash flows is an alternate measure of earnings informativeness (for examples, see Badertscher, et al. 2010 and Atwood et al. 2010). We use the following regression model to capture this association:

$$CFO_{it+1} = \beta_0 + \beta_1 EARN_{it} + \beta_2 PSCORE_{it} + \beta_3 EARN_{it} \times PSCORE_{it} + \beta_{4-11} CONTROLS + \beta_{12-19} EARN_{it} \times CONTROLS + \varepsilon_{it} \quad (6)$$

where *CFO* is the annual cash flow from operations and all other variables are as described above. Again, we are most interested in the sign of the estimated coefficient β_3, where a positive (negative) coefficient supports the supposition that increased reliance on principles-based (rules-based) standards increases earnings informativeness.

3.3 Control Variables

In all our empirical tests, we include a vector of control variables. These variables are taken from the prior literature and are likely associated with both earnings informativeness and the standards used in the creation of financial statements. First, we control for industry clustering (2-digit SIC codes) and year fixed effects in all specifications. We also include control variables representing firm size (*SIZE*), market-to-book ratio (*MB*), and leverage (*LEV)*.

In addition to these controls, we control for the underlying complexity of the firm (and by extension the transactions of the firm) in our empirical tests. We recognize the standards firms employ in their financial statements may be correlated with the complexity of the firm's' underlying business model. To isolate the effects of principles- or rules-based standards, we attempt to control for the complexity of operations and reporting at the firm level. We use firm size (*SIZE*), measured as log of total sales, as one measure of complexity. Generally, larger

firms have increased capital and human resources to handle more complex business operations. Larger firms also likely operate in more diverse transaction sets. To further control for the diversity of transactions within firms, we also use the number of operating and geographic segments (*BUSSEG* and *GEOSEG*) as additional controls for firm complexity.

4. Sample Selection and Results

4.1 Sample Selection and Descriptive Statistics

Table 1 outlines the sample selection procedures for this study. Our sample begins in 1994, the first fiscal year the SEC offers 10K information in format useable for our keyword searches. Because Mergenthaler (2010) stops the calculation of RBC in 2006, our sample also ends with this fiscal year. We then restrict the sample to firms that have machine readable financial statement data from the SEC's website, www.sec.gov, causing us to drop more than 50,000 firm-year observations (see Table 1). This requirement is necessary to count the various keywords needed for the creation of *PSCORE*. We lose an additional 19,364 observations when imposing the data requirements needed for our dependent and independent variables using Compustat data. Thus, for our tests examining the future cash flows or earnings persistence, our sample consists of 50,805 firm-year observations. For tests using CRSP returns, we lose an additional 6,777 firm-years due to CRSP data requirements, leaving a sample consisting of 44,028 firm-years.

Descriptive statistics for the sample are reported in Table 2. In panel A, we first report these statistics for our complete sample. The median EPS for our firms is 2.8 cents per share. The median *PSCORE* is -1.70. A higher *PSCORE* reflects greater reliance on principles-based standards (i.e., standards that contain few rules-based characteristics). The median firm in our

sample has an annual market adjusted abnormal return of around -5.8%, while the mean return is 4.0%, consistent with positive skewness in returns.

In panel B of Table 2 we report the mean and median averages of relevant variables across quintiles of *PSCORE*. We find that median values of earnings and one-year-ahead earnings are increasing as *PSCORE* increases (e.g., becomes more principled-based). Median values of both of the cash flow and accrual components of earnings also follow this pattern. This suggests that firms using more principled-based standards report higher earnings. Surprisingly, mean values of earnings and its components display a monotonically decreasing pattern, opposite of the pattern from median values. This highlights the different motivations firms may have to increase or decrease reporting earnings. The measures of size (i.e., the log of the previous fiscal year market value of equity and the log of the current year's sales) both decrease monotonically across *PSCORE* quintiles. This relationship corresponds to a univariate Spearman (Pearson) correlation of -0.310 (-0.313) between *SIZE* and *PSCORE* (untabulated) and highlights the importance of controlling for size in our tests. As leverage is generally positively related to size, the monotonically decreasing averages across *PSCORE* quintiles is unsurprising. No recognizable pattern can be seen for book-to-market ratio or market returns.

