OTHER COMPREHENSIVE INCOME AND THE MARKET'S PROCESSING OF EARNINGS INFORMATION

Abstract

This study examines whether OCI items impact the market's ability to process earnings in the contexts of uncertainty/disagreement among market participants and value-relevance. We find that earnings and OCI gains and losses are individually associated with reduced market uncertainty/disagreement and are positively impounded into share prices by investors. However, we also find that both OCI gains and (especially) losses interact with earnings, weakening 1) the negative relation between earnings and market uncertainty/disagreement and 2) the value-relevance of earnings. Further, we find that the apparent effects of OCI gains and losses on the market's processing of earnings information are stronger in weak information environments, as measured by analyst following. Our findings suggest that OCI conveys information to the market that is useful but also noisy, thereby potentially hindering the market's ability to interpret earnings, particularly in weaker information environments.

Keywords: Other comprehensive income; earnings; market uncertainty; market disagreement; value-relevance

OTHER COMPREHENSIVE INCOME AND THE MARKET'S PROCESSING OF EARNINGS INFORMATION

I. INTRODUCTION

An extensive literature has evolved over the last three decades that examines the value-relevance of earnings and factors associated therewith (Barth et al. 2017). A related literature explores the extent to which an expanded measure of economic performance, comprehensive income, is impounded into share prices. Branches of this literature explore the comparative value-relevance of earnings and comprehensive income (e.g., Kanagaretnam et al., 2009; Chambers et al. 2007; Dhaliwal et al. 1999; O'Hanlon and Pope 1999) and (separately) the value-relevance of individual components of "other comprehensive income" (e.g., Louis 2003; Cahan et al. 2000) with mixed findings. We contribute to both literatures by examining whether "other comprehensive income" (OCI) items impact market participants' ability to process other accounting information. Specifically, we explore whether 1) the associations between earnings and measures of uncertainty and disagreement among market participants and 2) the value-relevance of earnings are affected by the presence of OCI gain and losses.

According to SFAS No. 130, OCI is comprised of positive and negative economic performance items that are included in comprehensive income but not in net income, such as unrealized gains and losses on certain investments, minimum liability pension adjustments, and foreign currency translation adjustments. The components of OCI generally represent unrealized economic gains and losses stemming from fluctuations in markets prices, foreign currency exchange rates, etc.

Several studies provide evidence that comprehensive income and/or OCI items convey information that useful to market participants toward establishing share prices (e.g.,

Kanagaretnam et al., 2009; Chambers et al. 2007; Biddle and Choi 2006; Louis 2003; Dhaliwal et al. 1999; O'Hanlon and Pope 1999). However, other studies (e.g., Dhaliwal et al. 1999) find that comprehensive income has less explanatory power for stock prices than net income, calling into question the incremental usefulness of OCI in measuring economic performance. Moreover, some prior studies find that OCI lacks persistence and predictability and tends to be volatile in nature (Black 2016; Rees and Shane 2012; Jones and Smith 2011). Arguably consequently, prior evidence also suggests that OCI items are relatively poor predictors of future profitability (e.g., Pronobis and Zulch 2010; Kanageretnam et al. 2009).

To the extent that the unpredictable and volatile nature of OCI items introduce added uncertainty to the process of evaluating firms' financial reports, they may constrain the overall usefulness of accounting numbers (Linsmeier et al. 1997). Indeed, recent research supports the notion that OCI is a noisy measure of economic performance; for example, Khan and Bradbury (2014) find that comprehensive income is associated with market-based measures of risk (namely, volatility of stock returns and beta). We argue that OCI gains and losses affect the way that market participants processes other accounting information, generating uncertainty and disagreement around that information. Based on prior evidence that uncertainty negatively impacts market participants' ability to process accounting information (e.g., Imhoff and Lobo 1992), we predict that the association between earnings and investor heterogeneity is stronger in the presence of OCI.

Using a sample of 13,455 firm-year observations over the 2001-2016 period and multiple measures of market uncertainty/disagreement (i.e., analyst earnings forecast dispersion, analyst earnings forecast errors, and stock return volatility), we find that reported earnings and OCI gains and losses are individually associated with reduced uncertainty and disagreement among

market participants and are positively impounded into share prices by investors. However, we also find that both OCI gains and losses interact with earnings so as to weaken the negative relation between earnings and market uncertainty/disagreement and the value-relevance of earnings. Further, we find that the negative effects of OCI items on the market's ability to process earnings are more consistently evident for OCI losses than OCI gains. Finally, we find that the apparent effects of OCI gains and losses on market participants' processing of earnings information manifest more strongly in weaker information environments than in stronger ones, as measured by analyst following.

These results suggest that although OCI gains and losses provide useful information to market participants directly, as several prior studies have found, they also have a negative *indirect* effect on market participants' ability to assess firms' fundamentals. Our results also imply that a stronger information environment provides market participants with the tools to generally retain the informational benefits provided by OCI items directly while mitigating any confusing or noisy elements contained therein that may affect interpretation of other financial statement items.

Our study contributes the broad literature examining the effects of accounting information on the market in multiple ways. First, as noted previously, an extensive literature has sought to understand the value-relevance of earnings and the factors that impact it (e.g., Barth et al. 2017). We contribute to this line of inquiry by providing evidence that the value-relevance of earnings is affected by other accounting information that may introduce added uncertainty to market participants as they assess and interpret earnings information. Further, most studies examining how the market processes OCI items have focused on the general value-relevance of OCI items and/or how the value-relevance of comprehensive income compares with that of earnings (e.g.,

Kanagaretnam et al., 2009; Chambers et al. 2007; Louis 2003; Cahan et al. 2000; Dhaliwal et al. 1999; O'Hanlon and Pope 1999). We extend this literature by considering the potential interactive effects of OCI gains and losses with other accounting information in the context of market reactions, specifically how OCI items impact the associations between earnings and 1) uncertainty and disagreement among market participants and 2) stock returns.

Section II provides a review of the prior literature and the development of our hypotheses. Section III discusses our research methods and data used to test how OCI gains and losses impact 1) the association between earnings and market uncertainty/disagreement and 2) the value-relevance of earnings. Section IV presents the results of our analyses, and Section V presents our concluding remarks.

II. PRIOR LITERATURE AND HYPOTHESIS DEVELOPMENT

Institutional Background

As mandated by Statement of Financial Accounting Standard (SFAS) No. 130, firms are required to report comprehensive income as a separate item in their financial statements. Statement of Financial Accounting Concepts (SFAC) No. 6 defines comprehensive income as "the change in equity [net assets] of a business enterprise during a period from transactions and other events and circumstances from nonowner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners." Accordingly, the major components of comprehensive income are net income and a collection of "other comprehensive income" (OCI) items.

SFAS No. 130 defines OCI as all "revenues, expenses, gains, and losses that under generally accepted accounting principles (GAAP) are included in comprehensive income but excluded

from net income." It includes items such as unrealized gains and losses on available-for-sale (AFS) securities pursuant to SFAS No. 115 and cash-flow hedges, the net loss associated with the minimum liability pension adjustment pursuant to SFAS No. 87, and foreign currency translation adjustments pursuant to SFAS No. 52 (Black 2016; Skinner 1999). The principal aim of SFAS No. 130 is to mitigate clean surplus violations through mandated reporting of a new performance measure (i.e., comprehensive income) in addition to net income that is intended to include net income as well as the effects of unrealized economic gains and losses stemming from fluctuations in markets prices, foreign currency exchange rates, and the like.

Value-Relevance of OCI

Over the years, OCI has proven to be contentious in financial reporting (Cahan et al. 2000). In a 1993 report, the Association for Investment Management and Research (AIMR) strongly supported disclosure of separate comprehensive income items, stating:

> We have profound misgivings about the increasing number of wealth changes that elude disclosure on the income statement. Yet individual items may be interpreted differently. That calls for the display of comprehensive income that allows components of different character to be seen and evaluated separately (AIMR 1993, p. 63).

Such is the rationale for adequate disclosure of separate OCI components; inadequate OCI disclosure could conceivably lead to the discounting of these items by analysts and investors. The FASB suggests that although total comprehensive income is useful as an aggregate measure, information pertaining to individual components is also necessary to allay concerns that the total measure conveys only a limited understanding of overall enterprise activity. In 1995, the AIMR issued a report indicating that at least some of the OCI components are value-relevant.

