Comprehensive Income: Who’s Afraid of Performance Reporting?

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ABSTRACT: Firms can report comprehensive income in either an income-statement-like performance statement or the statement of equity. Traditional theories of contracting incentives cannot explain this reporting location choice that only affects where comprehensive income data appear, because the contractible values of net income, other comprehensive income items, and comprehensive income are exactly the same regardless of the location where the firm reports comprehensive income. Drawing on theory, analysis of comment letters, and results of survey-based and behavioral research, we identify two factors—equity-based incentives and concerns over job security—that help explain why most firms do not follow policymakers’ preference to report comprehensive income in a performance statement. Our empirical evidence on a broad cross-section of firms shows that managers with stronger equity-based incentives and less job security are significantly less likely to use performance reporting. Overall, our study suggests that even though the reporting location choice is inconsequential in a traditional rational markets view, managers act as if they believe that comprehensive income reporting location matters.

Keywords: accounting choice; comprehensive income; executive compensation; managerial job security.

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I. INTRODUCTION

Financial reporting standards in the U.S. currently allow firms to report comprehensive income in either an income-statement-like format as part of a statement of performance,1 or in the statement of equity (Financial Accounting Standards Board [FASB] FAS No. 130). Firms report exactly the same information (i.e., the same values of net income, other comprehensive income, and comprehensive income) either way. It is only the reporting location that differs. In traditional models of financial markets, rational investors fully process information regardless of its location, so it does not matter where firms report comprehensive income.

Standard-setters, however, believe the location of comprehensive income does matter. FAS No. 130 stated a preference for an income-statement-like presentation—referred to as performance reporting—viewing this as the more transparent presentation (FASB 1997, paragraph 67).2 Managers say developing a reputation for transparent reporting is a key factor in their disclosure decisions (Graham et al. 2005, 54), so we would expect managers who believe reporting location has little consequence to follow policymakers’ recommendations and use performance reporting. Yet most firms report comprehensive income in the statement of equity, contrary to policymakers’ preferences (e.g., Bhamornsiri and Wiggins 2001; Pandit et al. 2006).

We investigate determinants of managers’ comprehensive income reporting location choices. The only empirical evidence on this choice is the Lee et al. (2006) investigation in the property-liability insurance industry. They provide evidence that insurers who report comprehensive income in a statement of equity are more likely to smooth earnings by cherry-picking realized gains and losses on available-for-sale (AFS) securities. Apparently, these insurers believe performance reporting would make their attempts to smooth earnings more transparent. The insurance industry is an excellent setting in which to investigate the link between firms’ comprehensive income reporting choices and selective sales of AFS securities. Opportunities to cherry-pick are ripe in this industry because the average AFS portfolio is about 40 percent of total assets (Godwin et al. 1998).

Outside the insurance industry, AFS securities are a smaller proportion of firm assets, which reduces opportunities for cherry-picking. Yet firms outside the insurance industry are even less likely to use performance reporting (Lee et al. 2006), so cherry-picking cannot be the primary reason non-insurers report comprehensive income in the statement of equity. Nor can traditional contracting incentives explain a choice that is merely one of location—the values of net income, other comprehensive income, and comprehensive income are exactly the same regardless of where comprehensive income appears. So contracts relying on recognized contractible accounting numbers (e.g., debt contracts whose covenants

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1 Under FAS No. 130, Reporting Comprehensive Income, the income-statement-like format can take one of two specific forms: (1) a statement that includes the information in an income statement as well as comprehensive income, or (2) a separate statement that begins with net income and ends with comprehensive income. Following Lee et al. (2006), in our primary analyses we group all firms using the income-statement-like format in one category. Later sensitivity tests consider the two forms separately.

2 FAS No. 130 does not explicitly define the term transparent, but we consider a transparent presentation to be one that is easily recognized or detected, and we consider transparent reporting to be open and frank, consistent with definitions provided by Dictionary.com Unabridged (v 1.1). Random House, Inc. http://dictionary.reference.com/browse/transparent (accessed: March 23, 2009).
draw on net income or its components) are not affected. Consequently, we must look beyond traditional contracting incentives to identify other reasons that can explain the comprehensive income reporting location decision for a broad cross-section of firms.

As described in the next section, analysis of the comment letters responding to the FASB’s controversial Exposure Draft, Reporting Comprehensive Income (FASB 1996), which called for mandatory performance reporting, suggests many managers believed reporting comprehensive income in a salient performance statement would lead investors and other stakeholders to increase their assessments of the volatility of the firm’s performance. Behavioral finance theory (Hirshleifer and Teoh 2003) and the results of laboratory experiments (Maines and McDaniel 2000) support managers’ stated concerns that more salient performance reporting would likely adversely affect investors’ perceptions of the volatility of the firm’s performance.

Managers responding to the Graham et al. (2005) survey also say they believe higher perceived volatility of firm performance could hurt the firm’s stock price and assessments of the manager’s own performance. We therefore hypothesize that managers with more powerful equity-based incentives (whose wealth would suffer more from lower stock prices) and managers with less job security (whose jobs are at greater risk if the firm experiences unfavorable future performance) would be less likely to report comprehensive income in a performance statement.

We test our expectations on the initial comprehensive income reporting choice made by Standard & Poor’s (S&P) 500 firms during the 1998 to 2001 period. Consistent with our hypotheses, firms that do not follow policymakers’ preferences for performance reporting are headed by CEOs with more powerful equity-based incentives and less job security. To assess the robustness of our results beyond (large) S&P 500 firms, we also examine the initial comprehensive income reporting location choices of a random sample of 181 firms not included in the S&P 500. Our inferences generalize to these smaller firms. An additional analysis of the small set of S&P 500 firms that changed their comprehensive income reporting location further supports our inferences: firms whose CEOs have increasingly powerful equity incentives and decreasing job security are more likely to switch away from performance reporting. This “change” analysis suggests our primary conclusions are not attributable to some unidentified correlated omitted variable or uncontrolled firm-specific effect.

We also find that firms with larger (absolute) unrealized gains and losses on AFS securities are less likely to use performance reporting. Thus, firms with more opportunity to manage earnings by selectively selling AFS securities tend to avoid performance reporting, consistent with evidence in Hunton et al. (2006) that managers believe performance reporting increases the likelihood users detect such opportunistic sales.

Our study contributes to the literature in several ways. First, weaving together theory, prior research on comment letters, prior survey-based research, and results of behavioral research, we identify new determinants of managers’ choice of where to locate recognized accounting numbers. This focus on a pure location choice fundamentally differs from most

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3 Following prior research on determinants of accounting choice (e.g., Cheng and Warfield 2005; Bergstresser and Philippon 2006), we focus on the CEO’s incentives, because the CEO’s preferences likely affect the firm’s accounting choices, even if the CFO or controller makes the choice. For example, if the CEO prefers smoother reported performance, the firm’s accounting choices are likely to further this goal.
other accounting studies that examine choices affecting reported values of recognized accounting numbers.\(^4\) Our evidence that managers with more powerful equity incentives and less job security are less likely to use performance reporting appears to reflect managers’ concerns that more salient reporting of comprehensive income could hurt stock prices and evaluation of their performance.

The evidence suggests that even though the reporting location choice is inconsequential in a traditional efficient markets view, managers act as if they believe it matters. Evidence that managers’ personal equity-based incentives and job security concerns are associated with comprehensive income reporting location choices in a sample that is broadly representative of firms in the U.S. economy complements the Lee et al. (2006) evidence that cherry-picking sales of AFS securities is associated with this choice in the insurance industry, where opportunities to cherry-pick are more pervasive. Collectively, this evidence on who ignores the FASB’s recommendations is relevant as the FASB and IASB are considering requiring all firms to prepare a single performance statement titled “Statement of Comprehensive Income,” which would essentially require performance reporting (FASB 2008; IASB 2008).

Second, our study contributes by providing evidence suggesting that managers’ job security concerns affect their financial reporting choices. While prior research has made this conjecture (e.g., Fudenberg and Tirole 1995), as far as we are aware, the only previous related evidence is the Graham et al. (2005) survey results suggesting managers’ career concerns affect their reporting choices. This dearth of empirical evidence prompts Graham et al. (2005, 24) to characterize the effects of managers’ career concerns on their financial reporting choices as an “under-explored” issue. Our study begins to address this void.

Third, we extend prior research showing that equity-based incentives affect earnings management (e.g., Cheng and Warfield 2005; Bergstresser and Philippon 2006) by showing that equity incentives also affect a transparency-related accounting choice—the decision to disclose accounting information in a more or less salient location.

II. DEVELOPMENT OF HYPOTHESES

An extensive literature focuses on determinants of accounting choices that affect the value of recognized accounting numbers. Choices about accruals (e.g., Healy 1985; Holthausen et al. 1995), employee stock options (e.g., Aboody et al. 2004), and off-balance-sheet financing (e.g., El-Gazzar et al. 1986) all affect reported income. Traditional contracting incentives are often used to explain these kinds of choices that affect the values of accounting numbers used in contacts. For example, debt covenants often incorporate recognized accounting amounts such as net income and debt-to-equity ratios, so incentives stemming from debt contracts help explain accounting choices that affect recognized accounting numbers (e.g., Press and Weintrop 1990; DeFond and Jiambalvo 1994).