4.2 Empirical Results

Table 3 presents empirical findings from the linear regression model in equation (3) that examines the relation between accounting earnings and concurrent annual returns. In all regression models presented throughout this study, we include fiscal year indicator variables and report standard errors adjusted for clustering at the industry-level (2-digit SIC) to control for correlation across time or industry structures (Petersen 2009). We report results from two model specifications. In model (1), we only include the interactions with the various control variables.

This specification is consistent with Francis et al (2005). We also include the control variable main effects in model (2). The signs of the coefficient estimates for the control variables and interactions are consistent with prior literature. More germane to our study, the coefficient on the interaction between *EARN* and *PSCORE* is positive and statistically significant in both models. This positive coefficient is consistent with earnings capturing more of the total news released during the period for firms that rely more on principles-based standards. Thus, firms that use more principle-based standards have greater earnings informativeness.

Table 4 reports empirical findings for the earnings persistence model. As expected, the coefficient estimate for *EARN* is significantly positive in all specifications. Consistent with the return results in Table 3, we document a significantly positive coefficient for the interaction between *EARN* and *PSCORE* across both empirical models. This positive loading suggests that firms that rely more on principles-based standards have more persistent earnings. Insofar as increased earnings persistence is informative to investors when making economic decisions, this finding suggests firms with more principle-based standards provide more informative earnings to market participants. Further, the positive coefficient estimate is robust to a variety of control specifications.

Table 5 presents the results of our empirical model examining the relation between earnings and future, one-year-ahead cash flows. In Panel A, we record our findings from the linear regression represented in equation (6). As expected, the coefficient estimates for *EARN* are positive and significant in all models and suggests $1 of current earnings leads to between $0.74 and $0.81 in one-year-ahead cash flows. The coefficients on the interaction between earnings and *PSCORE* in both models are also positive and significant (p-values less than 0.001), suggesting that firms that rely more on principles-based standards (e.g. standards with fewer

rules-based characteristics) have earnings that are more highly correlated with future cash flows. This suggests that firms that rely on principles-based standards have earnings that better predict future cash flows. In Panel B, we split earnings into accrual (*ACC*) and cash flow components (*CFO*) and interact these components with *PSCORE*. Our findings indicate the documented increase in earnings informativeness is largely driven by increased informativeness in the accrual component of earnings. This finding is consistent with various characteristics of standards having a greater impact on reported accruals than cash flows from operations.

Overall, the results of our empirical tests suggest principles-based standards impact the informativeness of reported earnings. Firms that are more reliant on more principle-based standards have earnings that are more highly correlated with concurrent annual abnormal returns, are more persistent, and better predict future, one-year-ahead cash flows from operations. These findings are consistent with increased firm reliance on principle-based standards leading to greater earnings informativeness.

5. Conclusion

Academics and standard setters debate whether principles-based accounting standards increase or reduce earnings informativeness. As outlined in the SEC (2003) and FASB (2002) reports, some argue that rules-based standards allow managers to structure transactions to be in technical compliance, while circumventing the intent of the standard. On the other hand, some argue (e.g., Herz 2003) that principles-based standards provide opportunities for managers to exercise their judgment opportunistically to manipulate earnings. Overall, proponents and critics of principles-based standard contend that principles-based standards impact earnings informativeness, but disagree on whether principles-based standards improve or diminish earnings informativeness.

We attempt to shed light on this issue, by examining whether the reliance on principles-based standards impacts the informativeness of earnings. We define principles-based standards as standards that have fewer rules-based characteristics. More specifically, principles-based standards contain fewer (1) bright-line thresholds, (2) scope and legacy exceptions, (3) large volumes of implementation guidance, and (4) high levels of detail. We view standards on a continuum where standards containing fewer of the above-mentioned characteristics are defined as more principles-based and standards containing more of these characteristics are defined as more rules-based.

To investigate our research question, we create a firm-level instrument that measures the extent to which firms rely on principles-based standards. Our instrument, *PSCORE*, extends Mergenthaler's (2010) standard level measure by utilizing textual analysis software. Specifically, we develop keyword lists for each accounting standard. We ensure our key words appropriately capture reliance on the standard by having the national office of one of the Big Four auditing firms review the key word list for accuracy and completeness. We then assume that firms will devote more of their 10-K discussion to items that have a larger impact on their financial reporting, suggesting firms rely more upon those items. Then, we standardize this measure by determining how often the key words are mentioned in the company's 10-K relative to how often the standard is mentioned in other firms 10-K. Items that are mentioned more in the firm's 10-K relative to other firms receive greater weights in computing a weighted average principles-continuum score for the firm. Higher values of this weighted average measure, labeled *PSCORE*, suggest the firm relies more on principles-based standards, whereas lower values suggest the firm relies more on rules-based standards.

