

Effects of Managerial Discretion in Fair Value Accounting Regulation and Motivational Incentives to “Go Along” with Management on Analysts’ Expectations and Judgments

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The current study examines the extent to which financial analysts expect firms to manage earnings when accounting rules allow a relatively high degree of discretionary choice and low level of transparency, and measures whether analysts’ stock price estimates are upwardly biased when they are aware that management is taking advantage of the situation. We further investigate whether analysts’ expectations and judgments in this regard are amplified in the presence of an incentive to “go along” with management’s misleading financial information.

A total of 44 experienced financial analysts participate in a between-participants experiment, wherein those who are provided with misleading (non-misleading) information from management regarding the fair value of an impaired asset for which there is no active exchange market, expect management to recognize a downwardly biased (non-biased) asset impairment loss and issue commensurately higher (lower) stock price estimates. The results also show that analysts who have an incentive to go along with management anticipate a downwardly biased impairment loss and provide a higher stock price estimate, relative to analysts with no such incentive. Finally, the research findings indicate a significant interaction whereby the differential responses from analysts in the truthful and misleading conditions are greater in the presence, compared to absence, of an incentive go along with management.

Keywords: Managerial discretion, Analysts’ judgements, Fair value, Earnings management

INTRODUCTION

FASB Statement No. 157 (SFAS 157), *Fair Value Measurements*, and the preceding documents (June 2004 Exposure Draft and October 2005 Working Draft) have reenergized the debate over fair value measurement. Proponents of fair value

measurement argue that fair values provide useful relevant information, especially for financial instruments where there are active exchange markets (AAA FASC [2000], Carroll et al. [2003], Barth [1994], Petroni and Wahlen [1995], Barth et al. [1996], Eccher et al. [1996], Nelson [1996]). Opponents, however, suggest that fair value measurement related to non-financial assets and liabilities for which there are no active exchange markets, introduces subjective estimation and thereby provides managers with opportunities for earnings manipulation (AAA FASC [2005], Benston [2006], CCR [2005], Barth and Landsman [1995]). Additional concerns

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arise related to the transparency of information under a fair value system; that is, when fair values are determined by active markets for identical items, transparency is not at issue, as fair values are derived externally. Transparency is diminished, however, in situations where active markets do not exist. Financial disclosures with relatively low transparency have been associated with earnings management (Hunton et al. [2006]).

One purpose of this study is to examine whether analysts' judgments are affected when managers intentionally issue misleading information regarding the valuation of an asset impairment loss, where there is no active exchange market for the asset. A second purpose of this study is to assess the extent to which analyst's judgments in this situation are influenced in the presence of an incentive to "go along" with management's biased valuation. Market regulators are concerned over these issues, as they are charged with overseeing that listed firms issue high quality financial statements to the public and ensuring that financial analysts provide unbiased reports to investors. Accounting standard-setters also are interested in how their rules affect managers and stock market participants for well-intended regulations sometimes can trigger unintended side effects.

A total of 44 financial analysts participated in a two-by-two, between-participants design, wherein we manipulated management guidance (truthful or misleading) and analyst incentive (absent or present). The dependent variables reflect the dollar value of impairment loss the analysts will expect management to recognize and the analysts' estimate of the firm's stock price after the loss is recognized in the financial statements. We find that analysts who are provided with misleading (truthful) information, where the accompanying financial information clearly disputes (supports) the veracity of the misleading (truthful) information, anticipate that management will recognize a downwardly biased (unbiased) impairment loss and, in turn, will issue relatively high (low) stock price estimates. Also, analysts who are provided with an incentive (no incentive) to go along with management expect managers to recognize a downwardly biased (unbiased) impairment loss and offer relatively high (low) stock price estimates. A significant interaction effect suggests that the differential responses from analysts in the truthful and misleading conditions are substantially amplified in the presence, relative to absence, of an incentive to go along with management.

Overall, the study findings suggest that financial analysts expect firm managers to take advantage of discretionary valuation judgments when assessing the fair value of non-financial assets and liabilities, particularly when the lack of an active exchange market obfuscates some of the key valuation assumptions. We also extend prior literature in the area of analyst forecast bias by demonstrating that, despite regulatory attempts at eliminating the sources of such bias, analysts continue to favor management when doing so furthers their own self-interests.

BACKGROUND

Fair Value Measurements and Transparency

As discussed in the Financial Accounting Standards Board (FASB) Exposure Draft (2004) and the Working Draft (2005) and reflected as a standard in SFAS 157, the presence or absence of active market inputs gives rise to a fair value hierarchy in which valuation estimates are classified based on the relative reliability of the inputs. The hierarchy is assumed to distinguish more from less reliable inputs and ranges from Level 1, in which quoted prices (unadjusted) in active markets for identical assets or liabilities are available, to Level 3, which is based solely on unobservable inputs (FASB [2006]). While managers are cautioned that valuation using unobservable market inputs should be adjusted if information is reasonably available indicating that market participants would use different assumptions (FASB [2006]), concerns continue to persist regarding unobservable inputs; that is, when unobservable inputs are used to approximate fair value for non-financial assets and liabilities, managers might take advantage of the inherent subjectivity in this situation to manage earnings.