Nevertheless, when the initial exposure draft of the comprehensive income disclosure standard (i.e. SFAS No. 130) was issued by the FASB in June 1996, not all parties held the additional measure in favorable regard. One cited reproach of the ensuing change was that the

introduction of an additional performance measure (i.e., comprehensive income) might confuse users (Cahan 2000). Opponents generally argue that OCI lacks predictability and tends to be volatile in nature (Black 2016).

Weighing in on the ongoing debate as to whether OCI is incrementally informative, extant OCI research provides empirical evidence, albeit mixed, that OCI is value-relevant. Chambers et al. (2007) examine the pricing of aggregate OCI and find that OCI is priced on a dollar-for-dollar basis. As for the components of OCI, Chambers et al. (2007) also find the adjustments for foreign currency translations and unrealized gains and losses on available-for-sale investments to be value-relevant; these components of OCI provide price-relevant information that is incremental to that provided by net income in the post-SFAS No. 130 time period. Kanagaretnam et al. (2009) also find that components of OCI are value-relevant for a 1998 to 2003 sample of Canadian firms. Louis (2003) takes a more narrow focus to specifically examine the economic implications of foreign currency translation adjustments for manufacturing firms, finding that the information contained in foreign currency translation adjustments is associated with a decrease in firm value. Two similar studies also examine the value-relevance of foreign currency translation adjustments (Dhaliwal et al. 1999; O'Hanlon and Pope 1999).

Some recent research has questioned the usefulness of OCI components from a couple different perspectives (Rees and Shane 2012). One stream of the research broadly addresses whether earnings or comprehensive income constitute a better summary measure for firm performance (Barton et al. 2010; Pronobis and Zulch 2010; Dhaliwal et al. 1999). Another related branch of the literature instead adopts an informational perspective and questions whether OCI items truly provide decision-useful information to financial statement users. Of this stream of decision-usefulness literature, researchers generally focus on OCI as a whole (Kanagaretnam

et al. 2009; Chambers et al. 2007; Dhaliwal et al. 1999; O'Hanlon and Pope 1999), but some also focus more narrowly on the individual components of OCI (Campbell 2010; Louis 2003; Bartov 1997; Barth et al. 1996).

Several studies cast doubt on whether comprehensive income represents a better measure of firm performance than net income. For instance, Dhaliwal et al. (1999) fail to find evidence indicating that comprehensive income is more strongly associated with market value or better predicts future cash flows than net income. They provide empirical evidence demonstrating that comprehensive income has relatively less explanatory power for stock prices than net income. On the other hand, Biddle and Choi (2006) compare distinct measures of income from comprehensive income components through use of SFAS No. 130 adoption (1997) as a natural experiment. Contrary to Dhaliwal et al. (1999), they find comprehensive income to explain annual returns better than both net income and the change in retained earnings plus common stock dividends.

Chambers et al. (2007) also examine the pricing of OCI through analyzing the correlation between returns and comprehensive income. They find that OCI does yield incrementally value-relevant information beyond net income in the post-SFAS No. 130 era. Specifically, they conclude that foreign currency translation adjustments and unrealized gains and losses on available-for-sale investments are value-relevant, providing incremental price-relevant information beyond net income in the post-SFAS No. 130 era. Similarly, Cahan et al. (2000) examine the incremental value-relevance of separate comprehensive income components in relation to both total comprehensive income and net income using a sample of New Zealand firms, finding total comprehensive income to be the most value-relevant.

Research also examines whether the value-relevance of OCI items relative to net income is affected by whether OCI components are disclosed in the statement of changes in shareholders' equity (SCE). Ohlson (1995) shows that, under clean surplus accounting, the value of the firm is a function of net book value and abnormal earnings. Cahan et al. (2000) build on the Ohlson (1995) framework to weigh in on this debate as to whether comprehensive income disclosures in the statement of changes in equity are useful. They do not find evidence to support that the separate OCI items are incrementally value-relevant above and beyond comprehensive income. They also do not find OCI items to be incrementally value-relevant relative to net income after the SCE was required.

However, other recent evidence indicates that investors consistently price OCI when the measure is reported in the SCE, but not when it is reported in a separate statement of comprehensive income (Lin et al. 2016).[1] Moreover, Schaberl and Victoravich (2015) find a decline in value-relevance of OCI for firms required to alter OCI reporting location from the statement of equity to a performance statement in response to ASU 2011-05. Chambers et al. (2007) also finds that the type of financial statement in which the firm elects to report OCI affects pricing; investors tend to lend more attention to OCI information that is reported on the SCE as opposed to the statement of financial performance. Despite policymaker's preference for the reporting of comprehensive income in a performance statement for transparency purposes, Bamber et al. (2010) find that a large number of firms still report comprehensive income in the SCE. Bamber et al. (2010) provides evidence that managers behave as if the comprehensive income reporting location is of consequence.

[1] Investors value OCI reported in the separate statement of comprehensive income only in the financial crisis period when the magnitude and volatility of OCI are more significant (Lin et al. 2016).

OCI as a Noisy Measure of Economic Outcomes

Particularly given the central importance of the OCI debate, the apparent divergence of empirical evidence regarding the value-relevance of such information can be taken as an indication that further research in this area is warranted. The research at hand seeks to weigh in on this discussion through examination of whether OCI conveys information to the market that is useful but also noisy, thereby potentially hindering market participants' ability to interpret earnings. Purportedly, clear identification of separate comprehensive income components could allow investors to better estimate firm value. However, while the prior research has provided evidence to support the claim that OCI is value-relevant, there is not a clear means for differentiating between earnings and OCI in the FASB Conceptual Framework, and the measurement of OCI items often involves a degree of inherent uncertainty and/or requires substantial managerial judgment.

As of now, conceptual standard setting has failed to provide clear guidance to differentiate between economic transactions that flow to net income and OCI. An official definition of conceptual differences between the items of net income versus those appearing in OCI in consolidated financial reports does not exist. Research has documented that this lack of definitional clarity has resulted in *ad hoc* classifications of OCI components (Rees and Shane 2009). Black (2016) cites examples of instances where comparable economic transactions flow through both net income and OCI. Namely, such instances include unrealized gains and losses on trading securities (net income) versus AFS securities (OCI) and unrealized gains and losses on fair value hedge instruments (net income) versus cash-flow hedge instruments (OCI). Most of the OCI items are transitory or result from "noisy market price movements" (Black 2016). It

follows that such OCI components may not necessarily present a clear picture of the underlying changes in the firm's fundamental economic position.

Paired with this documented definitional ambiguity, OCI reporting also involves an inherent degree of uncertainty; OCI is generally composed of mark-to-market adjustments that likely are more susceptible to managerial judgment.[2] Dhaliwal et al. (2012) state, "some components of OCI may involve more subjective estimates, thereby adding noise to financial reporting." When an active market for a security does not exist, managerial estimates are permitted in accordance with FASB and SEC guidance. Components of OCI are affected by such managerial discretion over the choice of valuation methods, thereby casting a degree of uncertainty on the quality of the fair-value estimates and related financial information (Lee et al. 2013).

Dirty surplus accounting (i.e., OCI) could represent a source of error in valuation models (Linsmeier et al. 1997). Isidro et al. (2006) document a relation between valuation errors and dirty surplus flows for U.S. firms. Based on fair value measurement and disclosure, level-1 assets and liabilities represent quoted prices obtained from active markets in which identical assets or liabilities may be observed. One would expect level-2 and level-3 measurements contained in OCI to require more overall subjectivity and managerial judgment as compared to level-1 measurements because quoted prices are not readily available for an identical asset or liability.

Concern regarding lack of OCI transparency is not new to the accounting literature (Isidro et al. 2006); the idea that such uncertainty surrounding dirty surplus accounting might constrain the overall usefulness of accounting numbers has been historically acknowledged (Linsmeier et al.

[2] Such mark-to-market adjustments are derived from instances such as interest rate changes, and exchange rates (Lee and Park 2013).