But the choice we study is fundamentally different: the only difference is the location where these numbers are reported. Therefore, we look beyond the contracting literature and draw on behavioral finance, comment letters, and survey-based and behavioral research to identify a parsimonious set of factors that we expect to explain most firms’ decisions not to follow policymakers’ preference for performance reporting.

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\(^{4}\) Our investigation of determinants of a location choice differs fundamentally from prior research on choices between recognition versus disclosure, which: (1) do affect the value of reported net income and other contractible accounting numbers, and (2) mostly focuses on consequences of this choice (e.g., Amir 1993; Aboody 1996; Barth et al. 2003; Ahmed et al. 2006). Cotter and Zimmer (2003) is a rare exception that investigates determinants of a recognition versus disclosure choice.
Figure 1 summarizes our hypothesis development. We start by reviewing evidence that managers likely believed performance reporting would lead financial statement users to perceive the firm’s performance as more volatile. Then we explain why managers would expect an increase in the perceived volatility of firm performance to hurt the firm’s stock price and their own performance evaluation. We use these discussions to develop our hypotheses that managers who avoid performance reporting have stronger equity-based incentives and less job security.

Comprehensive income includes unrealized gains and losses on (1) AFS securities; (2) foreign currency translations; (3) minimum pension obligations; and (4) certain hedging and derivative activities. These unrealized gains and losses stem from uncontrollable and volatile market forces (e.g., stock market trends and changes in currency exchange rates and interest rates) and are therefore transitory. It is not surprising that comprehensive income is generally more volatile than net income (Barth et al. 1995; and our Figure 2). Comprehensive income is an incomplete measure of the firm’s performance because unrealized gains and losses on other assets and liabilities of the firm, which may be natural or planned hedges for the unrealized gains and losses included in other comprehensive income, are not recognized. Thus, other comprehensive income items are generally volatile, transitory, and incomplete representations of the firm’s unrealized gains and losses.

In a theoretical model of financial statement users with limited attention and information-processing ability, Hirshleifer and Teoh (2003; hereafter HT) suggest that more salient reporting of volatile, transitory, and incomplete information will increase users’ assessment of the volatility of the firm’s performance. HT argue that users more fully assimilate information that is more salient and fail to fully assimilate relevant information that is less prominent. Their argument suggests that if comprehensive income is more salient, then: (1) users will put more weight on comprehensive income as a performance measure than they would if it were less salient (Bloomfield’s [2002] incomplete revelation hypothesis makes a similar prediction), and (2) users will fail to consider offsetting unrealized gains and losses on other assets and liabilities that are not recognized in the current accounting model. Both effects will lead users to believe the firm’s performance path is more volatile.

Evidence from comment letters and laboratory experiments support the implication of HT’s theory that salient performance reporting leads investors to assess the firm’s performance as more volatile. The 1996 Exposure Draft proposing mandatory performance reporting spurred over twice the average number of comment letters as the FASB’s first 100 accounting standards (Yen et al. [2007, 59] citing Tandy and Wilburn [1992]). Yen et al. (2007) find that over 80 percent of the comment letters expressed concern about financial statement users’ reactions to mandatory performance reporting. Nearly half expressed concerns over the volatility of comprehensive income. Many argued that performance reporting

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5 In our sample, the average of the firm-specific serial correlations (over 1998 to 2006, which spans both bear and bull markets) in other comprehensive income is −0.10, whereas the average serial correlation in net income is 0.26.

6 Bloomfield et al. (2006) provide evidence consistent with HT’s second proposed effect. Using experimental financial markets, they show that when a firm’s other comprehensive income is highly correlated with other public information about the firm (for example, when the unrealized gains and losses on the firm’s AFS securities are correlated with the firm’s returns), investors do not fully recognize the redundancy of the information in other comprehensive income and the firm’s stock price is influenced by where the firm reports comprehensive income.

7 HT (2003, 380) note that their model “suggests that firms that hedge may be viewed by investors as more risky than those that do not if hedge profits are marked-to-market whereas the long-term business risk the firm is hedging is not marked to market.”
FIGURE 1
Development of Hypotheses

Hirshleifer and Teoh (2003)

- Comprehensive income is more volatile
- Comprehensive income is more transitory
- Comprehensive income is incomplete
- If the firm chooses performance reporting, comprehensive income is more salient

Graham, Harvey, and Rajgopal (2005)

- Increases the perceived volatility of the firm's performance and increases perceived risk
- Lowers stock price
- Lowers performance evaluation


YHH = Yen, Hirst, and Hopkins (2007);
MM = Maines and McDaniel (2000); and
FIGURE 2
Volatility in Comprehensive Income Relative to Net Income

Relative Volatility = \frac{\text{Standard Deviation of (Comprehensive Income/Assets)}}{\text{Standard Deviation of (Net Income/Assets)}}

would cause investors to perceive the firm as riskier and asserted that companies would change their operations to reduce the volatility of comprehensive income “to ‘head off’ a negative user reaction” (Yen et al. 2007, 69).8

The FASB backed down on mandatory performance reporting without providing an explicit rationale (FASB 1997, dissent). Paragraph 60 of FAS No. 130 says respondents to the Exposure Draft expressed concern: (1) about highlighting uncontrollable volatility in other comprehensive income items, (2) that comprehensive income is more a measure of entity performance than a measure of management performance, and (3) that users would be confused by two measures of income. The dissent to FAS No. 130 points out that the confusion argument appears to be an excuse, so it appears the FASB reversed itself as a

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8 We independently analyzed the 97 comment letters that managers of our sample firms sent in response to the initial exposure draft. Each letter opposed performance reporting, often expressing concern that performance reporting would increase perceived volatility of the firm’s performance. Managers’ actions were consistent with their comment letters, as each of these 97 firms actually chose not to use performance reporting.
result of pushback from constituents, largely based on concerns that more salient presentation of other comprehensive income items would highlight volatility due to market forces beyond management’s control.

Laboratory experiments also suggest financial statement users judge firms’ performance as more volatile only if comprehensive income appears in a performance statement. Maines and McDaniel (2000, 179) find “investors’ judgments of corporate and management performance reflect the volatility of comprehensive income only when it is presented in a statement of comprehensive income.” Similarly, Hirst and Hopkins (1998) find that when comprehensive income appears in the statement of equity, half of the experienced and sophisticated financial analyst participants do not recall seeing the term comprehensive income.9 Finally, Hunton et al. (2006) report that managers participating in their experiment act as if they believe the location of comprehensive income affects the extent to which financial statement users attend to the information. Their evidence supports our maintained assumption that managers believed the location of comprehensive income would likely affect investors’ perceptions.

In sum, we expect that when managers were making their initial location decision, they expected performance reporting would lead users to assess the volatility of the firm’s performance as higher. For this maintained assumption to hold, all that is relevant is what managers believed at the time they made their initial choice. Although our sample managers’ expectations are not directly observable today, all the evidence available at the time supports our assumption.10 Note our maintained assumption does not require that managers’ ex ante beliefs in 1998 turn out to be accurate descriptions of investors’ ex post reactions.11 If our assumption is incorrect, then this would work against finding the hypothesized effects.

Evidence that Managers Would Expect an Increase in the Perceived Volatility of Firm Performance to Hurt Stock Prices and Their Performance Evaluations

The Graham et al. (2005; hereafter GHR) survey evidence shows managers believe that—even keeping cash flows constant—stakeholders perceive more volatile performance measures as indicating higher firm risk. Over 88 percent of their surveyed CFOs responded that investors perceive smoother earning paths as less risky. This concern is echoed in the comment letters on the Exposure Draft (Yen et al. 2007), and evidence from laboratory experiments confirms that both professional and nonprofessional investors associate variability in earnings with higher firm risk (Farrelly et al. 1985; Lipe 1998). Koonce et al. (2005) also show that financial statement users perceive uncontrollable items as increasing

9 Hirst et al. (2004) find that even financial analysts with industry experience distinguish banks’ exposure to interest-rate risk only when unrealized gains and losses from all the bank’s financial assets and liabilities appear in a performance statement. Results in Hirst and Hopkins (1998) and Hirst et al. (2004) are consistent with Brown’s (1997) survey evidence that analysts regard the statement of equity as one of the least useful components of the annual report.

10 We focus on evidence about managers’ expectations at the time they made their initial choice. Absent perfect foresight, one would not expect managers to perfectly predict how investors will react to new disclosures. Moreover, Amershi and Sunder’s (1987) rational expectations model suggests that even in equilibrium in an efficient market, managers may continue to hold incorrect beliefs about investors’ use of accounting information.