We find that firms which rely more on principles-based standards have a stronger relation between earnings and returns. We also find that earnings map better into future cash flows and are more persistent when the firm relies on principles-based standards. Overall, these findings suggest that managers utilize the discretion provided by principles-based standards to better convey information to investors.

We recognize our empirical tests are joint tests of the effect of principles- and rules-based standards coupled with the effect of characteristics of the underlying transactions. Separating these two constructs, the form of the standard and the nature of the underlying economic transaction, is extremely difficult when using archival data over large samples. We attempt to control for the complexity of the economic transactions in our multivariate tests, and we continue to find significant results consistent with our hypotheses. Despite this limitation, our results still contribute to our understanding of the role of accounting standards in financial markets.

Our study suggests several avenues for future research. First, we create new firm-specific empirical measure capturing the variation in firm reliance on principles- or rules-based standards that can be used in a variety of contexts to address a range of research inquiries. For example, future research may examine how the form of accounting standards affects financial comparability. Future research can also be done to corroborate our results. One advantage of the current study is that the legal and regulatory environment is held constant for all observations because we confine our work to firms using U.S. GAAP. Future research could expand the scope of this study by examining these effects across international financial markets.

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Appendix: Keyword Searches for Accounting Standards in 10-Ks

Standard #	Keyword #1	Keyword #2	Keyword #3	Keyword #4
APB 2	"Investment Credit"	"offset" w/5 "income taxes"	"Investment" w/5 "Tax Credit"	"tax credit" w/10 "deferral Method"
APB 4	"Investment Credit"			
APB 9	"Extraordinary Items"	"Extraordinary Items" w/5 "EPS"	"Extraordinary Items" w/5 "comparative"	"Extraordinary Items" w/5 "retroactive"
APB 15	"EPS" w/5 "Comput*"	"EPS" w/5 "Calculat*"	"Earnings Per Share" w/5 "Comput*"	"Earnings Per Share" w/5 "Calculat*"
APB 16	"Business Combination"	"Acquisition"	"Merger" w/5 "Pool*"	"Merger" w/5 "Purchas*"
APB 17	"Intangible Assets"	"Goodwill" w/5 "Amortiz*"	"Goodwill"	"Acquisition costs"
APB 18	"Equity Method"	"significant influence"	"corporate joint venture"	"share of earnings"
APB 20	"Change in Accounting Principle"	"Change in Accounting Principle"	"Change in Accounting Estimate"	"Change in Reporting Entity"
APB 21	N/A			
APB 22	"Critical Accounting Polic*"	"Significant Accounting Polic*"	"disclosure* w/10 "accounting policies"	
APB 23	"Invest*" w/5 "Permanent" w/5 "Foreign" w/5 "Tax"	"undistributed earnings" w/5 subsidiar*	"Accounting for Income Taxes" w/3 "Special Areas"	"unremitted earnings" w/5 subsidiar*
APB 25	Stock-based compensation	"Stock options" w/5 "Grant"	"Stock options" w/5 "Issue"	"Restricted Stock" w/5 "Grant"
APB 26	"Early" w/5 "Extinguish*" w/5 "Debt"	"early" w/10 "extinguish*" w/10 "liabilit*"		
APB 29	"Nonmonetary Transaction"	"Nonmonetary Exchange"		
APB 30	"Discontinues Operations"	"Extraordinary Items"	"Disposal" w/5 "segment"	"unusual" w/5 "infrequent*"