1997; Paton 1934). Recent research also corroborates this notion of a "noisy" OCI measure by demonstrating that comprehensive income is more volatile than net income. Khan and Bradbury (2014) document that comprehensive income is associated with market-based measures of risk (namely, volatility of stock returns and beta). Lee et al. (2013) find that the OCI of Big 4 clients is more value-relevant than that of non-Big 4 clients. The research extends to demonstrate that, for the more subjective OCI components, the valuation effect is more pronounced relative to the less subjective components.[3]

Although components of OCI are found to be value-relevant, the items are also found to be poor predictors of future profitability. It is speculated that this lack of predictability is, at least in part, due to the transitory nature of the OCI items. In a German IFRS setting, Pronobis and Zulch (2010) document that comprehensive income does not have better predictive power for firm operating performance than net income. For a sample of Canadian companies that are cross-listed in the United States, Kanageretnam et al. (2009) examine whether mandating comprehensive income and component reporting yields incrementally value-relevant information to the securities market over the traditional historical cost earnings approach. They find net income to better predict future net income than comprehensive income, although comprehensive income is a better predict future cash flows from operations than net income.

For explaining abnormal returns, Cheung and Cheung (1993) find comprehensive income to be an inferior measure relative to both operating income and net income. They also find both operating income and net income to be superior to comprehensive income in information content. Jones and Smith (2011) also extend this line of research through demonstrating that

[3] Namely, the authors identify minimum pension liability and foreign currency translation adjustments as the more subjective components.

both special items and OCI are returns relevant. However, special items are found to be more returns relevant than OCI gains and losses. Jones and Smith (2011) find OCI gains and losses to be value-relevant, but find comprehensive income and OCI to be less predictable than net income. They, along with Rees and Shane (2012), also demonstrate that the degree of persistence of OCI components is relatively low. Research by Barton et al. (2010) provide additional empirical evidence attesting to the lack of predictability associated with OCI. Of eight performance measures under consideration, they find comprehensive income to be the least predictable of these measures in an international context.

Implications of OCI for the Market's Ability to Evaluate Earnings Information

Based on the premise that OCI decreases the precision of investor beliefs regarding the parameters of the distribution of cash flows, we hypothesize that the association between earnings and investor heterogeneity is stronger in the presence of OCI. *Ceteris paribus*, greater fundamental uncertainty surrounding a firm's future cash flows will likely result in larger stock price responses to value-relevant information (Imhoff and Lobo 1992). It has been suggested that low visibility surrounding dirty surplus flows may compromise value-relevance (O'Hanlon and Pope 1999) and thereby affect the way that the market processes accounting information. Noisy information conveys a signal with compromised information content (Holthausen and Verrecchia 1988). To the extent that this lack of clarity surrounding OCI hinders market interpretation of accounting information, one might expect a substantive increase in investor uncertainty and disagreement about firm fundamentals in the presence of an ambiguous OCI measure. Accordingly, we predict that the association between earnings and measures of market uncertainty/disagreement is increasing in the magnitude of OCI items. We state this prediction in alternative form below as:

H1: The association between earnings and market uncertainty becomes more strongly positive or weakly negative as the magnitude of OCI gains and/or losses increases.

To the extent that OCI items impact the market's processing of earnings information as predicted in H1, we would also expect the impounding of earnings information into share prices to be affected by OCI. Imhoff and Lobo (1992) provide evidence of a higher association between unexpected returns and unexpected earnings when the information uncertainty is low. If additional information uncertainty is introduced, the association between earnings and returns might be expected to weaken. As such, we predict that the value-relevance of earnings is decreasing in the magnitude of OCI items. We state this prediction in alternative form below as:

H2: The association between earnings and stock returns becomes more weakly positive or strongly negative as the magnitude of OCI gains and/or losses increases.

III. RESEARCH METHODS

Empirical Model

To investigate the extent (if any) to which OCI gains and losses impact the market's processing of earnings, we estimate an industry and year fixed effects model in which we regress measures of market uncertainty on earnings, OCI gains and losses, interactions between the two, and a set of control variables as follows (subscripts suppressed; see Appendix A for detailed variable descriptions):

$$\begin{aligned} Market = {} & \theta_0 + \theta_1 OCIGain + \theta_2 OCILoss + \theta_3 Ernings + \theta_4 Ernings \times OCIGain + \\ & \theta_5 Ernings \times OCILoss + \theta_6 BookVal + \theta_7 PPE + \theta_8 Intang + \theta_9 CFVol + \\ & \theta_{10} ROAVol + IndustryEffects + YearEffects + \varepsilon \end{aligned} \quad (1)$$

Market represents the dependent variables used in our model, all of which proxy for some aspect of market uncertainty. *AnaDisp* is analyst earnings forecast dispersion, and it reflects market uncertainty via divergence of opinion among analysts about future earnings (e.g.,

Comprix et al. 2011; Diether et al. 2002; Barron and Stuerke 1998; Ajinkya et al. 1991). Similarly, *AnaInacc* captures the absolute value of bias in analysts' earnings forecasts (Duru and Reeb 2002; Clement 1999; Brown 1993; Brown et al. 1985). Return volatility (*RetVol*) also reflects market uncertainty, but via disagreement among investors about firm fundamentals (Comprix et al. 2011; Berkman et al. 2009; Zhang 2006). Finally, as discussed above, to the extent that market uncertainty negatively affects investors' ability to process earnings, we would expect the association between earnings and stock returns to be weaker in the presence of higher uncertainty (i.e., potential mispricing; Imhoff and Lobo 1992). Accordingly, our fourth market-related dependent variable is cumulative abnormal stock return (*CumRet*).

Our primary independent variables of interest are *Erngs*, *OCIGain*, *OCILoss*, and (especially) the interactions between *Erngs* and the two OCI variables. *Erngs* is net income before extraordinary items. *OCIGain* and *OCILoss* represent the absolute values of gains and losses, respectively, in other comprehensive income arising from derivatives, securities, currency translation adjustments, noncontrolling interests, minimum pension adjustments, and other adjustments. A positive (negative) coefficient on *Erngs*OCIGain* and/or *Erngs*OCILoss* would support H1 (H2).

Included among our control variables is firm size, which is defined as book value of equity (*BookVal*). In our models where the dependent variable is defined based on share prices (i.e., *RetVol* and *CumRet*), we also employ the log of the number of shares outstanding (*OutShrs*; θ_{11}) as an additional control for firm size. Studies find mixed results for firm size in models of market uncertainty-related constructs (Dai et al. 2010; Rogers et al. 2009; Shores 1990; Atiase 1985). We also include fixed assets (*PPE*) and intangible assets (*Intang*) as controls. *PPE* is net property, plant, and equipment scaled by total beginning assets, and *Intang* is intangible assets

including goodwill scaled by total beginning assets. Relative levels of fixed assets and intangible assets may reflect firms' inherent operational uncertainty, although some studies find that firms with more intangible assets attract more analyst following, arguably resulting in an improved information environment (e.g., Barth et al. 2001). Finally, we control for the volatility of operating cash flows (*CFVol*) and earnings (*ROAVol*) because more volatile performance is likely to contribute positively to market uncertainty.

Data and Descriptive Statistics

We obtain financial statement data from the Compustat Industrial Annual File, stock returns from the Center for Research and Security Prices (CRSP) Daily Return files, and analyst forecasts from I/B/E/S. We eliminate observations lacking data necessary to calculate dependent variables, explanatory variables of interest (i.e., earnings and OCI gains/losses), and/or required control variables. The sample selection procedure generates a final full sample of 13,455 firm years covering the period from 2001 to 2016. Within each year, we winsorize the dependent variables and main independent variables at the top and bottom 0.5 percent of the sample distribution.

We report industry membership of the sample firms in Table 1 and, as a benchmark for comparison, all firms on Compustat in 2010 (largest concentration of firm-years toward the middle of the sample period). Industry definitions are based on the aggregation of similar two-digit SIC classifications (defined in the notes to Table 1). With one exception, industry representation of our sample firms is generally consistent with that of firms in the broader Compustat database. The exception, for which industry membership differs notably from the industry composition represented in the Compustat population, is financial services (6.91 vs. 31.42 percent). This difference is likely due to OCI-related data limitations for financial firms.