Current research suggests that valuation based on standards that are unstructured, such as Level 3 unobservable inputs, provides a setting where managers are likely to manipulate earnings due to a relatively low level of transparency regarding the underlying key assumptions that managers incorporate into their decision-making processes (Hunton et al. [2006]). Benston [2006] further suggests that use of Level 3 estimates in conjunction with an executive incentive plan linked to fair value estimates led directly to the financial collapse of Enron. We contend that valuation based on unobservable inputs reduces transparency and provides non-trivial opportunities for managerial manipulation.

Management Guidance

Management tends to avoid negative earnings surprises and often uses both guidance and earnings management techniques to minimize them (Matsumoto [2002], Payne and Robb [2000]). Management guidance, in the form of conference calls, has been shown to be informative to stock market participants and influential in moving stock prices (Bushee et al. [2003], Kimbrough [2005]). Prior to August 2000, managers often were selective regarding who would be included in conference calls, which gave unfair advantage to some analysts and investors. In August 2000, however, the Securities and Exchange Commission (SEC) passed Regulation Fair Disclosure (Regulation FD), which prohibits firms from disclosing material information to select groups of market participants on restricted access conference calls. Bushee et al. [2003] found that although Regulation FD has had some impact on firms' disclosure policies regarding the use and timing of conference calls, the effects are not large.

We suggest that Regulation FD has opened the door to an unintended effect; that is, managers can use publicly available conference calls to disclose misleading information on occasion, with the motive of bolstering share prices and future earnings expectations. Financial analysts typically expect that firms will manage market expectations when opportunities of this nature arise, particularly when it would be difficult for investors to verify the accuracy of such information due to decreased transparency of underlying key assumptions (Hunton et al. [2006]). Further, prior research indicates that financial analysts often fail to cognitively adjust for known management bias, thereby exhibiting the tendency to go along with misleading guidance (Tan et al. [2002], Hunton et al. [2006], Libby et al. [2007]). Although the extant literature does not explicate theoretically why analysts tend to go along with management in this regard, one possible explanation is rooted in the theory of motivated reasoning (Kunda [1990]).

Motivated reasoning theory suggests that judgment can be unintentionally biased when individuals are motivated to realize decision outcomes that offer personal benefits. Kunda [1990] reports that when individuals are biased toward achieving specific outcomes, they can subconsciously alter their cognitive processes. This bias can lead to illusions of objectivity, where they believe their decision processes are objective, even while they are pursuing self-interests (Kunda [1990], Pyszczynski and Greenberg [1987], Kruglanski [1980]). In addition, individuals who are motivated toward certain outcomes can be subconsciously biased by cognitive distortions, as their memories of facts and rules can be altered (Greenwald [1980], Kunda [1990]). While cognitive distortion of this nature involves an intricate web of psychological processes, most of which are not fully understood, Kunda [1990] indicates that decision makers "... are more likely to arrive at those conclusions that they want to arrive at" (p. 27), as the underlying motive of enhancing one's self-interest can lead to illusions of objectivity and cognitive distortions.

In general, sell-side financial analysts are motivated to go along with management's upwardly biased market guidance, as the analysts' brokerage incentives are linked to how well the stocks they follow perform in the marketplace. Thus, when management issues an overly optimistic earnings forecast, for instance, it would benefit analysts to impound some of the optimism into their forward-looking estimates, as favorable reports will tend to sell more stocks thus generate more commissions (Libby et al. [2007]). Hence, when accounting regulation allows for relatively high managerial discretion and low transparency, such as the determination of fair values when there is no active exchange market, managers have a legitimate conduit through which they can issue biased guidance, and analysts have a motive to go along, at least to some extent. Accordingly, we anticipate that analysts will expect managers to take advantage of the situation and posit that analysts will estimate higher firm stock prices,

even when they are aware that management is issuing biased information to the public.

Hypothesis One:

H1a: The amount of impairment loss analysts will expect managers to recognize will be significantly lower in the misleading guidance condition, relative to the truthful guidance condition.

H1b: The analysts' stock price estimates will be significantly higher in the misleading guidance condition, relative to the truthful guidance condition.

Analysts Incentives

While sell-side analysts have an obvious incentive to want the stocks they track to perform well, their incentive to "curry favor" with management reflects another powerful motivational influence that can further prejudice their judgments (Affleck-Graves et al. [1990], Dugar and Nathan [1995], Francis and Philbrick [1993], Maines [1995], Schipper [1991], Hunton and McEwen [1997]). For instance, Hunton and McEwen [1997] reported that an underwriting relation most heavily influences analysts' forecasts, followed by incentives to maintain good relations with a client firm. Regulation FD, Regulation AC (Analyst Certification)¹ and the Global Settlement² reflect three initiatives aimed at eliminating the biasing influence of analysts' incentives to gratify management. Some research indicates that these three initiatives have been fairly effective; for instance, Mohanram and Sunder [2006] found that analysts who work for large brokerage firms and who were deemed to be very accurate pre-initiatives, could not maintain their superiority post-initiatives. On the other hand, Cotter et al. [2006] observed a different post-initiatives trend; that is, analysts' forecasts that follow management guidance are becoming more beatable over time, which suggests a growing symbiotic relationship between analysts and firms in managing market expectations in order to enhance earnings expectations, thus boost stock prices. The research findings from Cotter et al. [2006] also suggest that analysts seem to be trying to please management, which fits with the assertion by Mayew [2006] that analysts who hold better relations with firm management are more likely to be allowed to participate in conference calls.