11 Whether managers’ expectations turn out to be correct ex post is beyond the scope of our study. In an analysis that is secondary to their main contribution, Chambers et al. (2007) conclude that reporting location is not associated with a significant difference in the pricing of other comprehensive income items over the period 1998–2003. However, their analysis does not control for self-selection of the reporting location, which could bias the pricing multiples, nor does it explicitly consider the pricing of the component of other comprehensive income that represents the reclassification of realized gains and losses. We therefore believe that further research on the pricing implications of the location choice is warranted.
risk, so the relatively uncontrollable nature of other comprehensive income items likely exacerbates users’ perceptions of firm risk.

GHR conclude that managers believe higher perceived risk hurts the firm’s stock price, with the interview evidence leading to the persistent theme, “the market hates uncertainty” (GHR 2005, 47). Many surveyed managers feared their P/E multiple would drop if earnings become more volatile. This concern is supported by research linking smoother earnings paths with higher P/E multiples (e.g., Barth et al. 1999; Francis et al. 2004). When pressed why they believed earnings volatility matters, GHR’s managers say it creates uncertainty. The idea is that uncertainty creates a perceived estimation risk in expected returns (e.g., Klein and Bawa 1976; Jorion 1985; Xia 2001) that causes investors to demand a higher risk premium, which in turn hurts stock price. Similarly, accounting research suggests that poor earnings quality (greater variation in/lower persistence of earnings or its components) is priced as if it contributes to information risk (e.g., Francis et al. 2004; Aboody et al. 2005). GHR also point out that because managers believe volatile earnings lead to volatile returns, they also believe idiosyncratic volatility is priced, consistent with evidence in Goyal and Santa-Clara (2003). Behavioral research also supports managers’ concerns that more salient performance reporting could hurt the firm’s stock price (e.g., Maines and McDaniel 2000; Hunton et al. 2006).

In addition to expecting the above adverse effects on equity investors, GHR’s managers also believe that more volatile earnings paths lead to: (1) lower credit ratings and higher costs of debt; (2) greater customer and supplier concern about the firm’s viability, and thus inferior terms of trade; and (3) lower growth projections by investors, all of which negatively affect the firms’ stock price. Empirical research provides some support for these additional concerns, by linking smoother earnings paths with: (1) better credit ratings and lower cost of debt (e.g., Gu and Zhao 2006), and (2) better terms of trade with customers (e.g., Sommer 1996).

Managers likely expect lower stock prices to hurt their performance evaluations. Furthermore, higher perceived riskiness of the firm can directly hurt managers’ own performance evaluations: Maines and McDaniel (2000) find that investors evaluating managers’ performance penalize managers for volatility in comprehensive income only when comprehensive income appears in the salient performance statement (and not when it appears in the statement of equity).

Hypotheses

Figure 1 summarizes the support for our expectations that managers believed reporting comprehensive income in a more salient performance statement could lower both stock price and managers’ performance evaluations. We expect managers with the most to lose from lower stock prices and poorer performance evaluations will be less likely to use performance reporting.

Managers whose wealth is more sensitive to changes in the firm’s stock price (i.e., managers with more powerful equity-based incentives) have more to lose from a lower stock price, and thus likely prefer reporting methods that reduce the perceived volatility of firm performance (Goel and Thakor 2003). Our first hypothesis (stated in the alternative) is:

**H1**: The likelihood that a firm avoids reporting comprehensive income in a performance statement increases in the power of the CEO’s equity-based incentives.
Managers who face greater risk of losing their jobs if they receive unfavorable performance evaluations—including repercussions of poor stock price performance—have less job security. We hypothesize that managers with less job security have more to lose from increased perceived volatility of firm performance. CEOs are rightfully concerned about job security because dismissals increased significantly from 1971 to 1994 (Huson et al. 2001) and further increased by 170 percent from 1995 to 2003 (Lucier et al. 2004). Our second hypothesis (stated in the alternative) is:

**H2:** The likelihood that a firm avoids reporting comprehensive income in a performance statement decreases as the CEO’s job security increases.

Both hypotheses propose determinants of location choice that reflect costs of performance reporting. The benefit of following policymakers’ preference for performance reporting is that it helps managers earn a reputation for transparency. To control for the extent to which the firm acts as if it values transparency (similar to Lee et al. [2006]), our empirical tests include a control for the firm’s propensity for transparent reporting practices.

### III. RESEARCH METHOD

#### Sample Selection and Descriptive Statistics

We start with the S&P 500 firms as of December 1998 from Compustat’s Price, Dividend, and Earnings file. 1998 is the required adoption year for FAS No. 130. We drop 46 firms for which we cannot reliably identify comprehensive income or obtain executive compensation data on ExecuComp from 1998 to 2001. To more cleanly isolate the determinants of firms’ long-term comprehensive income reporting choices, we follow Lee et al. (2006) and drop 14 firms that changed their location choice between 1998 and 2001.

Thus, we investigate the choices of the remaining 440 firms. This broad cross-sectional sample is representative of large firms in the U.S. economy and are of interest in their own right, as they comprise 66 percent of the total market value of NYSE, AMEX, and NASDAQ.

Only 19 percent of our sample (85 firms) reports comprehensive income in a performance statement (with the remaining 81 percent [355 firms] reporting in a statement of equity), whereas Lee et al. (2006) find that approximately half of their sample of property-liability insurers use performance reporting. Therefore, as Lee et al. (2006, 687) note, one should use caution in generalizing from the property-liability industry to the broader population.

Table 1 displays descriptive statistics for the first year the firms reported comprehensive income. Other comprehensive income is material for the mean (median) firm: the absolute value of other comprehensive income is 12.7 percent (7.2 percent) of the absolute value of net income. To provide evidence on the relative magnitudes of each of the four components of other comprehensive income, we divide the absolute value of each component by the sum of the absolute values of all four components. We also record the number of firms reporting a nonzero value for each component. The most common component is unrealized gains and losses on foreign currency translation (FORCUR), reported by 81 percent of our sample firms. This component represents more than half of other comprehensive income for the mean and median firm. The next most common component is unrealized gains and

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12 The low rate of switches confirms that the comprehensive income reporting choice is a long-term disclosure commitment. We later examine the small set of firms that changed their comprehensive income reporting location.
TABLE 1
Descriptive Statistics for Other Comprehensive Income in the Year 440 S&P 500 Firms Initially Report Comprehensive Income

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Lower Quartile</th>
<th>Median</th>
<th>Upper Quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute value of other comprehensive income</td>
<td>0.127</td>
<td>0.221</td>
<td>0.027</td>
<td>0.072</td>
<td>0.142</td>
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<tr>
<td>Absolute value of net income</td>
<td></td>
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</tr>
<tr>
<td>Absolute value of MKTSEC</td>
<td>0.309</td>
<td>0.385</td>
<td>0.000</td>
<td>0.083</td>
<td>0.691</td>
</tr>
<tr>
<td>Sum of the absolute values of other comprehensive income items</td>
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<tr>
<td>(n &gt; 0)/440 = 60%</td>
<td></td>
<td></td>
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<tr>
<td>Absolute value of PENSION</td>
<td>0.113</td>
<td>0.242</td>
<td>0.000</td>
<td>0.000</td>
<td>0.088</td>
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<tr>
<td>Sum of the absolute values of other comprehensive income items</td>
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<td></td>
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<tr>
<td>(n &gt; 0)/440 = 39%</td>
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<tr>
<td>Absolute value of FORCUR</td>
<td>0.554</td>
<td>0.407</td>
<td>0.075</td>
<td>0.700</td>
<td>0.954</td>
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<tr>
<td>Sum of the absolute values of other comprehensive income items</td>
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<tr>
<td>(n &gt; 0)/440 = 81%</td>
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<tr>
<td>Absolute value of DERIVATIVES</td>
<td>0.022</td>
<td>0.135</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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<tr>
<td>Sum of the absolute values of other comprehensive income items</td>
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<tr>
<td>(n &gt; 0)/440 = 4%</td>
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</table>

Descriptive statistics are from the initial comprehensive income reporting year, over the period 1998 to 2001. MKTSEC is the unrealized gains and losses from the firm’s available-for-sale securities. PENSION is the unrealized gains and losses resulting from changes in the minimum pension obligation. FORCUR is the unrealized gains and losses from foreign currency translation. DERIVATIVES is the unrealized gains and losses related to hedging and derivative activity.

losses on AFS securities (MKTSEC), reported by 60 percent of our sample firms. For the mean (median) firm this component represents more than 30 percent (8 percent) of other comprehensive income. Less than 40 percent of our sample report a pension component (PENSION), and less than 4 percent report a derivatives component (DERIVATIVES) because most firms started reporting comprehensive income before FAS No. 133 (FASB 1998)

Additional analysis confirms that opportunities for cherry picking are less abundant outside the insurance industry, so cherry picking is less likely to be the primary determinant of reporting location choice for our sample than for the insurers examined by Lee et al. (2006). All our insurers report unrealized gains and losses on AFS securities but only about half of the noninsurance firms do so, and the average magnitude of the unrealized gains and losses on AFS securities is over three and a half times larger among the insurers than the rest of the sample.