Nonetheless, we include industry effects in all empirical models to ensure that our results are not driven by industry-specific factors.

-- INSERT TABLE 1 ABOUT HERE --

Table 2 reports descriptive statistics for our 13,455 sample observations. With respect to our dependent variables, the mean (median) value for *AnaDisp* is 0.26 (0.07), the mean (median) *AnaInacc* value is 0.65 (0.16), and *RetVol* and *CumRet* have mean (median) values of 0.03 (0.03) and 0.13 (0.08), respectively. Among our main independent variables, *OCIGain* and *OCILoss* have mean (median) values of 0.33 (0.24) and 0.36 (0.29), respectively. Further, the average firm in our sample is profitable, with mean (median) *Erngs* of 1.17 (1.03). Notable statistics among the control variables include *CashFlow*, for which the mean (median) value of 3.03 (2.24) indicate that the average firm in our sample has positive operating cash flows.

-- INSERT TABLE 2 ABOUT HERE --

Table 3 presents Pearson correlation coefficients for the variables in our models. The primary concern here is the potential for harmful collinearity among the independent variables. The highest correlation among the independent variables is 0.74 between *CFVol* and *ROAVol*, which approaches a level sufficient to raise concern. Two other correlations also exceed 0.6 (0.65 between *CashFlow* and *BookVal* and -0.65 between *CashFlow* and *Accruals*). All other correlation coefficients are below 0.6. Overall, Table 2 suggests that collinearity is likely not a problem in our data. Nonetheless, we perform a sensitivity test to ensure that our findings are not driven by the one very high correlation noted above. Specifically, we re-estimate equation (1) omitting *CFVol*. Our results for equation (1) remain qualitatively the same as those for the initial specification, which are discussed below.

-- INSERT TABLE 3 ABOUT HERE –

IV. EMPIRICIAL RESULTS

Main Regression Results

Main regression results are presented in Tables 4 and 5, and significance levels are determined based on standard errors that are clustered at the firm level. Table 4 presents baseline results for a reduced version of equation (1) that does not include the interactions between *Erngs* and the OCI variable. R-squared values range from about 8 percent to about 64 percent. The coefficients on *OCIGain*, *OCILoss*, and *Erngs* are all significantly negative at least at the 0.10 level in the *AnaDisp*, *AnaInacc*, and *RetVol* models. These results suggest that, individually, earnings, OCI gains, and OCI losses provide information to the market that reduces uncertainty and disagreement among market participants about firms' fundamentals. In addition, *Erngs* (*OCILoss*) is positive (negative) in the *CumRet* model ($p < 0.01$) as one might expect, indicating that investors impound the corresponding economic gains and losses into share prices. *OCIGain* is insignificantly positive in the *CumRet* model.

-- INSERT TABLE 4 ABOUT HERE --

Several of the control variables are significant across the four models. *PPE* is significantly positive at least at the 0.05 level in every model. *ROAVol* is also positive in every model, significantly so ($p < 0.01$) in all but the *CumRet* model. Conversely, *Intang* is significantly negative ($p < 0.01$) in all but the *CumRet* model, where it is significantly positive ($p < 0.01$). *BookVal* is also significant in every model, at least at the 0.05 level, but is directionally inconsistent across the four models. *OutShrs* is significantly negative ($p < 0.01$) in the *RetVol* and *CumRet* models, while *CFVol* is significant (positive; $p < 0.01$) only in the *RetVol* model.

Table 5 reports results for the full specification of equation (1) that includes the interactions between *Erngs* and the OCI variables. R-squared values and results for the control variables are

virtually identical to those in Table 4 across the four models. With one exception, the signs and significance of the coefficients on *Erngs*, *OCIGain*, and *OCILoss* are consistent with those reported in Table 4 as well. The one exception is *OCILoss* in the *CumRet* model, which remains negative but is now not significant.

-- INSERT TABLE 5 ABOUT HERE --

We focus on the interactions between *Erngs* and the OCI variables for our hypothesis tests. As predicted, *Erngs*OCIGain* is positive in the *AnaDisp*, *AnaInacc*, and *RetVol* models (H1) and negative in the *CumRet* model (H2) and is significant at least at the 0.05 level in all but the *AnaInacc* model. Similarly, *Erngs*OCILoss* is positive in the *AnaDisp*, *AnaInacc*, and *RetVol* models (H1) and negative in the *CumRet* model (H2) and is highly significant in every case ($p < 0.01$). These results provide support for both of our hypotheses and suggest that although OCI gains and losses provide useful information to the market, that information negatively impacts market participants' ability to process earnings. Specifically, reported OCI gains and (especially) losses interact with reported earnings in such a way as to increase uncertainty and disagreement among market participants about earnings and weaken the association between earnings and stock returns.

OCI and Components of Earnings

In our main tests, we examine how OCI gains and losses impact the market's processing of earnings. We next explore whether our main results are concentrated in one or more components of earnings. Specifically, we repeat the analyses report in Table 5 decomposing *Erngs* into its accrual (*Accruals*) and operating cash flow (*CashFlow*) components, interacting both (separately) with OCI gains and losses. The results for this test are reported in Table 6. As in our main analysis, R-squared values and results for the control variables are virtually identical to

those in Table 4 across the four models. Further, the results for the OCI variables remain consistent with those reported in Table 4, although *OCIGain* is now significantly positive ($p < 0.05$) and *OCILoss* is insignificantly negative in the *CumRet* model. Both components of earnings (i.e., *CashFlow* and *Accruals*) consistently show highly significant ($p < 0.01$) coefficients that are negative in the *AnaDisp*, *AnaInacc*, and *RetVol* models and positive in the *CumRet* model, indicating that the useful information provided to the market by earnings is attributable to both its cash flow and accrual components.

-- INSERT TABLE 6 ABOUT HERE --

Looking to the interactions between the earnings components and the OCI variables, the results in Table 6 suggest that our main (i.e., Table 5) findings are generally applicable to both cash flows and accruals. Specifically, consistent with the results in Table 5, both *CashFlow*OCILoss* and *Accruals*OCILoss* are highly significant in every model ($p < 0.01$), positively so in the *AnaDisp*, *AnaInacc*, and *RetVol* models and negatively so in the *CumRet* model. Results are weaker for the interaction between earnings and OCI *gains*. Similar to the corresponding results in Table 5, *CashFlow*OCIGain* is positive in the *AnaDisp*, *AnaInacc*, and *RetVol* models, significantly so in the *AnaDisp* ($p < 0.10$) and *RetVol* ($p < 0.01$) models, and is significantly negative ($p < 0.01$) in the *CumRet* model. However, *Accruals*OCIGain* is marginally significant ($p < 0.10$) only in the *CumRet* model, where it is also negative. These results suggest that OCI *losses* strongly and negatively impact the market's processing of both the cash flow and accrual components of earnings, but the clouding effects of OCI *gains* are generally limited to the market's processing of the cash flow component.

The Impact of the Information Environment

Given the implications of our results for how the market processes accounting information, we next consider whether the broader information environment plays a role in our setting. Specifically, we examine whether our main (i.e., Table 5) results vary by the strength of the information environment. To do this, we repeat the analyses reported in Table 5 separately for subsets of our sample where the information environment is relatively strong and weak. Based on prior research, we proxy for the strength of the information environment using analyst following; observations with a value of *Coverage* in the highest (*Coverage = High*) and lowest (*Coverage = Low*) quintiles of the sample distribution represent relatively strong and weak information environments, respectively.

The results for this analysis are reported in Table 7. The findings for *OCILoss* and *Erngs* are consistent with the corresponding results in Table 5 in both the weak and strong information environment settings, with the one exception that *OCILoss* is now insignificant in the *CumRet* model where analyst coverage is low. Accordingly, OCI losses and reported earnings appear to be associated with reduced uncertainty and disagreement among market participants regardless of the broader information environment. Moreover, while investors predictably incorporate earnings into share prices at some level regardless of the information environment, they incorporate OCI losses into share prices only where the information environment is relatively strong. *OCIGain* is significant (negative; $p < 0.01$) only in the *RetVol* model where analyst following is relatively low, suggesting that OCI gains generally do not directly influence market uncertainty/disagreement or factor into share prices at the high or low ends of the analyst following distribution.