Given the focus of regulators on de-biasing analysts' judgments, one would think that analysts would no longer 'go along' with managers who attempt to mislead investors; yet, this practice appears to continue to some extent, post-initiatives. We suggest that analysts who are motivated to want a firm's stock to be favorably priced by the market are pulled by two opposing pressures: on one hand, regulative initiatives aimed at enforcing objectivity in analysts' judgments will pull them toward accurate reporting; on the other hand, the subconscious influences of motivated reasoning (Kunda [1990]) to want to curry favor with management will pull them in the opposite direction toward biased reporting.

These competing forces are of great interest to academicians, regulators and investors. In the current study, we posit that subconscious influences will exert a greater force than regulatory initiatives.

Our position in this matter is supported by two recent research studies. First, an experiment by Libby et al. [2007] reveals that incentives to maintain good relations with a firm biased analysts' earnings forecasts and stock price estimates in favor of the firm. Second, a study by Clement and Westphal [2007], which has received broad exposure in the financial media, suggests that 63% of analysts report they have received 'favors' from top-level executives of firms that they follow, and such favors indeed bolster their stock ratings. Accordingly, we hypothesize the following:

Hypothesis Two:

H2a: The amount of impairment loss analysts will expect managers to recognize will be significantly lower in the incentive condition, relative to the no incentive condition.

H2b: The analysts' stock price estimates will be significantly higher in the incentive condition, relative to the no incentive condition.

Finally, we posit an interactive effect of misleading guidance and analyst incentives. We suggest that accounting methods that allow an increased level of managerial judgment in conjunction with diminished transparency will afford opportunities to provide misleading guidance, and analyst incentives are posited to intensify this effect.

Hypothesis Three:

H3a: The mean difference in the amount of impairment loss analysts will expect managers to recognize between 'misleading guidance' and 'truthful guidance' in the high incentive condition will be *greater* than the mean difference between 'misleading guidance' and 'truthful guidance' in the no incentive condition.

H3b: The mean difference in the analysts' stock price estimates between 'misleading guidance' and 'truthful guidance' in the high incentive condition will be *greater* than the mean difference between misleading guidance and truthful guidance in the no incentive condition.

METHOD

The experiment involved a between-participants design with two randomized factors: 1) Management Guidance—Not misleading or Misleading and 2) Analyst Incentive—No relationship with the firm or Firm following with a strong buy recommendation. The participants were experienced sell-side financial analysts employed by a major international brokerage firm who were attending firm-sponsored training sessions. At the end of each session, they were asked to

volunteer to participate in a study about fair value and impairment losses. There were a total of three training sessions each held one week apart at different firm locations. The firm trainer, who was qualified by the researchers in how to administer the experimental materials, was unaware of the experimental treatments.

At the end of each training session, the trainer handed two sealed envelopes to each participant.³ Participants were asked to open the first envelope and remove the materials, which included a cover sheet, voluntary consent form, case description and dependent variable response sheet. After the participants read the cover sheet and signed the consent form, they read the case materials, responded to three items, placed all materials into and sealed the first envelope, opened the second envelope, removed the materials within, responded to a series of questions, provided some demographic information, and placed all open materials back into and sealed the second envelope. More importantly, after sealing the first envelope, the trainer assured that the participants did not reopen the first envelope while the second envelope was open. As an incentive to participate, the researchers provided each analyst with a \$50 contribution to the charity of his/her choice.

The Case

Participants first read background material about a company called MHMB Pharmaceuticals.⁴ They read that they found out from publicly available sources that approximately 15% of MHMB's total long-lived assets classified as held-and-used had been impaired. Accordingly, MHMB's management had to follow the provisions of FASB Statement No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, by writing the assets down to fair value and recognizing an impairment loss. The case then described why management had to use the income approach to measure the impairment loss.⁵

After explaining how the income approach works, the case indicated that management is strongly leaning toward using a 7% risk-adjusted rate to discount the expected cash flows of \$780 million over five years. The participants were then told that they are aware that the average rate in the industry is 11%. The case illustrated the resulting asset values and impairment losses under various discount rates, ranging from 7–11%, as shown in Table 1, panel A. The analysts were provided with summary income statement and balance sheet information in tabular form for 2002–2005, as shown in Table 1, panel B.

Management Guidance

The participants next read the following: "During the latest conference call with MHMB, a financial analyst questioned management's stated intention to use a 7% risk-adjusted rate for the impairment loss calculation, while the industry average rate is 11%. Specifically, the analyst wanted to know

TABLE 1
Experimental Materials.