These data precede FAS No. 158 (FASB 2006), which increases the pension component by requiring recognition in comprehensive income of changes in the over- or under-funded status of defined-benefit postretirement plans.
became effective in 2001. Because the derivative component is so rare, we do not consider it separately.

Our maintained assumption is that at the time managers make the initial comprehensive income reporting decision they expect the future stream of comprehensive income will be more variable than the future stream of net income. To assess the accuracy of this expectation, we compare the ex post volatility of comprehensive income to net income for each sample firm. Over the period 1996 to 2004, we compute the standard deviation of each series of income scaled by assets.\textsuperscript{15} We then divide the standard deviation of scaled comprehensive income by the standard deviation of scaled net income. As expected, comprehensive income is 32 percent (7 percent) more volatile than net income for the mean (median) firm. Figure 2 displays the distribution of the volatility of comprehensive income relative to net income. The shaded bars to the right of the dotted line show that for 72.5 percent of the sample firms, comprehensive income actually turns out to be more volatile than net income, ex post. This supports our maintained assumption that the average manager would expect comprehensive income to be more volatile than net income.

**Empirical Proxies for CEO Reporting Incentives**

**Power of the CEO’s Equity-Based Incentives**

We hypothesize that managers with more powerful equity-based incentives are more likely to avoid performance reporting. We use Bergstresser and Philippon’s (2006) measure of the sensitivity of the CEO’s stock and stock option holdings to changes in stock prices. Bergstresser and Philippon (2006) measure the dollar change in the value of a CEO’s stock and stock option holdings arising from a one percentage point increase in the firm’s stock price:

\[
\text{ONEPCT} = \text{the effect of a one percentage point increase in the firm’s stock price on the value of the firm’s shares held by the CEO (i.e., } 0.01 \times \text{share price } \times \text{number of shares the CEO owns) plus the effect of a one percentage point increase in the firm’s stock price on the value of the CEO’s options, calculated following Core and Guay (2002).}^{16}
\]

Bergstresser and Philippon (2006) then deflate ONEPCT to construct \( \text{EQUITY\_INC} \), and argue that \( \text{EQUITY\_INC} \) reflects the portion of the CEO’s total annual compensation from the firm stemming from a one percentage point increase in the firm’s stock price:

\[
\text{EQUITY\_INC} = \frac{\text{ONEPCT}}{\text{ONEPCT} + \text{SALARY} + \text{BONUS}} \tag{1}
\]

where \( \text{SALARY} \) is the CEO’s salary, and \( \text{BONUS} \) is the CEO’s cash bonus. We obtain stock and stock option ownership information, and salary and bonus amounts from ExecuComp, measured at the end of the first year the firm reports other comprehensive income.

Our expectation that managers with more powerful stock and stock option-based equity incentives prefer less volatile reported earnings is not inconsistent with traditional finance

\textsuperscript{15} Throughout the study we use as-reported comprehensive income data. We are able to obtain these data for two years before the year the firm initially reports comprehensive income, because FAS No. 130 requires that in the initial reporting year firms must also disclose comparative comprehensive income data for the previous two years.

\textsuperscript{16} Core and Guay (2002) show their procedure leads to unbiased estimates of the sensitivity of option value to changes in stock prices of firms whose options are in-the-money, and these estimates capture more than 99 percent of the variation in option portfolio value. Only three of our sample firms have out-of-the-money unexercisable options, and omitting them does not affect our inferences.
theory where owners grant stock option compensation to give risk-averse managers incentives to assume more risk in *operational and investment decisions*. Options may stimulate managers to make riskier operating and investment decisions, but we are unaware of theory suggesting options give managers incentives to make *financial reporting choices* that inflate the volatility of *reported earnings*. That is, managers do not lobby the FASB to adopt standards that add uncontrollable volatility to reported income. To the contrary, most managers prefer less volatile earnings streams (GHR 2005). Similarly, Cheng and Warfield (2005) argue that CEOs with large equity incentives prefer smoother earnings series, likely because managers believe more volatile earnings streams reduce the value of the firm’s shares (GHR 2005). In any event, our inferences remain the same when we omit option holdings from our measure of equity incentives.

**Job Security**

Our second hypothesis is that CEOs whose jobs are less secure are more likely to avoid performance reporting. Consistent with GHR’s (2005, 24) characterization of the effect of job security on managers’ financial reporting choices as “under-explored,” the literature in finance, management, and accounting does not yield a consensus empirical measure of job security. While the human resources literature has investigated job security, those studies use self-reported survey responses. It is not possible to survey managers about their perceptions of their job security when they made the initial comprehensive income reporting decision, so we must develop our own proxy.

The human resources literature defines job security as the perceived stability and continuation of one’s job, especially in a threatened job situation (e.g., Greenhalgh and Rosenblatt 1984; Probst 2003). If managers are concerned that more salient reporting of comprehensive income might adversely affect the firm’s perceived performance in the future (keeping in mind this location choice generally turns out to be a long-term decision), then in our setting the relevant threat to job security is that which arises from an unfavorable future outcome.

Thus, differential retention despite poor firm performance is key to the CEO’s perception of job security. Prior literature concludes that cross-sectional differences in CEOs’ ability to retain their positions if faced with threatened job situations arising from unfavorable outcomes are associated with two features of CEOs’ relations with the board: (1) whether the CEO also chairs the board (termed *CEO-chair duality*) and (2) the percentage of outside board members. It is not surprising that the CEO’s relation with the board of directors is an important explanator of differential retention given the board’s primary responsibility is hiring, monitoring, and if necessary dismissing the CEO (Mace 1986; Kaplan 1994; Hermelin and Weisbach 2003).18

---

17 However, recent research questions whether options really induce managers to make riskier operating and investment decisions. Ross (2004, 207) develops a model where options do not induce managers to make riskier choices, and concludes that “The common folklore that giving options to agents will make them more willing to take risks is false.” In the accounting literature, Lambert et al. (1991) show that if the probability a manager’s options will finish in-the-money is sufficiently high (and the vast majority of our sample’s options are in-the-money), risk-averse managers have incentives to *decrease* volatility because they do not want to risk a fall in stock price that will render the options out-of-the-money. Results of the Sawers et al. (2006) laboratory experiment are consistent with the Lambert et al. (1991) prediction that managers with in-the-money options make less risky choices.

18 We are not necessarily arguing that CEOs believe that board members were subject to limited attention that would make them more likely to overlook comprehensive income if it were reported in the statement of equity. Rather, all that is necessary is that managers were concerned that more salient performance reporting could hurt stock price, which in turn would reflect poorly on the CEO’s performance as illustrated in Figure 1.
With regard to CEO-chair duality, both Lucier et al. (2004) and Desai et al. (2006) show that CEOs who also chair the board enjoy lower turnover. More on point, even after controlling for the main effect of CEO-chair duality, Goyal and Park (2002) show that the sensitivity of CEO turnover to firm performance is significantly lower with CEO-chair duality. With regard to outside board members, many studies argue that boards with more outsiders are more likely to fire CEOs if the firm experiences poor performance (e.g., Fredrickson et al. 1988; Friedman and Singh 1989; Laux 2007). In addition, Huson et al. (2001) provide empirical evidence that boards dominated by outside directors are associated with higher forced CEO turnover. More importantly, after controlling for the main effect of board independence, Weisbach (1988) demonstrates that the sensitivity of CEO turnover to poor performance is lower when the board is dominated by insiders. Collectively, this empirical evidence suggests that if a CEO faces a threatened job situation arising from an unfavorable outcome, his job is disproportionately more secure (i.e., any elevated risk of dismissal is attenuated) if he also chairs the board and if the board is dominated by insiders. Our proxy for job security encompasses these two factors, measured as of the first year the firm reports comprehensive income:

\[ J_{\text{SECURITY}} = \text{CHAIRMAN} + \text{DIRECTORS} \] (2)

where:

\[ \text{CHAIRMAN} = 1 \text{ if the CEO also chairs the board of directors; 0 otherwise; and} \]
\[ \text{DIRECTORS} = 1 \text{ if the percentage of outside directors on the firm’s board is smaller than the sample median; 0 otherwise.} \]

Higher \( J_{\text{SECURITY}} \) suggests the CEO has more job security.19

A limitation of our proxy for job security is that it may also reflect weaker corporate governance (Shleifer and Vishny 1997). Although weak governance has been associated with less transparent reporting in other contexts (e.g., Beasley 1996; Klein 2002; Farber 2005), we expect governance to be at most a second-order effect in our setting. It is unlikely that the board would even be involved in the comprehensive income location decision. And even if it was, Jensen’s (2005) arguments suggest that the board would not necessarily have insisted on the more transparent performance reporting if it shared managers’ views that this could hurt the firm’s stock price. Finally, if our job security variable primarily reflects weak corporate governance, then it would be associated with the less transparent statement of equity location, not with the more transparent performance reporting as we hypothesize. Thus, any confound with corporate governance biases away from finding the hypothesized positive relation between our job security variable and the more salient performance reporting.20

19 Although prior research has shown other factors such as CEO age and firm size are associated with CEO turnover in general (e.g., Murphy 1999), we are not interested in CEO turnover in general, but rather differential retention when the CEO faces a performance-related threat to his job. Our measure of job security encompasses CEO-chair duality and board independence because both factors not only increase the likelihood of CEO retention, but are associated with differentially higher retention if a CEO faces a performance-related threat to job security.