Appendix (cont.): Keyword Searches for Accounting Standards in 10-Ks

Standard #	Keyword #1	Keyword #2	Keyword #3	Keyword #4
ARB 45	"Percentage of Completion"	"Long-Term Construction"	"Construction" w/2 "Progress"	"Cost" w/2 "Excess" w/2 "Billings"
ARB 51	"Consolidat&" w/5 "Financial Statement"	"Intercompany" w/5 "Eliminat"	"controlling financial interest"	
ARB 43 Ch. 3a	"Working Capital"			
ARB 43 Ch. 3b	"Right of Setoff"	"Right of Offset"		
ARB 43 Ch. 4	"Lower of Cost or Market"	"Inventory" w/1 "Impairment	"inventory pricing"	"firm purchase commitment"
ARB 43 Ch. 7a	"Quasi-Reorganization"	"Corporate Readjustment"		
ARB 43 Ch. 7b	"Stock Dividends"	"Stock Splits"	"split-ups"	
ARB 43 Ch. 9a	"Depreciation"			
ARB 43 Ch. 9b	"Depreciation" w/5 "Appreciat* Asset*"	"depreciation" w/5 "appreciation"	"depreciation" w/15 "quasi-reorganization"	
ARB 43 Ch. 10a	"Real Estate Taxes"	"Property Taxes"	"real estate" w/5 "taxes"	
ARB 43 Ch. 11a	"Cost Plus" w/5 "Fee*"			
ARB 43 Ch. 11b	"Government Contract" w/5 "Renegotiat*"	"Renegotiat*" w/15 "contract"	"renegotiation refund"	
ARB 43 Ch. 11c	"Fixed Fee" w/5 "War	"war" w/5 "contract"	"defense" w/5 "contract"	"war and defense
ARB 43 Ch. 12	"Foreign Earnings" w/5			
SFAC 5 & 6	"Earned" w/5 "Revenue"	"Earned" w/5 "Sales"	"Realizable Future Benefit"	"Probable Future Benefit"
EITF 00-21	"Revenue" w/10 "Multiple	"multiple deliverable	"direct cost" w/10	
EITF 94-03	"Restructuring exp*"	"Restructuring charg*"		
SFAS 2	"Research and Develop*"	"Research" w/5 "cost*"		
SFAS 5	"Conting* Liab*"	"Conting* Gain"	"Conting*" w/5 "loss"	
SFAS 7	"Develop* Stage" w/10 "Enterpris*"	"Develop* Stage" w/10 "Corp*"	"Develop* Stage" w/10 "Company"	

Appendix (cont.): Keyword Searches for Accounting Standards in 10-Ks

Standard #	Keyword #1	Keyword #2	Keyword #3	Keyword #4
SFAS 13	"Lease"	"bargain purchase option"	"bargain renewal option"	
SFAS 15	"Trouble* Debt Restruc*"	"debt" w/5 "restruc*"		
SFAS 16	"Prior Period Adjustment"			
SFAS 19	"Exploration"	"Mineral Rights"	"Proved Reserves"	"Unproved Reserves"
SFAS 34	"Interest" w/3 "Capitaliz*"			
SFAS 35	"Defined Benefit Pension"	"Defined Benefit Plan"	"defined benefit" w/10 pension	
SFAS 43	"Compensate* Absence*"	"Vacation Accru*"	"Sick Accru*"	"Illness Accru*"
SFAS 45	"Franchise Fee Revenue"	"franchise" w/10 "sales"	"franchise" w/10 "revenue"	"franchise fee"
SFAS 47	"Purchase Commitment"	"Purchase Obligation"	"long term commitment"	"long term obligation"
SFAS 48	"Right" w/2 "Return"			
SFAS 49	"Product Financing Arrange*"			
SFAS 50	"Record Industry"	"Music Industry"	"Record and Music Industry"	"licens*" w/5 "agree*"
SFAS 51	"Cable Television"			
SFAS 52	"Foreign Currency Translation"	"reporting currency"	"foreign currency"	"functional currency"
SFAS 53	"Motion Picture Films"			
SFAS 57	"Related Part*"			
SFAS 61	"Title Plant"			
SFAS 63	"Broadcasting Industr*"	"network affiliation agreement*"		