Panel A: Effect of Various Discount Rates Asset Value and Impairment Loss Using Various Risk-adjusted Discount Rates (\$in millions)					
	Estimate using 7% Risk-adjusted Rate	Estimate using 8% Risk-adjusted Rate	Estimate using 9% Risk-adjusted Rate	Estimate using 10% Risk-adjusted Rate	Estimate using 11% Risk-adjusted Rate
Asset value	\$556	\$531	\$510	\$484	\$463
Impairment loss	\$144	\$169	\$190	\$216	\$237

Panel B: Summary Financial Information MHMB Pharmaceuticals Selected Financial Information For the Years Ended December 31, 2002 through 2005 (In \$millions, except per share data)					
	12/31/05	12/31/04	12/31/03	12/31/02	
Income Statement					
Net sales Less:	\$17,987	\$15,007	\$16,502	\$17,538	
Cost of sales	6,253	3,896	\$4,458	4,730	
Gross margin	11,734	11,111	12,044	12,808	
Other expense	8,952	8,437	8,621	8,978	
Earnings before impairment loss	\$2,782	\$2,674	\$3,423	\$3,830	
Impairment loss	??	NA	NA	NA	
Earnings after impairment loss	??	\$2,674	\$3,423	\$3,830	
Earnings per share:					
Basic and diluted	??	\$1.35	\$1.73	\$1.95	
Average shares outstanding:					
Basic and diluted	1,940	1,987	1,984	1,965	
Selected Balance Sheet Information					
Total assets, (12/31/05 before the impairment write-down)	\$27,812	\$16,243	\$17,101	\$17,756	
Long-term debt	\$6,237	\$1,364	\$1,342	\$1,336	
Stockholders' equity, (12/31/05 before current year net earnings)	\$9,075	\$7,488	\$7,644	\$7,888	
Price per common share	??	\$54.91	\$66.19	\$73.94	

how committed management is to using the 7% rate and how management could justify using a rate that is lower than the industry average. In the non-misleading condition, management's response was as follows: "We have not decided whether we will use the 7% rate, as our risk profile has been deteriorating over the past 4 years." In the misleading treatment, management's response was as follows: "We have definitely decided use the 7% rate, as our risk profile has been improving over the past 4 years."⁶

Analyst Incentive

In the no-incentive condition, analysts read the following: "Your firm does not follow MHMB Pharmaceuticals and you have not made any recommendation to your clients." In the incentive manipulation, participants read the following: "Your firm follows MHMB Pharmaceuticals and within the last week you issued a strong buy recommendation to your clients."⁷

Dependent Measures

One of the dependent variables assessed the dollar value of impairment loss that the participants' believed management

would recognize. The dollar amounts from which the analysts could choose were yoked to an assumed discount rate; thus, the responses were limited to one of five choices:

A response of 1 = \$144 million, which assumes a discount rate of 7%

A response of 2 = \$169 million, which assumes a discount rate of 8%

A response of 3 = \$190 million, which assumes a discount rate of 9%

A response of 4 = \$216 million, which assumes a discount rate of 10%

A response of 5 = \$237 million, which assumes a discount rate of 11%

The analysts were also asked to estimate MHMB's common share price as of December 31, 2005, after the firm recognized the impairment loss. We expect an inverse relationship between the recognized impairment loss and stock price because a higher impairment loss would lower earnings, which in turn should lower the stock price estimates. After completing the dependent measures, the participants responded to a series of psychological debriefing items

and demographic items that were included in the second envelope.

RESULTS

Participants

A total of 44 financial analysts participated in the study. There were 15 female (34.09%) and 29 male analysts. The mean (standard deviation) age was 32.8 (4.74). The analysts' mean (standard deviation) years experience as financial analysts was 7.25 (4.37), and years with the current firm was 5.98 (3.05). Of the 44 analysts, 41 (93.18%) were Chartered Financial Analysts. The distribution of gender, age, years experience, years with current firm, and certification were not significant (all p -values $> .50$) across treatment conditions.

Manipulation Check Items

Two key conditions were held constant across all four treatments: 1) MHMB was leaning strongly toward using a 7% discount rate in determining the dollar amount of impairment loss and 2) the industry average discount rate was 11%. The participants were asked to record the discount rate that MHMB management was intending to use and the industry average rate. All respondents replied correctly to these items.

We next asked the analysts the following questions: 1) What effect did a lower risk-adjusted interest rate have on the amount of the impairment loss [a. the lower rate resulted in a lower impairment loss, b. the lower rate resulted in a higher impairment loss or c. the lower rate had no effect on the amount of the impairment loss], and 2) what effect did a lower risk-adjusted interest rate have on the amount of the impaired asset [a. the lower rate resulted in a lower amount for the impaired asset, b. the lower rate resulted in a higher amount for the impaired asset or c. the lower rate had no effect on the amount of the impaired asset]. All participants correctly indicated an answer of "a" for the first question and "b" for the second question.

As a way to assess the incentive manipulation, participants were also asked to check one of the two following items: 1) your firm was following MHMB and you had issued a strong buy recommendation or 2) your firm was not following MHMB and you had not issued a recommendation. All participants responded correctly to this item in accordance with their randomized incentive conditions; thus, the incentive treatment was deemed successful.