20 CEO job security could also reflect entrenchment (where entrenched managers take value-decreasing actions at the expense of shareholders’ long-term value). But empirical evidence suggests that one of our components of job security, CEO-chair duality, does not primarily reflect entrenchment (Brickley et al. 1997). Even if our measure did reflect entrenchment, this would be associated with less transparent reporting, which would also work against finding the hypothesized relation.
Model

We use a logit model to test the determinants of firms’ comprehensive income location choices:

\[
AVOID\_PERF = \beta_0 + \beta_1EQUITY\_INC + \beta_2J\_SECURITY + \beta_3MKTSEC\_D
+ \beta_4PENSION\_D + \beta_5FORCUR\_D + \beta_6DISC\_QUAL
+ \beta_7VOLATILITY + \beta_8LEVERAGE
+ \beta_9LSIZE + \beta_{10}E\&Y + \varepsilon
\]  

(3)

where:

- \(AVOID\_PERF = 1\) if the firm avoids performance reporting by reporting comprehensive income in a statement of equity, otherwise 0;
- \(EQUITY\_INC = \) the sensitivity of the CEO’s stock and stock option holdings to a 1 percent change in the firm’s stock price, following Bergstresser and Philippon (2006), as explained above;
- \(J\_SECURITY = \) a measure of the CEO’s job security, as explained above;
- \(MKTSEC\_D = 1\) if the absolute value of unrealized gains and losses from the firm’s AFS securities (hand-collected from the 10-K report and deflated by total assets), averaged over the two years prior to and the initial comprehensive income reporting year, exceeds the sample median, otherwise 0;
- \(PENSION\_D = 1\) if the absolute value of unrealized gains and losses resulting from changes in the minimum pension obligation (hand-collected from the 10-K report and deflated by total assets), averaged over the two years prior to and the initial comprehensive income reporting year, exceeds the sample median, otherwise 0;
- \(FORCUR\_D = 1\) if the absolute value of unrealized gains and losses from foreign currency translation (hand-collected from the 10-K report and deflated by total assets), averaged over the two years prior to and the initial comprehensive income reporting year, exceeds the sample median, otherwise 0;
- \(DISC\_QUAL = \) disclosure quality factor extracted from analyst following, institutional holdings, and bid-ask spreads, following Lee et al. (2006), at the end of the initial comprehensive income reporting year;
- \(VOLATILITY = \) the standard deviation of comprehensive income scaled by total assets, divided by the standard deviation of net income scaled by total assets, measured over the initial comprehensive income reporting year and the prior two years;
- \(LEVERAGE = \) long-term debt scaled by total assets, as of the end of the initial comprehensive income reporting year;
- \(LSIZE = \) log of the market value of the firm’s common shares outstanding, as of the end of the initial comprehensive income reporting year; and
- \(E\&Y = 1\) if the auditor is E&Y, otherwise 0.

Hypothesis 1 predicts that the coefficient on \(EQUITY\_INC\) will be positive if CEOs whose equity holdings are more sensitive to changes in the firm’s stock price avoid...
performance reporting. Hypothesis 2 predicts that the coefficient on \( J \textunderscore \text{SECURITY} \) will be negative, because we expect CEOs whose jobs are less secure to avoid the more salient performance reporting.

In addition to the primary variables used in our hypothesis tests, we control for a number of other factors. First, we control for the magnitudes of each of the other comprehensive income items by including dummy variables coded 1 if the absolute value of the item exceeds the sample median. Denoted as \( \text{MKTSEC} \_\text{D} \), \( \text{PENSION} \_\text{D} \), and \( \text{FORCUR} \_\text{D} \), these controls are necessary because our analysis of the comment letters on FAS No. 130 reveals that almost twice as many critics express concern about the effect of unrealized gains and losses on AFS securities as mentioned the other components. We use an above-versus below-the-median bifurcation because managers can predict the firm’s \emph{exposure} to each source of unrealized gains and losses (e.g., managers know whether the firm holds AFS securities and, thus, whether the firm is \emph{exposed} to unrealized gains and losses), but managers are unlikely to be able to predict the \emph{ex post} magnitude of unrealized gains and losses. Thus, while a firm’s \emph{exposure} to unrealized gains and losses may be sufficiently predictable to affect its comprehensive income reporting location choice, the magnitude of other comprehensive income items are not. As a result, there is unlikely to be a linear relation between the highly skewed raw magnitudes of other comprehensive income items and the firm’s initial comprehensive income location choice.\(^{21}\)

We control for disclosure quality because Lee et al. (2006) find that insurance firms with higher general disclosure quality are more likely to use performance reporting. Our proxy is similar to theirs and is based on a factor analysis of three characteristics prior research has shown are associated with higher analysts’ ratings of firms’ disclosure policies (i.e., higher Association for Investment Management and Research ratings): lower bid-ask spreads, higher institutional ownership, and higher analyst following (Welker 1995; Lang and Lundholm 1996; Healy et al. 1999; Bushee and Noe 2000).\(^{22}\) We expect firms with lower disclosure quality are more likely to avoid performance reporting, so we expect the coefficient on \( \text{DISC} \_\text{QUAL} \) to be negative.

We control for the relative volatility of comprehensive income to net income (\( \text{VOLATILITY} \)). We expect a positive coefficient on \( \text{VOLATILITY} \), because firms with relatively more volatile comprehensive income may be less likely to use performance reporting. We control for leverage (\( \text{LEVERAGE} \)) because Graham et al. (2005) provide evidence suggesting managers of more levered firms are more concerned with smoothing earnings to minimize the perceived risk of the firm. Therefore, more levered firms may be more likely to report comprehensive income in a statement of equity. Similar to Lee et al. (2006), we also control for the log of firm size (\( \text{LSIZE} \)). Finally, in ancillary analysis we found that firms audited by E&Y are significantly less likely to use performance reporting than are clients of other audit firms, so, we include a control for firms audited by E&Y.

\(^{21}\) Our inferences are robust using the ranks of the other comprehensive income items. Controlling for the signed values of the other comprehensive income items does not affect our inferences, which is not surprising given their transitory nature: the average signed value of other comprehensive income is insignificantly different from zero for 93 percent of our sample firms.

\(^{22}\) To maximize the power of the factor analysis and minimize estimation error in the extracted disclosure quality factor, we start with all firms listed in the 1998 Compustat file that have data for the bid-ask spread (from CRSP), analyst following (from First Call), and institutional holdings data (from CDA Spectrum). A principal factor analysis yields one common disclosure quality factor that, as expected, is a positive function of analyst following and institutional holdings and a negative function of the bid-ask spread. The factor explains about 56 percent of the total variation in the original variables. We then apply these factor coefficients to the bid-ask spread, analyst following, and institutional holdings to compute the disclosure quality factor for our sample firms.
IV. RESULTS

Descriptive Statistics

Table 2 reports descriptive statistics. The mean of $EQUITY\_INC$ shows that, on average, a 1 percent change in the firm’s stock price spurs a 29 percent change in the CEO’s total annual compensation from the firm. Our sample S&P 500 firms are large, with a median (mean) market value of equity of $7.9$ ($20.2$) billion.\textsuperscript{23}

\begin{table}[h]
\centering
\caption{Descriptive Statistics for Independent Variables}
\begin{tabular}{lcccc}
\hline
Variable & Mean & Std. Dev. & Lower Quartile & Median & Upper Quartile \\
\hline
$EQUITY\_INC$ & 0.292 & 0.243 & 0.117 & 0.209 & 0.386 \\
$J\_SECURITY$ & 1.291 & 0.613 & 1 & 1 & 2 \\
$MKTSEC\_D$ & 0.500 & 0.501 & 0 & 0.500 & 1 \\
$PENSION\_D$ & 0.386 & 0.487 & 0 & 0 & 1 \\
$FORCUR\_D$ & 0.500 & 0.501 & 0 & 0.500 & 1 \\
$DISC\_QUAL$ & 1.700 & 0.583 & 1.260 & 1.660 & 2.085 \\
$VOLATILITY$ & 1.396 & 1.272 & 0.944 & 1.028 & 1.302 \\
$LEVERAGE$ & 0.216 & 0.143 & 0.110 & 0.199 & 0.317 \\
$E\&Y$ & 0.248 & 0.432 & 0 & 0 & 0 \\
Market value of equity (in $ millions) & 20,243 & 34,990 & 3,764 & 7,931 & 18,366 \\
\hline
\end{tabular}
\end{table}