Appendix (cont.): Keyword Searches for Accounting Standards in 10-Ks

Standard #	Keyword #1	Keyword #2	Keyword #3	Keyword #4
SFAS 65	"Mortgage Loans"	"Mortgage-Backed Securities"	"Loan Fees"	"Commitment Fees"
SFAS 66	"Sale" w/5 "Real-Estate"			
SFAS 67	"Real Estate" w/5 "Acquisition"	"Real Estate" w/5 "Development"	"Real Estate" w/5 "Construction Real Estate" w/5 "Sale"	"Real Estate" w/5 "Sale"
SFAS 68	"Fund*" w/5 "Research and Development"	"Research and Development Arrangements"	"research and development" w/5 "obligation*"	
SFAS 71	"Cost-Based Rates" w/3 "Regulat*"	"Accounting for the Effects of Certain Types of Regulation"	"Regulatory Asset*"	"Regulatory Liabilit*"
SFAS 101	"Discontinuation of Application of FASB Statement no. 71"	"Cease* to Meet the Criteria" w/5 "SFAS 71"	"Cease* to Meet the Criteria" w/5 "SFAS 71 no. 71"	regulated enterprise
SFAS 105	"Discontinuation of Information about Financial Instruments with Off-Balance-Sheet Risk and Concentrations of	"Disclosur*" w/5 "Financial Instrument"		
SFAS 106	"Postretirement Benefits Other Than Pensions"	"Postretirement Health Care Benefit"		
SFAS 107	"Disclos*" w/5 "Financial* Instrument*" w/5 "Fair Value"			
SFAS 109	"Income Tax*"			

Appendix (cont.): Keyword Searches for Accounting Standards in 10-Ks

Standard #	Keyword #1	Keyword #2	Keyword #3	Keyword #4
SFAS 113	"Reinsurance" w/5 "Short-Duration"	"Reinsurance" w/5 "Long-Duration"		
SFAS 115	"Available-For-Sale" w/5 "Securit*"	"Trading" w/5 "Securit"	"Held-To-Maturity" w/5 "Securit*"	other than temporary impairment w/10 investment
SFAS 116	"Accounting for Contributions Received and Contributions Made"	"nonreciprocal transfer"	"donor imposed restriction"	"donor imposed condition"
SFAS 119	"Disclos*" w/5 "Derivative"			
SFAS 121	"Impair" w/5 "Long-Lived"	"long lived" w/10 "dispos*"		
SFAS 123	"Stock-Based Compensation"	"Stock Options" w/5 "Grant"	"Restricted Stock" w/5 "Grant"	
SFAS 123r	"Stock-Based Compensation"	"Stock Options" w/5 "Grant"	"Restricted Stock" w/5 "Grant"	
SFAS 125	"Transfer" w/5 "Financ* Asset*"	"Servic*" w/5 "Financ* Asset*"	"Extinguishments" w/2 "Liabilit*"	transfer w/5 receivable
SFAS 128	"EPS" w/5 "Comput*"	"EPS" w/5 "Calculat*"	"Earnings Per Share" w/5 "Comput*"	"Earnings Per Share" w/5 "Calculat*"
SFAS 129	"Disclos*" w/5 "Capital* Struct*"	"Disclos*" w/5 "Prefer* Stock*"	"Disclos*" w/5 "Redeem* Stock*"	"Capital* Struct*"
SFAS 130	"Comprehensive Income"			
SFAS 131	"Segment" w/5 "Disclos*"	"Operating Segment"	"Reportable Segment"	
SFAS 132	"Pension" w/5 "Benefit*"	"Postretirement" w/5 "Benefit"		

Appendix (cont.): Keyword Searches for Accounting Standards in 10-Ks

Standard #	Keyword #1	Keyword #2	Keyword #3	Keyword #4
SFAS 132r	"Pension" w/5 "Benefit*"	"Postretirement" w/5 "Benefit"		
SFAS 133	"Derivativ*"	"Hedg*"		
SFAS 140	"Transfer" w/5 "Financ* Asset*"	"Servic*" w/5 "Financ* Asset*"	"Extinguishments" w/2 "Liabilit*"	
SFAS 141	"Merger"	"Acquisition"	"Business Combination"	"Purchase Method" w/10 "Combination"
SFAS 142	"goodwill"	"Intangible Asset*"		
SFAS 143	"Asset* Retirement Obligation"			
SFAS 144	"Impair*" w/5 "Long-	"Disposal*" w/5 "long-		
SFAS 146	"Restruct* Exp*"	"Exit" or "Disposal Activit*"	"Restruct* Charge"	"One-time termination benefits"
SFAS 150	"Instruments with Characteristics of Both Liabilities and Equity"			
SFAS 154	"Change in Accounting Principle"	"Change in Accounting Estimate"	"Change in Reporting Entity"	
SAB 101	"Persuasive Evidence" w/5 "Arrangement"	"Persuasive Evidence" w/5 "Agreement"	"Delivery" w/5 "Occur*"	"Fee is Fixed" w/5 "Determinable"
SOP 97-2	"Multiple Element" w/5 "Contract"	"Objective Evidence" w/20 "Element*" w/5 "Fair Value"	"Vendor Specific Objective Evidence"	"Software" w/10 "Revenue Recognition"

All accounting standards also include added keywords representing appropriate titles for the standards (e.g., SFAS 34, FAS 34, or FASB Statement No. 34 for SFAS 34).