With regard to the management guidance manipulation, participants responded to four items. The first item asked how committed management was to using the lower than industry-average rate (1 = weakly committed and 9 = strongly committed) and the mean (standard deviation) [t-test] results were as follow: truthful guidance 1.76 (0.70), misleading guidance 8.52 (0.65) [$t = 32.72$, $p < .01$]. The second item asked how management portrayed the company's risk profile over the

past 4 years (-4 = strongly deteriorating, 0 = unchanging and $+4$ = strongly improving) and the mean (standard deviation) [t-test] results were as follow: truthful guidance -2.38 (0.74), misleading guidance 2.35 (0.57) [$t = 23.54$, $p < .01$]. The third item asked the analysts how they would characterize the company's risk profile over the past 4 years (-4 = strongly deteriorating, 0 = unchanging and $+4$ = strongly improving) and the mean (standard deviation) [t-test] results were as follows: truthful guidance -3.23 (0.62), misleading guidance -3.18 (0.78) [$t = 0.30$, $p = .76$]. The final item asked the participants to describe management's response to the question the analyst posed during the conference call (-4 = very misleading, 0 = neutral, and $+4$ = very truthful). The mean (standard deviation) [t-test] results were as follow: truthful guidance 3.24 (0.70), misleading guidance -1.91 (0.67) [$t = 24.91$, $p < .01$]. Based on the findings of the latter three items, even though the analysts understood how management was portraying the company's risk profile (deteriorating versus improving), participants in both conditions characterized the profile as deteriorating; thus, when there was congruity (incongruity) between management's and the analysts' risk profile characterizations, the analysts described management's guidance as truthful (misleading). Hence, the management guidance manipulation was deemed successful.

Preliminary Testing

We ran two initial regression models, where the dependent variables reflected (1) the amount of impairment loss the analysts' believed management should recognize and (2) the stock price estimate after recognizing the recommended loss. The independent variables were the analyst incentive condition and management guidance condition, and the possible covariates were gender, age, certification, years of experience, years with firm, and training session. None of the covariates was significant (all $p > .15$) in either regression model; hence, they were not further considered when analyzing the hypotheses.

Hypothesis Testing

Asset impairment loss management should recognize

Because the dependent variable scale for impairment loss is ordinal (i.e., the differences in dollar amounts among the five choices are not equal at each level), we used general linear ANOVA model to analyze the data, where the responses were ordinal-ranked within each treatment condition (Littell 1996).⁸ Table 2, panel A shows means, standard deviations, medians and sample sizes by main effects and treatment conditions.

Results of ANOVA testing (Table 2, panel B) indicates that the truthful guidance mean (4.29) is significantly greater than the misleading guidance mean (3.13) [$F = 13.95$, $p = .01$]. This result supports H1a; that is, analysts in the misleading guidance treatment, relative to the non-misleading treatment, suggested that management should recognize a significantly lower impairment loss. In addition, the no-incentive mean (4.70) is significantly greater than the incentive mean (2.27) [$F = 44.10$, $p = .01$]. This finding supports H2a, as analysts in the incentive condition indicated that management should recognize a significantly lower impairment loss than analysts in the no incentive condition. While the simple main effects of either independent variable hold at each level of the other independent variable, the main effects obtained in H1a and H2a need to be cautiously interpreted in light of a marginally significant interaction, as next described.

Recall, H3a predicted a specific pattern of responses; that is, the mean difference between 'misleading guidance and 'truthful guidance' in the incentive condition would be greater than the mean difference between 'misleading guidance and 'truthful guidance' in the no incentive condition. As shown on Table 2, panel B, the interaction term is marginally significant ($F = 3.55$, $p = .07$). A graph of the interaction is presented on Figure 1, panel A, as is the result of a planned contrast test. As indicated by the planned contrast test results, H3a is marginally supported ($t = 1.86$, $p = .07$); specifically, the mean difference of 1.77 [(misleading guidance $\times$ incentive) minus (truthful guidance $\times$ incentive)] is marginally significantly greater than the mean difference of 0.58 [(misleading guidance $\times$ no incentive) minus (truthful guidance $\times$ no incentive)].

TABLE 2
Impairment Loss Analysts Believe Management
Should Recognize.
Panel A: Mean (standard deviation) [median] sample
size responses across treatment conditions

Management Guidance	Analyst Incentive		Main Effect: Guidance
	No	Yes	
Truthful	5.0	3.5	4.29
	(0.00)	(1.08)	1.06
	[5]	[3.5]	[5]
	{11}	{10}	{21}
Misleading	4.42	1.73	3.13
	(1.24)	(1.27)	1.84
	[5]	[1]	[3]
	{12}	{11}	{23}
Main Effect: Incentive	4.70	2.27	3.68
	.093	1.47	1.61
	[5]	[3]	[5]
	{23}	{21}	{44}

Panel B: ANOVA Model

Source	d.f.	S.S.	M.S.	F-Ratio	p
Guidance Bias	1	15	15	13.95	.01
Incentive	1	48	48	44.10	.01
Interaction	1	4	4	3.55	.07
Error Term	41	44	1		
Total	44	111			