\textit{EQUITY\_INC} is the sensitivity of the CEO’s stock and stock option holdings to a 1 percent change in the firm’s stock price, following Bergstresser and Philippon (2006). $J\_SECURITY$ is the sum of two indicator variables. The first equals 1 if the CEO also chairs the board of directors, and 0 otherwise. The second equals 1 if the percentage of independent directors on the firm’s board is smaller than the sample median, and 0 otherwise. $MKTSEC\_D$ equals 1 if the average absolute value of the unrealized gains and losses from the firm’s available-for-sale securities (hand-collected from the firm’s 10-K report and then scaled by total assets), averaged over the three years starting two years before the initial comprehensive income reporting year, exceeds the sample median, and 0 otherwise. $PENSION\_D$ equals 1 if the average absolute value of the unrealized gains and losses resulting from changes in the minimum pension obligation (hand-collected from the firm’s 10-K report and then scaled by total assets), averaged over the three years starting two years before the initial comprehensive income reporting year, exceeds the sample median, and 0 otherwise. $FORCUR\_D$ equals 1 if the average absolute value of unrealized gains and losses from foreign currency translation (hand-collected from the firm’s 10-K report and then scaled by total assets), averaged over the three years starting two years before the initial comprehensive income reporting year, exceeds the sample median, and 0 otherwise. $DISC\_QUAL$ is the disclosure quality factor extracted following Lee et al. (2006), where higher values indicate higher quality disclosure. $VOLATILITY$ is the standard deviation of comprehensive income scaled by total assets, divided by the standard deviation of net income scaled by total assets, measured over the initial comprehensive income reporting year and the prior two years. $LEVERAGE$ is long-term debt scaled by total assets. $LSIZE$ is the log of the market value of the firm’s common shares outstanding. $E\&Y$ equals 1 if the firm’s auditor is $E\&Y$, and 0 otherwise.

\textsuperscript{23} Our mean $EQUITY\_INC$ (0.29) is a bit higher than Bergstresser and Philippon’s (2006, 517) mean of 0.24. This is not surprising given the increase in equity incentives during the 1990s and our sample starts in 1998 whereas theirs starts in 1994. Also, for $MKTSEC\_D$ and $FORCUR\_D$, exactly half of the observations are coded as zero because they are in the lower half of the distribution, and the other half coded as one because they are in the upper half, so the median (and mean) values of these variables are 0.5 by construction. For $PENSION\_D$, only 38.6 percent of the firms report a pension component, so more than half of the observations are coded as zero. For continuous variables, all analyses are conducted after winsorizing at 1 percent and 99 percent.
Table 3 reports correlations among the independent variables. CEO equity incentives (EQUITY\_INC) are greater for firms whose CEOs have more job security. This is not surprising because Morse et al. (2007) find that equity compensation is increasing in the influence of the CEO. Our logit analyses include both EQUITY\_INC and J\_SECURITY so we can identify the incremental effect of each variable after controlling for the other.

Equity incentives are also associated with several control variables: equity incentives are greater in larger firms, and equity incentives are also associated with the MKTSEC\_D and PENSION\_D components of other comprehensive income. As in prior research, DISC\_QUAL is higher for larger firms (Lang and Lundholm 1993; Kasznik and Lev 1995).

Logit Results

Table 4 displays the results of estimating the logit model in Equation (3) with and without controlling for industry (Bowen et al. 1995). Specifically, we add a dummy variable for each major economic sector identified by the Global Industry Classification Standards (GICS) codes because Bhojraj et al. (2003) show that they generate more homogenous industry groups than SIC codes or the Fama and French (1997) algorithm. (Our results are unaffected when we use one-digit SIC classifications.) The benchmark industry (whose effect is impounded in the intercept) is Energy. Significance levels are based on robust standard errors correcting for heteroscedasticity and dependence across firms within the same industry (Froot 1989; Wooldridge 2002).

The results support our hypothesis that firms whose CEOs have higher equity-based incentives are more likely to avoid performance reporting (p < 0.01), whether or not we control for industry. Table 4 also shows that CEOs who enjoy greater job security are less likely to avoid performance reporting, consistent with our second hypothesis (p < 0.03). These inferences are robust to alternative specifications of equity incentives and job security.24

We calculate the percentage change in odds for EQUITY\_INC and J\_SECURITY to assess the effect of a change in the independent variable on the odds of reporting comprehensive income in a statement of equity, holding all other independent variables at their means.25 We find that a one-standard-deviation increase in EQUITY\_INC increases the odds the manager avoids performance reporting by 64.7 percent. A one-unit increase in J\_SECURITY (which ranges from 0 to 2) reduces the odds the manager avoids performance reporting by 28 percent. Thus, differences in our determinants of comprehensive income location choice are associated with what appear to be meaningful reporting differences.

Table 4 also shows that firms with large absolute unrealized gains and losses on AFS securities (i.e., MKTSEC\_D = 1) are less likely to use performance reporting (p < 0.04). Since 60 percent of our sample firms have unrealized gains and losses on AFS securities, whereas 40 percent do not, our result suggests that firms exposed to unrealized gains and losses from AFS securities tend not to use performance reporting.

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24 Our primary analysis is based on Bergstresser and Philippon’s (2006) measure of equity incentives because we believe the portion of the CEO’s compensation from the firm stemming from a 1 percent change in stock price best captures the power of equity incentives. However, our inferences are robust using either the natural logarithm of ONEPCT following Burns and Kedia (2006), or a measure of the manager’s stake in the firm, using the CEO’s total stock and option holdings deflated by the firm’s total outstanding shares, following Cheng and Warfield (2005). With respect to job security, our main analysis considers independent and gray directors to be outside directors. Our inferences are unaffected if we classify only independent directors as outside directors.

25 For continuous variables, the percentage change in odds is 100 [\exp(\beta_i \times \bar{z}_i) - 1], where \beta_i is the estimated coefficient for variable \(i\) and \bar{z}_i is the sample standard deviation of variable \(i\). For discrete variables, the percentage change in odds is 100 [\exp(\beta_i) - 1].
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<td>0.132</td>
<td>-0.088</td>
<td>-0.090</td>
<td>-0.071</td>
<td>-0.015</td>
<td>-0.065</td>
<td>-0.080</td>
<td></td>
</tr>
<tr>
<td>(0.056)</td>
<td>(0.587)</td>
<td>(0.006)</td>
<td>(0.066)</td>
<td>(0.061)</td>
<td>(0.136)</td>
<td>(0.751)</td>
<td>(0.171)</td>
<td>(0.094)</td>
<td></td>
</tr>
</tbody>
</table>

Pearson correlations appear above the diagonal, and Spearman correlations appear below the diagonal. Two-tailed p-values are in parentheses.
Table 2 defines the variables.
### TABLE 4
Logit Analysis of Comprehensive Income Reporting Location Choice
(Independent variable = 1 if the firm avoids performance reporting, and 0 otherwise)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Predicted Sign</th>
<th>Without Industry Controls (1)</th>
<th>With Industry Controls (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EQUITY_INC</strong></td>
<td>+</td>
<td>2.056 (0.001)</td>
<td>1.538 (0.004)</td>
</tr>
<tr>
<td><strong>J_SECURITY</strong></td>
<td>−</td>
<td>−0.329 (0.026)</td>
<td>−0.334 (0.031)</td>
</tr>
<tr>
<td><strong>MKTSEC_D</strong></td>
<td>?</td>
<td>0.375 (0.036)</td>
<td>0.503 (0.026)</td>
</tr>
<tr>
<td><strong>PENSION_D</strong></td>
<td>?</td>
<td>−0.011 (0.951)</td>
<td>0.041 (0.802)</td>
</tr>
<tr>
<td><strong>FORCUR_D</strong></td>
<td>?</td>
<td>0.443 (0.101)</td>
<td>0.241 (0.341)</td>
</tr>
<tr>
<td><strong>DISC_QUAL</strong></td>
<td>−</td>
<td>−0.403 (0.112)</td>
<td>−0.224 (0.287)</td>
</tr>
<tr>
<td><strong>VOLATILITY</strong></td>
<td>+</td>
<td>0.132 (0.044)</td>
<td>0.154 (0.022)</td>
</tr>
<tr>
<td><strong>LEVERAGE</strong></td>
<td>?</td>
<td>0.594 (0.619)</td>
<td>0.649 (0.586)</td>
</tr>
<tr>
<td><strong>LSIZE</strong></td>
<td>?</td>
<td>0.044 (0.784)</td>
<td>0.011 (0.957)</td>
</tr>
<tr>
<td><strong>E&amp;Y</strong></td>
<td>?</td>
<td>0.969 (0.003)</td>
<td>0.949 (0.003)</td>
</tr>
<tr>
<td>Consumer Discretionary</td>
<td>?</td>
<td></td>
<td>1.535 (0.000)</td>
</tr>
<tr>
<td>Consumer Staples</td>
<td>?</td>
<td></td>
<td>2.206 (0.000)</td>
</tr>
<tr>
<td>Financials</td>
<td>?</td>
<td>0.448 (0.114)</td>
<td></td>
</tr>
<tr>
<td>Health Care</td>
<td>?</td>
<td>0.485 (0.013)</td>
<td></td>
</tr>
<tr>
<td>Industrials</td>
<td>?</td>
<td>0.827 (0.020)</td>
<td></td>
</tr>
<tr>
<td>Information Technology</td>
<td>?</td>
<td>1.01 (0.000)</td>
<td></td>
</tr>
<tr>
<td>Materials</td>
<td>?</td>
<td>0.677 (0.022)</td>
<td></td>
</tr>
<tr>
<td>Telecommunication Service</td>
<td>?</td>
<td>1.876 (0.000)</td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td>?</td>
<td>0.058 (0.797)</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>?</td>
<td>0.756 (0.631)</td>
<td>0.059 (0.977)</td>
</tr>
<tr>
<td>McKelvey and Zavoina’s (1975) R²</td>
<td></td>
<td>0.158 (0.058)</td>
<td>0.216 (0.000)</td>
</tr>
</tbody>
</table>