-- INSERT TABLE 7 ABOUT HERE --

Turning to our hypothesized interactions, *Erngs*OCILoss* is significantly positive (at least at the 0.10 level) in the *AnaDisp*, *AnaInacc*, and *RetVol* models and significantly negative (at least at the 0.10 level) in the *CumRet* model in all cases, i.e., in both the strong and weak information environment conditions. As our findings for the interaction between earnings and OCI losses appear to be consistent across strong vs. weak information environments, we compare the coefficients on *Erngs*OCILoss* across the *Coverage = Low* and *Coverage = High* conditions in each model using Wald statistics. The coefficient on *Erngs*OCILoss* is more strongly positive (negative) for the *Coverage = Low* case relative to the *Coverage = High* case in the *AnaDisp*, *AnaInacc*, and *RetVol* (*CumRet*) models, and significantly so (at least at the 0.05 level) in all but the *AnaDisp* model. These results suggest that the clouding effects of OCI losses on market participants' ability to process earnings are more pronounced where the information environment is relatively weak compared to where it is relatively strong, as one might expect.

The comparative results for *Erngs*OCIGain* in the *Coverage = Low* vs. *Coverage = High* cases are similar. *Erngs*OCIGain* is strongly significantly positive ($p < 0.01$) in the *AnaDisp* and *RetVol* models and significantly negative ($p < 0.01$) in the *CumRet* model *only* in the *Coverage = Low* condition; it is not significant in the *Coverage = High* condition in any model. Further, *Erngs*OCIGain* is not significant in either of the information environment conditions in the *AnaInacc* model. These results generally suggest that, similar to OCI losses, the negative effects of OCI gains on market participants' ability to process earnings present most strongly where the information environment is relatively weak.

Summary

Overall, our results provide evidence that although OCI gains and losses provide useful information to market participants directly, they also have a negative *indirect* effect on market

participants' ability to assess firms' fundamentals. Specifically, consistent with prior evidence, reported earnings and OCI gains and losses are associated with reduced uncertainty and disagreement among market participants and are positively impounded into share prices by investors. However, the informational effects of earnings are weakened as OCI gains and/or losses increase. Further, the clouding effects of OCI items on the market's ability to process earnings present more consistently for OCI losses than OCI gains. Finally, these clouding effects manifest more strongly in weaker information environments than in stronger ones, suggesting that a stronger information environment (higher analyst following in our case) provides market participants with the tools to generally retain the informational benefits provided by OCI items directly while mitigating any confusing or noisy elements contained therein that may affect interpretation of other financial statement items.

V. CONCLUDING REMARKS

This study examines whether OCI items impact market participants' ability to process other accounting information, specifically earnings. That is, we investigate whether 1) the associations between earnings and measures of uncertainty and disagreement among market participants (analyst forecast dispersion, analyst forecast error, and stock return volatility) and 2) the value-relevance of earnings are affected by the presence of OCI gain and losses. Based on the unpredictable and volatile nature of OCI items, we argue that OCI gains and losses affect the way that market participants processes other accounting information, generating uncertainty and disagreement around that information. We predict that the association between earnings and investor heterogeneity is stronger in the presence of OCI.

Our results are consistent with this prediction. We find that reported earnings and OCI gains and losses are individually associated with reduced uncertainty and disagreement among market participants and are positively impounded into share prices by investors. However, we also find that both OCI gains and losses interact with earnings so as to weaken the negative relation between earnings and market uncertainty/disagreement and the value-relevance of earnings. Further, we find that the negative effects of OCI items on the market's ability to process earnings are more consistently evident for OCI losses than OCI gains. Finally, we find that the apparent effects of OCI gains and losses on market participants' processing of earnings information manifest more strongly in weaker information environments than in stronger ones, as measured by analyst following.

Our results are consistent with OCI gains and losses providing useful information to market participants directly, but also having a negative *indirect* effect on market participants' ability to assess firms' fundamentals. Our results also suggest that a stronger information environment enables market participants to generally retain the informational benefits provided by OCI items directly while reducing or eliminating any confusing or noisy elements contained therein that may affect interpretation of other financial statement items.

REFERENCES

Ajinkya, B., R. Atiase, and M. Gift. 1991. Volume of Trading and the Dispersion in Financial Analysts' Earnings Forecasts. *The Accounting Review*. 66(2): 389–401.

Association for Investment Management and Research (AIMR), 1993. *Financial Reporting in the 1990s and Beyond.* Charlottesville: AIMR.

Atiase, R. 1985. Predisclosure Information, Firm Capitalization, and Security Price Behavior Around Earnings Announcements. *Journal of Accounting* Research. 23(1): 21–36.

Bamber, L. S., Jiang, J., Petroni, K. R., & Wang, I. Y. 2010. Comprehensive income: Who's Afraid of Performance Reporting? *The Accounting Review*, *85*(1), 97–126.

Barron, O.E. and P.S. Stuerke. 1998. Dispersion in Analyst's Earnings Forecasts as a Measure of Uncertainty. *Journal of Accounting, Auditing, and Finance*. 13: 243-268.

Barth, M. E. and G. Clinch. 1996. International Accounting Differences and Their Relation to Share Prices: Evidence from U.K., Australian, and Canadian Firms*. *Contemporary Accounting Research*, 13: 135–170.

Barth, M., R. Kasznik, and M. McNichols. 2001. Analyst Coverage and Intangible Assets. *Journal of Accounting Research*. 39(1): 1-34.

Barth, M., K. Li, and C. McClure. 2017. Evolution in value relevance of accounting information. Working Paper: Stanford University.

Barton, J., Hansen, T. B., & Pownall, G. 2010. Which Performance Measures Do Investors Around the World Value the Most—and Why? *The Accounting Review*, *85*(3), 753–789.

Berkman, H., V. Dimitrov, P. C. Jain, P. D. Koch, and S. Tice. 2009. Sell on the News: Differences of Opinion, Short-sales Constraints, and Returns Around Earnings Announcements. *Journal of Financial Economics*. 92(3): 376–399.

Biddle, & Choi. (2006). Is Comprehensive Income Useful? *Journal of Contemporary Accounting and Economics*, 2(1), 1-32.

Black, D. E. 2016. Other Comprehensive Income: A Review and Directions for Future Research. *Accounting & Finance*, *56*(1), 9–45.

Brown, L.D. 1993. Earnings Forecasting Research: Its Implications for Capital Market Research. *International Journal of Forecasting*. 9: 295-320.

Brown, P., G. Foster, and E. Noreen. 1985. Security Analyst Multi-year Earnings Forecasts and the Capital Market. Sarasota, FL: American Accounting Association.

Cahan, S. F., Courtenay, S. M., Gronnewoller, P. L., & Upton, D. R. 2000. Value Relevance of Mandated Comprehensive Income Disclosures. *Journal of Business Finance & Accounting*, *27*(9–10), 1233–1265.

Campbell, J. 2015. The Fair Value of Cash Flow Hedges, Future Profitability, and Stock Returns. *Contemporary Accounting Research*, 32(1), 243-279.

Chambers, D., Linsmeier, T. J., Shakespeare, C., & Sougiannis, T. 2007. An Evaluation of SFAS No. 130 Comprehensive Income Disclosures. *Review of Accounting Studies*, *12*(4), 557–593.

Cheng, A., Cheung, J., & Gopalakrishnan, V. 1993. On the Usefulness of Operating Income, Net Income and Comprehensive Income in Explaining Security Returns. *Accounting and Business Research*. 23(91), 195-203.

Clement, M. 1999. Analyst forecast accuracy: Do Ability, Resources, and Portfolio Complexity Matter? Journal of Accounting and Economics. 21: 285-303.

Comprix, J., R. Graham, and J. Moore. 2011. Empirical Evidence on the Impact of Book-tax differences on Divergence of Opinion Among Investors. *Journal of the American Taxation Association*. 33(1): 51-78.

Dai, Z., D. Shackelford, and H. Zhang. 2010. Capital Gains Taxes and Stock Return Volatility. Working paper, University of Texas at Dallas; University of North Carolina.