A response of 1 = \$144 million, which assumes a discount rate of 7%

A response of 2 = \$169 million, which assumes a discount rate of 8%

A response of 3 = \$190 million, which assumes a discount rate of 9%

A response of 4 = \$216 million, which assumes a discount rate of 10%

A response of 5 = \$237 million, which assumes a discount rate of 11%

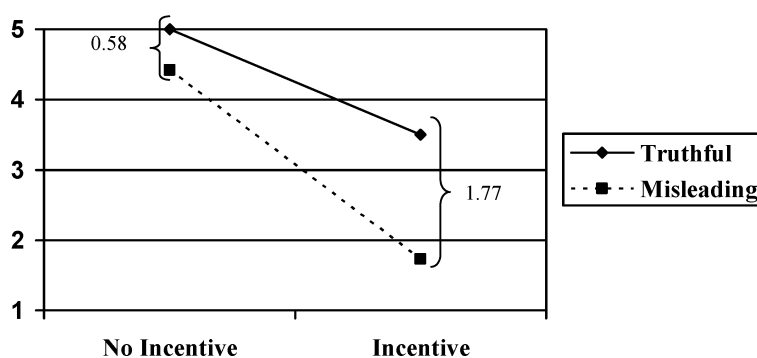


FIGURE 1 Interaction pattern and planned contrast test for impairment loss recognition expectations

A response of 1 = \$144 million, which assumes a discount rate of 7%

A response of 2 = \$169 million, which assumes a discount rate of 8%

A response of 3 = \$190 million, which assumes a discount rate of 9%

A response of 4 = \$216 million, which assumes a discount rate of 10%

A response of 5 = \$237 million, which assumes a discount rate of 11%

H3a: Planned Contrast Test

$(3.50 - 1.73 = 1.77) > (5.00 - 4.42 = 0.58)$

TABLE 3
Stock Price Estimate as of Year-End

Panel A: Descriptive Statistics – Mean (Standard Deviation)				
Management Guidance	Analyst Incentive		<i>Main Effect: Guidance</i>	
	No	Yes		
Truthful	48.82 (2.14)	54.70 (2.21)	51.62 (3.68)	
Misleading	50.58 (1.24)	59.27 (2.90)	54.74 (4.93)	
<i>Main Effect: Incentive</i>	49.74 (1.91)	57.10 (3.45)	53.25 (4.61)	

Panel B: ANOVA Model					
Source	d.f.	S.S.	M.S.	F-Ratio	p
Guidance Bias	1	110	110	23.06	.01
Incentive	1	581	581	121.88	.01
Interaction	1	21	21	4.52	.04
Error Term	41	191	5		
Total	44	912			

^aThe following potential covariates were non-significant ($p > .10$): Gender, Age, Certification, Years Experience, Years with Firm, Training Session (1, 2 or 3).

Stock price estimate

Results of ANOVA testing on the year-end stock price estimate are shown on Table 3, and descriptive statistics are shown on panel A. As indicated on panel B, both main effects are significant ($p < .01$), indicating that the mean stock price estimate in the “misleading” condition (\$54.74) was greater than the ‘truthful’ condition (\$51.62), and the mean stock price estimate in the “incentive” treatment (\$57.10) condition

was greater than the “no incentive” treatment (\$49.74). These results support hypotheses H1b and H2b, respectively. Once again, although the simple main effects of either independent variable hold at each level of the other independent variable, the main effects have to be considered jointly in light of a significant interaction, as presented next.

The interaction hypothesis (H3b) expects to find the same difference in differences as explained for H3a. The interaction term is significant in the ANOVA model ($F = 1.52$, $p = .04$). The pattern of mean responses is shown in Figure 2, as is the result of a planned contrast test. As indicated by the planned contrast test results, H3b is supported ($t = 2.13$, $p = .04$); specifically, the mean difference of \$4.57 [(misleading guidance x incentive) minus (truthful guidance x incentive)] is significantly greater than the mean difference of \$1.76 [(misleading guidance x no incentive) minus (truthful guidance by no incentive)].

Post Hoc Analyses

The participants responded to some post-experiment, clinical debriefing items, which are shown on Table 4. The analysts were asked to respond to these items in a general fashion, as they were not specifically related to the case they had just read.⁹ The first two items indicate that the analysts are quite concerned that the use of discounted cash flows to measure the fair value of assets and impairment losses will offer opportunities for management to manipulate earnings ($m = 6.70$), and they believe that the pervasiveness of such manipulation would be moderately pervasive ($m = 4.10$).

The remaining four items were designed to measure whether analyst biases are subconscious. We attempted to discern the consciousness of such biases by asking them the extent to which referent others would be biased by the same

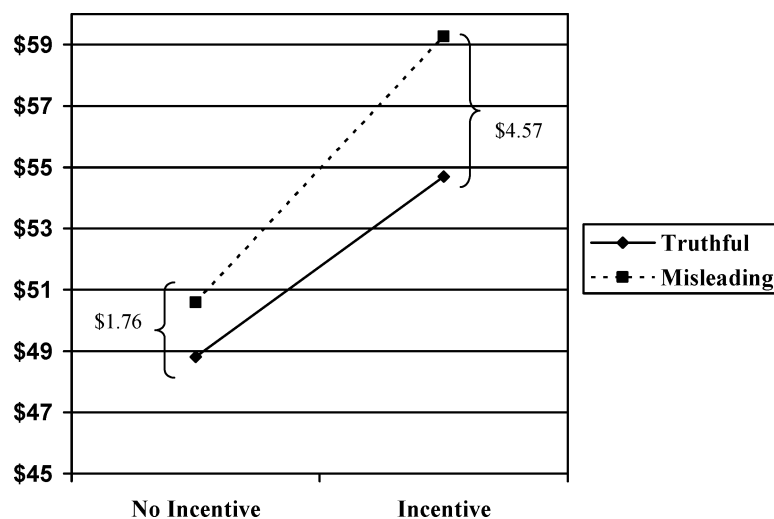


FIGURE 2 Interaction pattern and planned contrast test for stock price estimate.
H3b: Planned Contrast Test ($\$59.27 - \$54.70 = \$4.57$) > ($\$50.58 - \$48.82 = \1.76)