Table 1: Sample Selection

Firms on Compustat with non-missing at, cik, ib from 1994-2006	123,319
Less firms unable to calculate PSCORE	(53,150)
Less firms with missing data	(19,364)
Full sample firm years	50,805
Less firms without returns during the period	(6,777)
Returns sample firm years	44,028

This table presents the sample selection criteria. We begin with all firms available on Compustat Xpressfeed with non-missing assets, income before extraordinary items, gvkey and cik. To calculate PSCORE, we need to obtain the 10-K from Edgar. For our returns regressions, we require firms to have CRSP stock return data over the year, reducing the sample for these tests.

Table 2: Univariate Statistics

Panel A: Descriptive Statistics

	N	Mean	Stdev	p25	p50	p75
PSCORE	50,805	-1.70	0.64	-2.01	-1.60	-1.27
EARN	50,805	-0.03	0.22	-0.03	0.03	0.07
CFO	50,805	0.03	0.18	0.00	0.06	0.12
ACC	50,805	-0.06	0.13	-0.10	-0.05	0.00
SIZE	50,805	5.17	2.22	3.71	5.17	6.66
BTM	50,805	0.59	0.52	0.26	0.47	0.77
LEVERAGE	50,805	0.42	0.81	0.00	0.11	0.45
BUSSEG	50,805	1.65	1.61	1.00	1.00	1.00
GEOSEG	50,805	1.49	1.34	1.00	1.00	1.00
RET	44,028	0.04	0.61	-0.31	-0.06	0.22

This table reports descriptive statistics for the sample firms. EARN is earnings before extraordinary items (ib) divided by total assets (at). CFO is cash from operations (oancf) divided by total assets (at). ACC is EARN - CFO. PSCORE is the score of the firm's reliance on principles-based standards and is described in more detail in Section 3.1. SIZE is the log of total sales (sale). BTM is the book-to-market ratio of the firm at the end of the prior fiscal year (ceq/prcc_f*csho). LEVERAGE is the ratio of long-term debt to market value of equity at the end of the prior fiscal year (dltt/prcc_f*csho). BUSSEG (GEOSEG) is the number of business (geographic) segments reported in Compustat. RET is the market adjusted abnormal returns from the prior year's earnings announcement to the current year's earnings announcement. All variables except BUSSEG and GEOSEG are winsorized at 1 and 99 percentiles.

Table 2 (continued): Univariate Statistics

Panel B: Descriptive Statistics by PSCORE Quintile

	MEAN					MEDIAN				
	Rules (1)	(2)	(3)	(4)	Principles (5)	Rules (1)	(2)	(3)	(4)	Principles (5)
$PSCORE_t$	(2.684)	(1.920)	(1.597)	(1.333)	(0.958)	(2.518)	(1.911)	(1.595)	(1.335)	(1.015)
CFO_t	0.050	0.043	0.035	0.026	0.005	0.061	0.064	0.066	0.066	0.058
$EARN_t$	(0.024)	(0.022)	(0.024)	(0.031)	(0.050)	0.021	0.027	0.031	0.032	0.033
$EARN_{t+1}$	(0.023)	(0.028)	(0.036)	(0.043)	(0.060)	0.021	0.024	0.028	0.030	0.030
$ACCRUAL_t$	(0.073)	(0.065)	(0.059)	(0.057)	(0.055)	(0.048)	(0.048)	(0.045)	(0.045)	(0.041)
$log(MVE)_{t-1}$	6.429	5.722	5.299	4.948	4.523	6.476	5.714	5.222	4.806	4.334
BTM_{t-1}	0.579	0.573	0.577	0.601	0.599	0.486	0.460	0.462	0.476	0.473
RET_t	0.035	0.036	0.034	0.055	0.041	(0.038)	(0.057)	(0.064)	(0.064)	(0.072)
$SIZE_t$	6.187	5.556	5.120	4.749	4.217	6.189	5.519	5.115	4.710	4.145
$LEVERAGE_t$	0.634	0.460	0.374	0.326	0.283	0.269	0.140	0.092	0.075	0.043