Dhaliwal, D., Subramanyam, K. R., & Trezevant, R. 1999. Is Comprehensive Income Superior to Net Income as a Measure of Firm Performance? *Journal of Accounting and Economics*, *26*(1), 43–67.

Diether, K.B., C.J. Malloy, and A. Scherbina. 2002. Difference of Opinion and the Cross Section of Stock Returns. *Journal of Finance*. 57(5): 2113-2141.

Duru, A. and D.M. Reeb. 2002. International Diversification and Analysts' Forecast Accuracy and Bias. *The Accounting Review*. 77(2): 415-433.

Financial Accounting Standards Board (FASB), 2008. Conceptual Framework for Financial Reporting. Statement of financial accounting concepts No. 6, Norwalk, CT, FASB.

Holthausen, R. W., & Verrecchia, R. E. 1988. The Effect of Sequential Information Releases on the Variance of Price Changes in an Intertemporal Multi-Asset Market. *Journal of Accounting Research*, *26*(1), 82.

Imhoff, E., & Lobo, G. 1992. The Effect of Ex Ante Earnings Uncertainty on Earnings Response Coefficients. The Accounting Review, 67(2), 427-439.

Isidro, H., O'Hanlon, J., & Young, S. (2006). Dirty Surplus Accounting Flows and Valuation Errors. *Abacus*, *42*(3–4), 302–344.

Johnstone, D. 2016. The Effect of Information on Uncertainty and the Cost of Capital. *Contemporary Accounting Research*, *33*(2), 752–774.

Jones, D. A., and Smith, K. J. 2011. Comparing the Value Relevance, Predictive Value, and Persistence of Other Comprehensive Income and Special Items. *The Accounting Review*, *86*(6), 2047–2073.

Kanagaretnam, K., Mathieu, R., & Shehata, M. 2009. Usefulness of Comprehensive Income Reporting in Canada. *Journal of Accounting and Public Policy*, *28*(4), 349–365.

Khan, S., and Bradbury, M. E. 2014a. Volatility and Risk Relevance of Comprehensive Income. *Journal of Contemporary Accounting & Economics*, *10*(1), 76–85.

Khan, S., and Bradbury, M. E. 2014b. Volatility and Risk Relevance of Comprehensive Income. *Journal of Contemporary Accounting & Economics*, *10*(1), 76–85.

Lee, C., and Park, M. S. 2013. Subjectivity in Fair-value Estimates, Audit Quality, and Informativeness of Other Comprehensive Income. *Advances in Accounting*, *29*(2), 218–231.

Lin, S., Martinez, D., Wang, C., & Yang, Y. 2016. Is Other Comprehensive Income Reported in the Income Statement More Value Relevant? The Role of Financial Statement Presentation. *Journal of Accounting, Auditing & Finance*, 0148558X1667077.

Linsmeier. 1997. An Issues Paper on Comprehensive Income. (1997). Accounting Horizons., 11(2), 120.

Lipe, M. G. 1998. Discussion of Comprehensive Income Reporting and Analysts' Valuation Judgments. *Journal of Accounting Research*, *36*, 77.

Louis, H. 2003. The Value Relevance of the Foreign Translation Adjustment. *The Accounting Review*, *78*(4), 1027–1047.

O'Hanlon, J. F., & Pope, P. F. (1999). The Value-relevance of UK Dirty Surplus Accounting Flows. *The British Accounting Review*, *31*(4), 459–482.

Ohlson, J. (1995). Earnings, Book Values, and Dividends in Equity Valuation. *Contemporary Accounting Research,* 11(2), 661-687.

Paton, W. (1934). Aspects of Asset Valuations. The Accounting Review, 9(2), 122-129.

Pinto, J. A. (2005). How comprehensive is Comprehensive Income? The Value Relevance of Foreign Currency Translation Adjustments. *Journal of International Financial Management & Accounting*, *16*(2), 97–122.

Pronobis, P., & Zülch, H. (2010). The Predictive Power of Comprehensive Income and its Individual Components Under IFRS.

Rees, L. L., & Shane, P. B. (2012). Academic Research and Standard-Setting: The Case of Other Comprehensive Income. *Accounting Horizons*, *26*(4), 789–815.

Rogers, J., D. Skinner, and A. Van Buskirk. 2009. Earnings Guidance and Market Uncertainty. *Journal of Accounting and Economics*. 48(1): 90–109.

Schaberl, P. D., & Victoravich, L. M. (2015). Reporting Location and the Value Relevance of Accounting Information: The Case of Other Comprehensive Income. *Advances in Accounting*, *31*(2), 239–246.

Shores, D. 1990. The Association Between Interim Information and Security Returns Surrounding Earnings Announcements. *Journal of Accounting* Research. 28(1): 164–181.

Skinner, D. (1999). How Well Does Net Income Measure Firm Performance? A Discussion of Two Studies. *Journal of Accounting and Economics*, 26(1), 105-111.

Zhang, X. 2006. Information Uncertainty and Stock Returns. *Journal of Finance*. 61(1): 105-137.

APPENDIX A
Variable Definitions

Dependent Variables

AnaDisp	=	The standard deviation of analysts' forecasts on EPS during 0 to 15 days after the earnings announcement date for year t deflated by beginning-of-year stock price.
AnaInacc	=	The absolute value of bias, which is calculated as analysts' forecast consensus less actual reported earnings per share in year t (IBES ACTUAL) deflated by begnning-of-year stock price. Analysts' consensus is the average of analysts' earnings forecasts during 0 to 15 days after the earnings announcement date for year t.
CumRet	=	The cumulative abnormal return for firm i over the one-year period from the second quarter of year t to the first quarter of year t+1. Abnormal returns are captured using the difference between expected returns and the market risk free
RetVol	=	The standard deviation of daily stock returns for firm i over the one-year period from the second quarter of year t to the first quarter of year t+1.

Independent Variables

Accruals	=	The difference between income before extraordinary items (Compustat IB) and operating cash flows (Compustat OANCF) in year t deflated by the number of outstanding shares.
BookVal	=	Shareholders' equity (Compustat CEQ) deflated by number of outstanding shares.
CashFlow	=	Operating cash flows (Compustat OANCF) deflated by the number of outstanding shares.
CFVol	=	The standard deviation of operating cash flows for firm i from year t-5 to year t deflated by prior year total assets.
Coverage	=	The natural logarithm of the number of distinct analysts following firm i during 0 to 15 days after the earnings announcement date for year t.
Intang	=	Intangible assets including goodwill at the end of year t (Compustat INTAN) deflated by prior year total assets.
Erngs	=	Net income before extraordinary items in year t (Compustat IB) deflated by the number of outstanding shares.
OCIGain	=	The absolute value of OCI gains in year t deflated by the number of outstanding shares. OCI gains are defined as the sum of all the positive derivatibe gains/losses (Compustat CIDERGL), securities gains/losses (Compustat CISECGL), currency translation adjustments (Compustat CICURR), noncontrolling interest (Compustat CIMII), other adjustments (Compustat CIOTHER), and minimum pension adjustments (Compustat CIPEN).
OCILoss	=	The absolute value of OCI losses in year t deflated by the number of outstanding shares. OCI losses are defined as the sum of all the negative derivatibe gains/losses (Compustat CIDERGL), securities gains/losses (Compustat CISECGL), currency translation adjustments (Compustat CICURR), noncontrolling interest (Compustat CIMII), other adjustments (Compustat CIOTHER), and minimum pension adjustments (Compustat CIPEN).
OutShrs	=	The natural log of the number of shares outstanding for firm i at the end of year t.
PPE	=	Property, plant and equipment at the end of year t (Compustat PPENT) deflated by prior year total assets.
ROAVol	=	The standard deviation of ROA for firm i from year t-5 to year t. ROA is income before extraordinary items in year t (Compustat IB) divided by prior year total assets.