TABLE 4
Post Hoc Debriefing Questions^a

1	How concerned are you that the use of discounted cash flows to measure fair value of assets and impairment losses will provide opportunities for management to manipulate earnings? (1 = Not concerned, 9 = Highly concerned) [mean = 6.70, std. dev. = 1.30; t-value for mean equal to 5 = 8.66, $p < .01$]
2	If your answer to the previous question was greater than 1, please answer this question; otherwise, skip to the next question. How pervasive do you think this type of manipulation will be? (1 = Not pervasive, 9 = Very pervasive) [mean = 4.10, std. dev. = 1.10; t-value for mean equal to 5 = 2.50, $p < .01$]
3	In the presence of a following relationship and a strong buy recommendation, to what extent would the earnings forecasts of other analysts in your firm be influenced by management's biased earnings estimates? (1 = Not at all, 9 = Very much) [mean = 6.47, std. dev. = 1.44; t-value for mean equal to 5 = 6.81, $p < .01$]
4	If your answer to the previous question was greater than 1, please answer this question; otherwise, skip to the next question. To what extent do you believe that such influence would be subconscious or deliberate (conscious)? (-4 = Totally subconscious, 0 = Not sure, +4 = Totally deliberate) [mean = -1.32, std. dev. = 1.09; t-value for mean equal to zero = 7.99, $p < .01$]
5	In the presence of a following relationship and a strong buy recommendation, to what extent would the earnings forecasts of other analysts outside your firm be influenced by management's biased earnings estimates? (1 = Not at all, 9 = Very much) [mean = 8.39, std. dev. = 0.81; t-value for mean equal to 5 = 27.62, $p < .01$]
6	If your answer to the previous question was greater than 1, please answer this question; otherwise, skip to the next question. To what extent do you believe that such influence would be subconscious or deliberate (conscious)? (-4 = Totally subconscious, 0 = Not sure, +4 = Totally deliberate) [mean = 3.63, std. dev. = 0.50; t-value for mean equal to zero = 23.90, $p < .01$]

^a The means were not significantly different ($p > .10$) across treatment conditions.

motivational influence used in the case materials. The reason for asking respondents to reflect on how others would be influenced is grounded in the concept of social projection. According to social projection theory, when individuals are asked how referent others might respond to the same stimuli, they frequently project their own subconscious or repressed conscious beliefs onto the referent others (Beeler and Hunton [2002], Clement and Krueger [2000], Mikulincer and Horesh [1999], Ruvolo and Fabin [1999], Smith [1997]).

When asked about the extent to which their earnings forecasts would be influenced by management's biased earnings estimates in the presence of a following relationship and a strong buy recommendation (1 = not at all, 9 = very much), all analysts recorded a response of one—not at all (item not shown). However, when asked about the extent to which other analysts in their firm would be influenced, the mean response (item three) was 6.47 (moderate influence). The mean response to item four (-1.32) suggests that the analysts believe the influence of 'other analysts' in their firm would be slightly subconscious. With regard to how other analysts outside their firm might be influenced, the mean response to item five was 8.39 (high influence). Finally, participants suggested that the biased influence of analysts outside the firm (item six) would be deliberate ($m = 3.63$). Based on social projection theory, these results suggest that the analysts themselves might be influenced by management's biased guidance, and that such influence might be partially subconscious and partially deliberate.

Analysts' Incentives

We asked the analysts an open-ended question related to the types of incentives that would lead an analyst to be influenced by management's biased earnings estimates in the presence of a following relationship and strong buy recommenda-

tion. The analysts' responses are summarized on Table 5.¹⁰ It appears as though the primary incentive motivations are as follow: Attain, maintain or enhance the analyst's 1) personal success (31.71%), 2) reputation within the analyst community (21.95%), reputation with firm management (23.17%) and 4) reputation with major investors who rely on the analyst's recommendations (23.17%). As with the influence items (above), based on social projection theory, the analysts' responses to the open-ended question potentially reflect their own motivated reasoning (Kunda [1990]) for being influenced by biased management guidance.

SUMMARY AND CONCLUSIONS

The first-order effect of allowing managers too much discretion in accounting regulation coupled with too little transparency in divulging the underlying assumptions involved in exercising such discretion is that they can take advantage of the situation to manage earnings. A second-order effect involves the possibility that important stock market intermediaries, such as financial analysts, who are aware that management is prone to taking such advantage, will base their judgments on biased information, rather than cognitively adjusting for known management bias. In the current study, we examine a second-order effect of this nature, and investigate the extent to which such effect is potentially exacerbated in the presence of an incentive to go along with management.