This table reports descriptive statistics for the sample firms by PSCORE quintiles. PSCORE is the score of the firm's reliance on principles-based standards and is described in more detail in Section 3.1. EARN is earnings before extraordinary items (ib) divided by total assets (at). CFO is cash from operations (oancf) divided by total assets (at). ACCRUAL is EARN - CFO. log(MVE) is the log of the market value of equity (prcc_f*csho) at the end of the prior fiscal year. BTM is the book-to-market ratio of the firm at the end of the prior fiscal year (ceq/prcc_f*csho). RET is the market adjusted abnormal returns from the prior year's earnings announcement to the current year's earnings announcement. SIZE is the log of total sales (sale). LEVERAGE is the ratio of long-term debt to market value of equity at the end of the prior fiscal year (dltt/prcc_f*csho).

Table 3: Regression Estimates of the Effect of Principles-Based Standards on the Relation Between Annual Returns and Earnings

$$RET_{it} = \beta_0 + \beta_1 EARN_{it} + \beta_2 PSCORE_{it} + \beta_3 EARN_{it} \times PSCORE_{it} + \beta_{4-11} CONTROLS + \beta_{12-19} EARN_{it} \times CONTROLS + \varepsilon_{it}$$

	Model 1		Model 2	
	coeff.	p-value	coeff.	p-value
EARN	0.534	(0.006)	0.471	(0.013)
PSCORE	0.011	(0.107)	0.003	(0.718)
EARN*PSCORE	0.131	(0.019)	0.152	(0.005)
EARN*SIZE	0.171	0.000	0.186	0.000
EARN*BTM	(0.156)	(0.011)	(0.061)	(0.235)
EARN*LEVERAGE	(0.141)	0.000	(0.143)	0.000
EARN*BUSSEG	(0.020)	(0.270)	(0.012)	(0.528)
EARN*GEOSEG	(0.043)	(0.071)	(0.031)	(0.184)
SIZE			(0.010)	(0.001)
BTM			0.140	0.000
LEVERAGE			0.030	(0.013)
BUSSEG			(0.010)	(0.001)
GEOSEG			0.013	(0.000)
Intercept	(0.026)	(0.858)	(0.073)	(0.008)
Year Dummies	INCLUDED		INCLUDED	
N	44,028		44,028	
R^2	9.84%		11.44%	

This table presents regression estimates of annual returns on earnings and earnings interacted with PSCORE and controls to determine whether reliance on principles-based standards increases or decreases the informativeness of earnings. All variables are defined in Table 2. Fiscal year indicators are included in the model but not presented. P-values are listed in parentheses next to the coefficients and are calculated using standard errors clustered by industry (2-digit SIC).

Table 4: Regression Estimates of the Effect of Principles-Based Standards on the Persistence of Accounting Earnings

$$EARN_{it+1} = \beta_0 + \beta_1 EARN_{it} + \beta_2 PSCORE_{it} + \beta_3 EARN_{it} \times PSCORE_{it} + \beta_{4-11} CONTROLS + \beta_{12-19} EARN_{it} \times CONTROLS + \varepsilon_{it}$$

	Model 1		Model 2	
	coeff.	p-value	coeff.	p-value
EARN	0.960	0.000	0.887	0.000
PSCORE	(0.003)	(0.136)	0.010	(0.002)
EARN*PSCORE	0.044	(0.027)	0.040	(0.035)
EARN*SIZE	(0.040)	0.000	(0.039)	0.000
EARN*BTM	(0.050)	(0.016)	(0.040)	(0.056)
EARN*LEVERAGE	0.013	(0.619)	0.015	(0.544)
EARN*BUSSEG	0.013	(0.085)	0.007	(0.281)
EARN*GEOSEG	(0.007)	(0.116)	(0.005)	(0.239)
SIZE			0.014	0.000
BTM			0.010	(0.001)
LEVERAGE			(0.002)	(0.162)
BUSSEG			(0.001)	(0.270)
GEOSEG			0.000	(0.937)
Intercept	0.006	(0.177)	(0.062)	0.000
Year Dummies	INCLUDED		INCLUDED	
N	50,805		50,805	
R^2	57.51%		58.65%	

This table presents regression estimates of annual returns on earnings his table presents persistence regression estimates of future earnings on current earnings and interacted with PSCORE and control variables. All variables are defined in Table 2. Fiscal year indicators are included in the model but not presented. P-values are listed in parentheses next to the coefficients and are calculated using standard errors clustered by industry (2-digit SIC).