Table 1
Description of Sample
Firm-Year Observations by Industry Group

Industry	N Sample	% Sample	% Compustat
Natural resources	1,066	7.92	6.89
Construction and metal	657	4.88	3.31
Food	573	4.26	3.03
Consumer goods	381	2.83	1.96
Paper and printing	283	2.10	1.34
Chemical and petroleum	1,280	9.51	7.55
Machinery and equipment	2,846	21.15	15.18
Transportation-related	952	7.08	4.19
Telecommunications	435	3.23	2.83
Wholesale and retail	1,149	8.54	5.66
Entertainment	180	1.34	1.14
Business services	1,793	13.33	10.12
Health services	209	1.55	1.17
Utilities	483	3.59	3.58
Financial Services	930	6.91	31.42
Other	238	1.78	0.63
Total	**13,455**	**100.00**	**100.00**

Industries are defined on the basis of two-digit SIC codes as follows. Natural Resources: 0-9,10-14; Construction/Metal: 15-19, 30, 32-34; Food: 20-21; Consumer Goods: 22-23, 25, 31, 39; Paper/Printing: 24, 26-27; Chemical/Petroleum: 28-29; Machinery/Equipment: 35-36, 38; Transportation: 37, 40-47; Telecommunication: 48; Wholesale/Retail: 50-59; Entertainment: 78-79; Business Services: 73, 81; Health Services: 70, 72, 75-76, 80, 82-89; Utilities: 49; Financial Services: 60-63, 65-67; Other: 99. "% Compustat" indicates the percentage of all firms on Compustat in 2010 (largest concentration of firm-years toward the middle of the sample period) represented in each industry.

Table 2

Descriptive Statistics

	Full Sample (n = 13,455)				
Variable	**Mean**	**Std. Dev.**	**25%**	**Median**	**75%**
AnaDisp	0.255	0.591	0.026	0.069	0.200
AnaInacc	0.646	1.617	0.056	0.159	0.457
RetVol	0.028	0.015	0.018	0.025	0.036
CumRet	0.132	0.576	-0.244	0.081	0.390
OCIGain	0.327	0.332	0.000	0.236	0.617
OCILoss	0.359	0.340	0.000	0.294	0.669
Erngs	1.167	2.547	0.013	1.034	2.269
BookVal	13.007	11.530	4.980	10.075	17.961
Accruals	-1.870	2.984	-2.473	-1.109	-0.346
CashFlow	3.025	3.421	0.856	2.236	4.251
PPE	0.286	0.284	0.070	0.180	0.426
Intang	0.212	0.244	0.019	0.128	0.331
CFVol	0.060	0.081	0.022	0.039	0.066
ROAVol	0.076	0.122	0.018	0.036	0.084
OutShrs	11.187	1.165	10.362	11.008	11.860

See Appendix A for variable definitions.

Table 3

Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. AnaDisp	**1.00**														
2. AnaInacc	**0.72**	**1.00**													
3. RetVol	**0.25**	**0.23**	**1.00**												
4. CumRet	**-0.14**	**-0.13**	**-0.22**	**1.00**											
5. OCIGain	**-0.10**	**-0.09**	**-0.17**	**0.10**	**1.00**										
6. OCILoss	**-0.07**	**-0.06**	**-0.17**	**-0.13**	**0.06**	**1.00**									
7. Erngs	**-0.26**	**-0.24**	**-0.44**	**0.21**	**0.23**	**0.20**	**1.00**								
8. BookVal	**-0.11**	**-0.11**	**-0.32**	**0.02**	**0.30**	**0.28**	**0.49**	**1.00**							
9. Accruals	**-0.09**	**-0.06**	**-0.07**	**0.12**	**-0.16**	**-0.16**	**0.25**	**-0.31**	**1.00**						
10. CashFlow	**-0.12**	**-0.13**	**-0.27**	**0.06**	**0.31**	**0.29**	**0.55**	**0.65**	**-0.65**	**1.00**					
11. PPE	**0.08**	**0.04**	0.00	0.01	**0.05**	**-0.05**	**0.05**	**0.13**	**-0.25**	**0.25**	**1.00**				
12. Intang	**-0.10**	**-0.09**	**-0.15**	**0.04**	**0.04**	**0.10**	**0.07**	**0.05**	**0.05**	0.01	**-0.28**	**1.00**			
13. CFVol	**0.09**	**0.07**	**0.29**	**0.03**	**-0.22**	**-0.23**	**-0.20**	**-0.27**	**0.14**	**-0.27**	**-0.16**	**-0.13**	**1.00**		
14. ROAVol	**0.14**	**0.11**	**0.34**	-0.01	**-0.21**	**-0.20**	**-0.30**	**-0.30**	**0.05**	**-0.28**	**-0.14**	**-0.10**	**0.74**	**1.00**	
15. OutShrs	**-0.04**	**-0.08**	**-0.20**	**-0.03**	**0.21**	**0.21**	**0.12**	**0.05**	**-0.08**	**0.16**	**0.08**	**0.04**	**-0.16**	**-0.09**	**1.00**

Pearson correlation coefficients appear in the lower diagonal. A bolded font indicates a statistically significant correlation at the 5% level. See Appendix A for variable definitions.

Table 4

Industry and Year Fixed Effects Regression Results

Earnings and OCI - No Interactions

	Dependent Variable							
	AnaDisp		**AnaInacc**		**RetVol**		**CumRet**	
Independent Variables	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**
Intercept	0.2386	0.59	0.4854	3.46 ***	0.0365	20.73 ***	0.6414	3.57 ***
Earnings and OCI Variables								
OCIGain	-0.0316	-1.76 *	-0.1047	-2.32 **	-0.0009	-2.66 ***	0.0003	0.02
OCILoss	-0.0553	-2.96 ***	-0.0991	-1.94 *	-0.0013	-4.03 ***	-0.0386	-2.70 ***
Erngs	-0.0529	-16.63 ***	-0.1375	-15.25 ***	-0.0012	-22.29 ***	0.0491	23.45 ***
Control Variables								
BookVal	0.0013	2.11 **	0.0033	1.99 **	-0.0001	-8.20 ***	-0.0043	-9.23 ***
PPE	0.1431	4.08 ***	0.2146	2.31 **	0.0022	3.79 ***	0.0599	2.49 **
Intang	-0.1192	-4.66 ***	-0.3796	-5.46 ***	-0.0024	-4.96 ***	0.1124	5.06 ***
CFVol	0.0574	0.41	-0.0192	-0.05	0.0128	4.85 ***	0.1765	1.55
ROAVol	0.3021	3.44 ***	0.7634	3.19 ***	0.0190	11.12 ***	0.0047	0.07
OutShrs					-0.0015	-15.41 ***	-0.0217	-5.40 ***
N	13,455		13,455		13,455		13,455	
F-stat.	16.78	(p < 0.01)	12.15	(p < 0.01)	149.38	(p < 0.01)	111.45	(p < 0.01)
R-squared (Adjusted)	0.113		0.080		0.635		0.283	

***, **, and * indicate significance for a two-tailed test at the 1%, 5% and 10% levels, respectively. The dependent variables are *AnaDisp*, *AnaInacc*, *RetVol*, and *CumRet*. See Appendix A for variable definitions.

Table 5

Industry and Year Fixed Effects Regression Results

Earnings and OCI

	Dependent Variable							
	AnaDisp		**AnaInacc**		**RetVol**		**CumRet**	
Independent Variables	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**
Intercept	0.0698	1.80	0.5925	3.81 ***	0.0382	22.99 ***	0.6007	3.37 ***
Earnings and OCI Variables								
OCIGain	-0.0488	-1.96 **	-0.1301	-2.11 **	-0.0017	-4.40 ***	0.0229	1.32
OCILoss	-0.0991	-4.13 ***	-0.2084	-3.18 ***	-0.0026	-6.62 ***	-0.0076	-0.49
Erngs	-0.0764	-12.80 ***	-0.1917	-11.70 ***	-0.0020	-19.60 ***	0.0686	17.75 ***
Erngs*OCIGain	0.0142	2.04 **	0.0236	1.26	0.0007	5.72 ***	-0.0171	-3.67 ***
Erngs*OCILoss	0.0347	5.01 ***	0.0864	4.50 ***	0.0010	9.04 ***	-0.0250	-5.88 ***
Control Variables								
BookVal	0.0012	1.97 **	0.0032	1.90 *	-0.0001	-8.77 ***	-0.0042	-9.04 ***
PPE	0.1568	4.53 ***	0.2451	2.66 ***	0.0027	4.65 ***	0.0478	1.98 **
Intang	-0.1131	-4.44 ***	-0.3664	-5.26 ***	-0.0021	-4.54 ***	0.1069	4.84 ***
CFVol	0.0606	0.44	-0.0140	-0.04	0.0130	4.97 ***	0.1732	1.52
ROAVol	0.2573	2.88 ***	0.6646	2.74 ***	0.0174	10.21 ***	0.0444	0.64
OutShrs					-0.0015	-15.70 ***	-0.0214	-5.38 ***
N	13,455		13,455		13,455		13,455	
F-stat.	17.02	(p < 0.01)	12.58	(p < 0.01)	152.50	(p < 0.01)	107.36	(p < 0.01)
R-squared (Adjusted)	0.116		0.082		0.641		0.285	

***, **, and * indicate significance for a two-tailed test at the 1%, 5% and 10% levels, respectively. The dependent variables are *AnaDisp*, *AnaInacc*, *RetVol*, and *CumRet*. See Appendix A for variable definitions.