Independent variables are defined in Table 2, except that industry dummies equal 1 if a firm is in the given industry. In column (2), energy industry is the benchmark industry whose effect is impounded in the intercept. P-values (in parentheses) are based on standard errors adjusted for heteroscedasticity and for correlation across firms within a given industry. P-values are one-tailed for variables with predictions, and two-tailed for variables without predictions.
With respect to the remaining control variables, the coefficient on DISC_QUAL is negative but not significant at conventional levels. The coefficient on VOLATILITY is positive (p < 0.05), so firms with relatively more volatile comprehensive income avoid performance reporting. Firms audited by E&Y tend to avoid performance reporting. The coefficients on the pension and foreign currency components, leverage, and firm size are not significant. Many of the industry dummy variables are significant, indicating systematic across-industry differences in reporting location. (Thus, in our logit analysis we use robust standard errors that correct for correlations across firms in the same industry when we do not include industry controls.)

Analysis of Firms Changing their Comprehensive Income Reporting Location

To help ensure our inferences are not simply an artifact of some unidentified correlated omitted variable, we examine the small set of firms that changed their comprehensive income reporting location between their initial reporting year and 2001. We start with the 14 firms in the S&P 500 (as of December 1998) omitted from our primary sample because they changed their location. We examined the 133 firms included in the October 2002 S&P 500 that were not in our original sample, and identified six firms that changed their reporting location between 1998 and 2001. This yields 20 firms that changed their comprehensive income reporting location.

Table 5, Panel A reports the changes in our explanatory variables between the year the firm first reported comprehensive income and the year the firm changed its reporting location. We denote these “change” variables with the prefix Δ. For the 13 firms that changed away from performance reporting, EQUITY_INC increased, while J_SECURITY decreased, on average. In stark contrast, for the seven firms that switched to performance reporting, EQUITY_INC decreased and J_SECURITY increased. The difference across reporting locations for changes in EQUITY_INC and J_SECURITY are significant (p = 0.07 and p = 0.04, respectively), consistent with increasingly powerful equity incentives and decreased job security reducing the likelihood of performance reporting. VOLATILITY increased more for firms that changed to the statement of equity (p = 0.08), but none of the other explanatory variables changed significantly.

Panel B of Table 5 reports the results of a logit analysis on the change firms, where the dependent variable equals 1 for firms that switch from performance reporting to the
TABLE 5
Analysis of the 20 Firms that Changed Comprehensive Income Reporting Location

Panel A: Univariate Tests of Differences between Firms Changing Reporting Location

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1) Change to Statement of Equity (n = 13)</th>
<th>(2) Change to Performance Reporting (n = 7)</th>
<th>Expected Difference: (1) − (2)</th>
<th>Actual Difference: (1) − (2)</th>
<th>p-value of Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>ΔEQUITY INC</td>
<td>0.059</td>
<td>−0.141</td>
<td>+</td>
<td>0.200</td>
<td>0.073</td>
</tr>
<tr>
<td>ΔJ_SECURITY</td>
<td>−0.539</td>
<td>0.429</td>
<td>−</td>
<td>−0.967</td>
<td>0.039</td>
</tr>
<tr>
<td>ΔMKTSEC_D</td>
<td>0.615</td>
<td>0.286</td>
<td>?</td>
<td>0.330</td>
<td>0.179</td>
</tr>
<tr>
<td>ΔPENSION_D</td>
<td>0.231</td>
<td>0.143</td>
<td>?</td>
<td>0.088</td>
<td>0.647</td>
</tr>
<tr>
<td>ΔFORCUR_D</td>
<td>0.308</td>
<td>0.429</td>
<td>?</td>
<td>−0.121</td>
<td>0.627</td>
</tr>
<tr>
<td>ΔDISC_QUAL</td>
<td>0.068</td>
<td>−0.019</td>
<td>−</td>
<td>0.087</td>
<td>0.707</td>
</tr>
<tr>
<td>ΔVOLATILITY</td>
<td>1.330</td>
<td>−0.005</td>
<td>+</td>
<td>1.335</td>
<td>0.081</td>
</tr>
<tr>
<td>ΔLEVERAGE</td>
<td>0.320</td>
<td>0.259</td>
<td>?</td>
<td>0.061</td>
<td>0.473</td>
</tr>
<tr>
<td>ΔLSIZE</td>
<td>8.957</td>
<td>8.723</td>
<td>?</td>
<td>0.233</td>
<td>0.672</td>
</tr>
<tr>
<td>ΔE&amp;Y</td>
<td>0</td>
<td>0</td>
<td>?</td>
<td>0</td>
<td>NA</td>
</tr>
</tbody>
</table>

Panel B: Logit Analysis of Decision to Change Comprehensive Income Reporting Location

<table>
<thead>
<tr>
<th>Dependent Variable = 1 if change is to a statement of equity and 0 if change is to performance reporting</th>
<th>Predicted Sign</th>
<th>Coefficient (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ΔEQUITY INC</td>
<td>+</td>
<td>13.462 (0.018)</td>
</tr>
<tr>
<td>ΔJ_SECURITY</td>
<td>−</td>
<td>−2.873 (0.015)</td>
</tr>
</tbody>
</table>

McKelvey and Zavoina’s (1975) R² = 0.821

ΔEQUITY INC is the difference in EQUITY INC between the year the firm changed its comprehensive income reporting location and the initial year it reported comprehensive income. Similarly, ΔJ_SECURITY, ΔMKTSEC_D, ΔPENSION_D, ΔFORCUR_D, ΔDISC_QUAL, ΔVOLATILITY, ΔLEVERAGE, ΔLSIZE, and ΔE&Y are the changes in the original variables (defined in Table 2) between the year the firm changed its comprehensive income reporting location and the initial year the firm reported comprehensive income. In Panel A, reported p-values are based on two-sample t-tests and are one-tailed for variables with predictions and two-tailed for variables without predictions. Reported p-values (in parentheses) in Panel B are one-tailed, and are based on standard errors adjusted for heteroscedasticity and for correlation across firms within a given industry.

statement of equity location, otherwise 0. We include only the change version of our two key variables, ΔEQUITY INC and ΔJ_SECURITY, because we have so few degrees of freedom (adding a control for ΔVOLATILITY does not affect our inferences). Consistent with the univariate change analysis, the coefficient is positive on ΔEQUITY INC (p = 0.018) and negative on ΔJ_SECURITY (p = 0.015). CEOs with increasingly powerful equity incentives and decreasing job security are more likely to switch away from performance reporting. The consistency of our changes and levels analyses suggests our conclusions are not attributable to some unidentified firm-specific effect or correlated omitted variable. The results of our change analysis further indicate that managers continue to act as if reporting location matters.
Additional Analyses

Our primary sample focused on S&P 500 firms, because of their economic importance and better data availability. Evidence that smaller firms’ investors may be more subject to limited attention (Huddart et al. 2009) suggests managers of smaller firms may be more concerned about investors’ response to salient reporting of comprehensive income. To assess whether our inferences hold for smaller firms, we draw a random sample of 300 firms that have compensation data on ExecuComp, but are not in the S&P 500. Of these 300 firms, 181 report comprehensive income different from net income in the year FAS No. 130 is effective, and have the necessary data to run our primary model.

The results of the logit analysis on this sample appear in Table 6. Consistent with the primary results in Table 4, the likelihood a firm avoids performance reporting is increasing in the power of the CEO’s equity incentives (p ≤ 0.058), and decreasing in our measure of job security (p < 0.05). Consistent with managers of smaller firms being more concerned about how the location of comprehensive income might affect stock prices and job security, the coefficients on this sample of smaller firms are larger in absolute magnitude than the coefficients on our sample of S&P 500 firms (reported in Table 4), although the differences in the coefficients are not statistically significant at conventional levels, probably due to the smaller number of observations in this additional sample. Nonetheless, these results demonstrate that our inferences generalize to the population of firms in ExecuComp.