Table 5: Regression Estimates of the Effect of Principles-Based Standards on Earnings Informativeness Relative to Future Cash Flows

Panel A: Regression Using Earnings as Independent Variable

$$CFO_{it+1} = \beta_0 + \beta_1 EARN_{it} + \beta_2 PSCORE_{it} + \beta_3 EARN_{it} \times PSCORE_{it} + \beta_{4-11} CONTROLS + \beta_{12-19} EARN_{it} \times CONTROLS + \varepsilon_{it}$$

	Model 1		**Model 2**	
	coeff.	p-value	coeff.	p-value
EARN	0.809	0.000	0.742	0.000
PSCORE	(0.008)	(0.078)	0.006	(0.235)
EARN*PSCORE	0.076	0.000	0.067	0.000
EARN*SIZE	(0.031)	0.000	(0.033)	0.000
EARN*BTM	(0.078)	0.000	(0.082)	0.000
EARN*LEVERAGE	(0.090)	(0.001)	(0.091)	0.000
EARN*BUSSEG	0.008	(0.306)	0.002	(0.825)
EARN*GEOSEG	(0.007)	(0.186)	(0.004)	(0.353)
SIZE			0.014	0.000
BTM			(0.002)	(0.727)
LEVERAGE			(0.005)	(0.001)
BUSSEG			(0.001)	(0.075)
GEOSEG			0.001	(0.195)
Intercept	0.051	0.000	(0.010)	(0.527)
Year Dummies	INCLUDED		INCLUDED	
N	50,805		50,805	
R^2	53.25%		55.22%	

This table presents regression estimates of future cash flows on current earnings interacted with PSCORE and controls to determine whether reliance on principles-based standards increases or decreases the informativeness of earnings. All variables are defined in Table 2. Fiscal year indicators are included in the model but not presented. P-values are listed in parentheses next to the coefficients and are calculated using standard errors clustered by industry (2-digit SIC).

Table 5 (cont.): Regression Estimates of the Effect of Principles-Based Standards on Earnings Informativeness Relative to Future Cash Flows

Panel B: Regression Using Earnings Components as Independent Variables

$$CFO_{it+1} = \beta_0 + \beta_1 CFO_{it} + \beta_2 ACCRUAL_{it} + \beta_3 PSCORE_{it} + \beta_4 CFO_{it} \times PSCORE_{it} + \beta_5 ACCRUAL_{it} \times PSCORE_{it} + \beta_{6-13} CONTROLS + \beta_{14-21} EARN_{it} \times CONTROLS + \varepsilon_{it}$$

	Model 1		**Model 2**	
	coeff.	p-value	coeff.	p-value
CFO	0.813	0.000	0.766	0.000
ACCRUAL	0.322	0.000	0.308	0.000
PSCORE	(0.004)	(0.094)	0.005	(0.022)
CFO*PSCORE	0.014	(0.304)	0.012	(0.372)
ACCRUAL*PSCORE	0.033	(0.032)	0.034	(0.035)
EARN*SIZE	(0.018)	0.000	(0.019)	0.000
EARN*BTM	0.000	(0.978)	(0.005)	(0.777)
EARN*LEVERAGE	(0.035)	(0.064)	(0.036)	(0.055)
EARN*BUSSEG	0.014	(0.001)	0.010	(0.004)
EARN*GEOSEG	0.002	(0.626)	0.003	(0.415)
SIZE			0.009	(0.000)
BTM			0.000	(0.888)
LEVERAGE			(0.002)	(0.044)
BUSSEG			(0.001)	(0.011)
GEOSEG			0.001	(0.127)
Intercept	0.024	0.000	(0.015)	(0.204)
Year Dummies	INCLUDED		INCLUDED	
N	50,805		50,805	
R^2	61.47%		62.25%	

This table presents regression estimates of future cash flows on current cash flows and accruals interacted with PSCORE and controls to determine whether reliance on principles-based standards increases or decreases the informativeness of earnings. All variables are defined in Table 2. Fiscal year indicators are included in the model but not presented. P-values are listed in parentheses next to the coefficients and are calculated using standard errors clustered by industry (2-digit SIC).