Table 6

Industry and Year Fixed Effects Regression Results

Accruals, Operating Cash Flows, and OCI

	Dependent Variable							
	AnaDisp		**AnaInacc**		**RetVol**		**CumRet**	
Independent Variables	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**
Intercept	0.0663	1.71	0.6014	4.08 ***	0.0386	22.90 ***	0.6064	3.40 ***
Earnings and OCI Variables								
OCIGain	-0.0871	-3.41 ***	-0.2667	-3.97 ***	-0.0027	-6.20 ***	0.0448	2.05 **
OCILoss	-0.1005	-3.77 ***	-0.2079	-2.81 ***	-0.0035	-7.63 ***	-0.0161	-0.80
CashFlow	-0.0673	-8.82 ***	-0.1825	-9.28 ***	-0.0019	-10.74 ***	0.0679	11.48 ***
Accruals	-0.0589	-7.25 ***	-0.1428	-6.99 ***	-0.0016	-9.81 ***	0.0565	10.88 ***
CashFlow*OCIGain	0.0139	1.87 *	0.0297	1.49	0.0006	4.40 ***	-0.0193	-3.40 ***
CashFlow*OCILoss	0.0291	3.64 ***	0.0758	3.51 ***	0.0010	6.26 ***	-0.0222	-3.85 ***
Accruals*OCIGain	-0.0011	-0.12	-0.0272	-1.14	0.0002	1.50	-0.0095	-1.71 *
Accruals*OCILoss	0.0269	2.87 ***	0.0672	2.82 ***	0.0007	4.09 ***	-0.0226	-4.15 ***
Control Variables								
BookVal	0.0009	1.33	0.0037	2.04 **	-0.0001	-8.85 ***	-0.0049	-9.39 ***
PPE	0.1587	4.39 ***	0.2711	2.85 ***	0.0028	4.62 ***	0.0368	1.48
Intang	-0.1103	-4.28 ***	-0.3552	-5.04 ***	-0.0020	-4.15 ***	0.1063	4.75 ***
CFVol	0.0548	0.40	-0.0580	-0.15	0.0128	4.93 ***	0.1700	1.46
ROAVol	0.2683	2.98 ***	0.6823	2.78 ***	0.0173	9.93 ***	0.0444	0.62
OutShrs					-0.0015	-15.42 ***	-0.0216	-5.36 ***
N	13,455		13,455		13,455		13,455	
F-stat.	15.88	(p < 0.01)	11.16	(p < 0.01)	149.33	(p < 0.01)	103.25	(p < 0.01)
R-squared (Adjusted)	0.111		0.081		0.639		0.284	

***, **, and * indicate significance for a two-tailed test at the 1%, 5% and 10% levels, respectively. The dependent variables are *AnaDisp*, *AnaInacc*, *RetVol*, and *CumRet*. See Appendix A for variable definitions.

Table 7

Industry and Year Fixed Effects Regression Results

Earnings and OCI by Level of Analyst Following

	Dependent Variable															
	AnaDisp				AnaInacc				RetVol				CumRet			
	Coverage = Low		Coverage = High		Coverage = Low		Coverage = High		Coverage = Low		Coverage = High		Coverage = Low		Coverage = High	
Independent Variables	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**	**Coeff.**	**t-stat**
Intercept	0.2438	1.64	-0.1705	-1.35	1.1100	2.63 ***	0.0008	0.00	0.0319	4.58 ***	0.0324	7.67 ***	0.5233	1.52	1.3687	2.35 **
Earnings and OCI Variables																
OCIGain	-0.0531	-1.22	0.0267	0.42	-0.1197	-0.93	0.0085	0.06	-0.0024	-3.18 ***	-0.0012	-1.55	0.0457	1.40	-0.0435	-1.19
OCILoss	-0.1357	-3.14 ***	-0.1659	-2.98 ***	-0.3126	-2.31 **	-0.2229	-1.65 *	-0.0039	-5.49 ***	-0.0017	-2.21 **	0.0126	0.43	-0.0768	-2.16 **
Erngs	-0.1257	-9.71 ***	-0.0544	-4.40 ***	-0.3238	-8.55 ***	-0.1102	-3.55 ***	-0.0028	-12.02 ***	-0.0012	-8.33 ***	0.1197	11.96 ***	0.0416	6.53 ***
Erngs*OCIGain	0.0445	2.76 ***	-0.0016	-0.13	0.0221	0.50	0.0200	0.65	0.0011	4.06 ***	0.0001	0.63	-0.0441	-4.01 ***	0.0029	0.39
Erngs*OCILoss	0.0725	4.55 ***	0.0382	2.63 ***	0.1905	4.09 ***	0.0593	1.67 *	0.0015	5.31 ***	0.0008	4.65 ***	-0.0640	-5.77 ***	-0.0139	-1.81 *
Control Variables																
BookVal	0.0013	1.08	0.0012	0.97	0.0055	1.28	0.0030	1.01	-0.0002	-8.67 ***	0.0000	-0.49	-0.0052	-5.57 ***	-0.0026	-2.86 ***
PPE	0.1463	1.95 *	0.2558	3.26 ***	0.3413	1.66 *	0.1910	0.92	0.0017	1.54	0.0046	4.09 ***	-0.0600	-1.19	-0.0159	-0.30
Intang	-0.0826	-1.54	-0.0164	-0.21	-0.3869	-2.53 **	-0.0694	-0.46	-0.0007	-0.66	-0.0011	-1.13	0.0742	1.55	0.1194	2.54 **
CFVol	-0.0913	-0.48	0.8899	1.99 **	-0.6939	-1.12	2.9375	2.48 **	0.0085	1.97 **	0.0305	4.76 ***	0.1871	0.95	0.3849	0.93
ROAVol	0.0737	0.58	0.6156	2.60 ***	0.3212	0.74	1.7295	2.87 ***	0.0154	5.22 ***	0.0229	5.53 ***	-0.0152	-0.13	-0.1410	-0.72
OutShrs									-0.0009	-3.83 ***	-0.0016	-8.02 ***	-0.0311	-3.26 ***	-0.0178	-1.72 *
N	3,879		2,361		3,879		2,361		3,879		2,361		3,879		2,361	
F-stat.	6.28 (p < 0.01)		7.37 (p < 0.01)		5.58 (p < 0.01)		5.22 (p < 0.01)		56.62 (p < 0.01)		71.69 (p < 0.01)		38.90 (p < 0.01)		14.05 (p < 0.01)	
R-squared (Adjusted)	0.098		0.161		0.082		0.113		0.631		0.683		0.283		0.285	
Effect Size with High vs. Low Analyst Coverage	χ^2				χ^2				χ^2				χ^2			
Erngs*OCIGain	5.31	##			0.00				10.93	###			12.66	###		
Erngs*OCILoss	2.55				5.14	##			4.96	##			14.30	###		

***, **, and * indicate significance for a two-tailed test at the 1%, 5% and 10% levels, respectively. ### and ## indicate significance for a χ^2 test at the 1% and 5% levels, respectively. The dependent variables are *AnaDisp*, *AnaInacc*, *RetVol*, and *CumRet*. *Coverage = High* represents the highest quintile of the sample distribution of *Coverage*. *Coverage = Low* represents the lowest quintile of the sample distribution of *Coverage*. See Appendix A for variable definitions.