Our primary analysis uses Equation (3) for parsimony, but our results are robust to controlling for a number of other variables. We repeat the analysis including a variable indicating whether the firm uses an industry-specialist auditor, because Lee et al. (2006) find that insurance firms using an industry specialist are more likely to use performance reporting. We also include an indicator variable to identify firms that have an independent audit committee, and another indicator variable to identify firms that have at least one audit committee member who is a financial expert (following DeFond et al. [2005]). None of these indicators are significant and their inclusion does not affect our inferences. Similarly, including other variables sometimes associated with accounting choice, such as a proxy for the firm’s financing needs (issuance of debt and equity, scaled by total assets) and the natural log of the market-to-book ratio (to control for growth opportunities) does not affect our inferences, and the coefficients on these control variables are not significant. We also reestimate our logit model after eliminating firms in the financial industry (which generally have more AFS securities) or firms in high-tech industries (which tend to have larger equity incentives). Our primary inferences are unaffected.29

Our analysis thus far combines the two forms of performance reporting: (1) the combined statement of net income and comprehensive income, and (2) the separate statement of comprehensive income (as did Lee et al. [2006]), effectively assuming both presentations are equally salient. One could argue the combined statement is the most salient, the separate statement of comprehensive income is in the middle, and the statement of equity presentation is least salient. We estimate an ordered logit model with the three aforementioned categories. Results are similar to those based on the dichotomous classification—both EQUITY_INC and J_SECURITY remain significant at p ≤ 0.03 without industry controls and p ≤ 0.055 with industry controls. The Brant (1990) proportional odds test reveals that

29 We would also like to control for cherry-picking similar to Lee et al. (2006), but we cannot because only about one-quarter of our sample firms disclose realized gains and losses on AFS securities whereas FAS No. 60 (paragraph 50; FASB 1982) uniquely requires all property-liability insurers to separately disclose them. Although we cannot directly capture ex post cherry-picking, our MKTSEC_D variable captures the ex ante opportunity to cherry-pick (which is a necessary, though not sufficient condition for actual cherry-picking).
### TABLE 6
Logit Analysis of Comprehensive Income Reporting Location Choice for a Random Sample of 181 Non-S&P 500 Firms

(Dependent variable = 1 if the firm avoids performance reporting, and 0 otherwise)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Predicted Sign</th>
<th>Without Industry Controls (1)</th>
<th>With Industry Controls (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EQUITY INC</strong></td>
<td>+</td>
<td>3.098 (0.004)</td>
<td>2.74 (0.058)</td>
</tr>
<tr>
<td><strong>J_SECURITY</strong></td>
<td>−</td>
<td>−0.602 (0.044)</td>
<td>−0.835 (0.035)</td>
</tr>
<tr>
<td><strong>MKTSEC_D</strong></td>
<td>?</td>
<td>−0.02 (0.954)</td>
<td>0.151 (0.674)</td>
</tr>
<tr>
<td><strong>PENSION_D</strong></td>
<td>?</td>
<td>0.093 (0.801)</td>
<td>−0.143 (0.726)</td>
</tr>
<tr>
<td><strong>FORCUR_D</strong></td>
<td>?</td>
<td>0.003 (0.992)</td>
<td>−0.002 (0.997)</td>
</tr>
<tr>
<td><strong>DISC_QUAL</strong></td>
<td>−</td>
<td>0.502 (0.911)</td>
<td>0.529 (0.864)</td>
</tr>
<tr>
<td><strong>VOLATILITY</strong></td>
<td>+</td>
<td>−0.056 (0.922)</td>
<td>−0.071 (0.907)</td>
</tr>
<tr>
<td><strong>LEVERAGE</strong></td>
<td>?</td>
<td>−4.161 (0.000)</td>
<td>−4.786 (0.003)</td>
</tr>
<tr>
<td><strong>LSIZE</strong></td>
<td>?</td>
<td>−0.609 (0.011)</td>
<td>−0.608 (0.083)</td>
</tr>
<tr>
<td><strong>E&amp;Y</strong></td>
<td>?</td>
<td>0.698 (0.346)</td>
<td>0.575 (0.430)</td>
</tr>
</tbody>
</table>

Consumer Discretionary

Financials

Health Care

Industrials

Information Technology

Materials

Utilities

Intercept

McKelvey and Zavoina’s (1975) R²

---

Independent variables are defined in Table 2, except that industry dummies equal 1 if a firm is in the given industry. In column (2), energy industry is the benchmark industry whose effect is impounded in the intercept. p-values (in parentheses) are based on standard errors adjusted for heteroscedasticity and for correlation across firms within a given industry. p-values are one-tailed for variables with predictions, and two-tailed for variables without predictions.
the coefficients in a logit model explaining (1) the statement of equity versus the separate statement of comprehensive income choice are not significantly different from those in a logit model explaining (2) the separate statement of comprehensive income versus a single combined statement of net income and comprehensive income. While this result is consistent with three ordered categories, our primary analysis relies on the dichotomous specification because: (1) the FASB considers both the combined statement format and the separate statement of comprehensive income as performance reporting since both formats are performance statements that end with comprehensive income as the bottom line figure, and consequently, and (2) prior research (e.g., Lee et al. 2006; Chambers et al. 2007) combines the two performance statement formats.

V. CONCLUSIONS

Policymakers prefer that firms report comprehensive income in a performance statement, which they consider as more transparent, rather than in the statement of equity. As this preference simply concerns a reporting location choice, one would expect managers to acquiesce because they place a great deal of importance on developing a reputation for transparent reporting (Graham et al. 2005, 54). However, over 80 percent of our sample S&P 500 firms do not follow policymakers’ preference, and instead report comprehensive income in the statement of equity. Our study provides new insight into why so many firms do not follow policymakers’ preference for reporting comprehensive income in the more salient performance statement.

Because traditional theories of accounting choice based on existing contracting incentives cannot explain a choice that is purely one of location, we draw on prior theoretical, survey-based, and behavioral research to identify new factors that we expect to affect this choice. This literature suggests that at the time managers made the initial comprehensive income reporting choice, they were concerned that reporting comprehensive income—which is typically more volatile than net income—in a performance statement could increase the perceived volatility of the firm’s performance (e.g., Hirshleifer and Teoh 2003; Yen et al. 2007; Maines and McDaniel 2000). Surveys and behavioral research show that managers expect that users who perceive the firm’s performance as more volatile will place a lower value on the stock and will assess the manager as less competent (Graham et al. 2005; Maines and McDaniel 2000).

Our empirical results support our hypotheses that managers who avoid performance reporting are those with more powerful equity-based incentives that will be devalued by a lower stock price and those with less job security who have more to lose from a poor performance evaluation. The magnitudes of these effects suggest managers’ unique personal equity-based incentives and job security concerns lead to meaningful differences in reporting behavior. Analysis of the small set of firms that change their comprehensive income reporting location further supports our inferences: CEOs with increasingly powerful equity incentives and decreasing job security are more likely to switch away from performance reporting. Our inferences also generalize to a random sample of smaller firms not in the S&P 500.

Our evidence suggests that at the time managers made the initial comprehensive income reporting location decision, they believed performance reporting would be more salient—consistent with views of the FASB and IASB and evidence from laboratory studies (e.g., Hirst and Hopkins 1998; Maines and McDaniel 2000; Hunton et al. 2006). Our change analysis suggests managers continue to believe reporting location matters. Our evidence on
who refuses to follow policymakers’ stated preferences on what seems to be an inconsequential reporting location choice is relevant as policymakers consider requiring all firms to use performance reporting (IASB 2008; FASB 2008).

Our result that managers with less job security on average make reporting choices that reduce transparency is of interest in its own right, and also helps fill the void that Graham et al. (2005) identify when they point out the dearth of evidence on how managers’ career concerns affect their financial reporting choices. Our results also extend prior research showing that equity-based compensation increases incentives for earnings management (e.g., Cheng and Warfield 2005; Bergstresser and Philippon 2006) by showing that equity incentives affect another transparency-related accounting choice: whether to disclose comprehensive income in a more or less salient location.

Finally, in comment letters on the initial FAS No. 130 proposal, managers expressed concern that performance reporting would lead stakeholders to view firms’ performance as more volatile than warranted by the actual economics. Our evidence suggests that the concerns expressed in the comment letters are real (as distinct from excuses).

Future research can complement our study of the determinants of comprehensive income reporting location by examining the consequences of the location choice. Specifically, research could further probe investors’ actual reactions to comprehensive income disclosures, in order to assess the ex post validity of managers’ ex ante concerns. Does performance reporting increase investors’ assessments of the firm’s risk and hurt the firm’s stock price and the manager’s performance evaluation in real markets? It would also be interesting to extend Chambers et al. (2007) to further explore whether investors react differently to comprehensive income reported in a performance statement versus a statement of equity. Such a valuation study should consider modeling the determinants of the location choice to control for self-selection biases, and incorporating the component of other comprehensive income that represents the reclassification of realized gains and losses.

REFERENCES


Morse, A., V. Nanda, and A. Seru. 2007. Are incentive contracts rigged by powerful CEOs? Working paper, The University of Chicago, Georgia Institute of Technology.