A total of 44 experienced financial analysts participated in a two (managerial guidance: truthful or misleading) by two (incentive to go along with management: absent or present), between-participants randomized experiment. We find that analysts who are provided with misleading guidance from management, relative to truthful guidance, expect managers

TABLE 5
Qualitative Analysis of Open-Ended Question

We asked the analysts the following open-ended question: "If you indicated (above) that you, other analysts in your firm or other analysts outside your firm would be influenced by management's biased earnings estimates in the presence of a following relationship and strong buy recommendation, in your opinion, what would be the motivational incentives for such influence?" All of the participants wrote down at least one incentive and many wrote more than one. We recorded each discrete incentive onto 3 x 5 index cards, and asked two graduate students to (separately) categorize the responses into logical groupings and give each grouping a label. One student created five classifications (performance evaluations, personal wealth, reputation within the analyst community, and reputation with firm management and reputation with major investors who rely on the analyst's recommendations). The other student combined the first two incentive categories into one, called personal success, but otherwise identified the same three categories as the first student. When the first student's 'performance evaluations' and 'personal wealth' were collapsed into one category, both students had placed the exact same cards into each of the four categories. Since the analysts mentioned 'performance evaluations' only 5 times, the students agreed that it made sense to combine these two into a single category. Below are excerpts of the analysts' responses, along with the number (%) of responses in each category.

Incentive Category	Number (%) of Responses in Category
1) Personal Success	26 (31.71%)
a) maximize personal wealth	
b) boost personal income	
c) promotion opportunities	
d) keep my boss happy	
2) Reputation within the analyst community	18 (21.95%)
a) personal reputation is on the line	
b) to save face with other analysts	
c) analyst ratings	
d) look good among other analysts	
3) Reputation with firm management	19 (23.17%)
a) stay in the loop with management	
b) foster relations with firm management	
c) stay tight with management	
d) keep managers happy	
4) Reputation with major investors	19 (23.17%)
a) investors must smile	
b) maintain investor relations	
c) keep investors relying on the recommendation	
d) save face with investors	
Total	82 (100%)

to issue misleading financial information and fail to adjust for management's bias when estimating share price values. Further, the expectations and judgments of analysts who are provided with an incentive to 'go along' with the management are significantly more influenced in favor of management, relative to analysts without the incentive. Finally, a significant interaction effect indicates that the differential expectations and judgments of analysts in the truthful and misleading guidance conditions are considerably amplified in the presence, relative to absence, of an incentive to go along with management.

The results of a post-experiment, clinical debriefing emphasize potential problems with current accounting regulation (SFAS 144 and SFAS 157) associated with determining the fair value of an impaired asset where no active market exists. That is, the analysts indicated a fairly high level of concern that management will use this setting to manipulate earnings and suggested that this manner of earnings manipulation could become quite pervasive. The clinical debriefing findings also offer insight into whether analysts' incentives to go along with management are affecting their decision making processes at a conscious level. Using social projection theory as a framework for drawing some inferences in

this regard, it appears as though analysts are aware, at least to some degree, that their judgments are favorably biased toward management when their self-interests will be positively affected by doing so.

When results from the current study are coupled with findings of Clement and Westphal [2007], market regulators should take notice that three key initiatives aimed at leveling the playing field for investors (Regulation FD, Regulation AC, and the Global Settlement) have not completely thwarted management's efforts to signal private information to financial analysts and other favored market participants. When findings of this study are assimilated with results of Hunton et al. [2006], accounting standard-setters should recognize that allowing too much discretionary latitude and too little transparency in accounting regulation could unintentionally set the stage for expectations and earnings manipulation. Finally, both market regulators and accounting standard-setters should be aware that when financial analysts' incentives are aligned with managerial motivations to want the market to perceive the firm as being financially healthy, analysts' judgments can be biased in favor of the firms and stocks they follow, particularly when the managers can exploit allowable discretionary accounting choices to their favor.

NOTES

1. Regulation AC was effective on April 13, 2003. According to regulation AC, analysts must provide a written statement that the opinions they express in research reports are unbiased. The intention of the regulation is to expose analysts to penalties for purposefully biasing their reports in order to curry favor with management.
2. The Global Settlement (reached on April 23, 2003) reflects an agreement between the Securities and Exchange Commission, National Association of Securities Dealers, New York Stock Exchange and ten of the largest U.S. investment firms to address conflicts of interest. The intention was to ensure that investment bankers would cease and desist all actions and practices that allowed them to inappropriate influence financial analysts.
3. The experimental materials were stacked in random order by the researchers and the trainer handed out the materials from the top to the bottom of the stack.
4. Although the name of the company was changed, the impairment loss and financial information was based on a real company. However, the dollar amounts were altered somewhat to fit the case scenario and to disguise the identity of the company.
5. Income approach is the phrase used in SFAS 157 to describe valuation techniques for measuring fair value that convert future amounts such as cash flows to a single discounted present amount.
6. The phrase "risk profile" was purposefully left undefined, as we wanted the analysts to use their own judgment and experience to decide the riskiness the company. However, the case was designed such that the company was clearly becoming riskier over time, as earnings and stock prices were mostly on the decline from 2002 thru 2005. The deteriorating risk profile was designed into the case to facilitate the "misleading guidance" treatment, such that the analysts were expected to question the use of a lower than industry average discount rate for a company that was becoming riskier.
7. The strongest incentive manipulation would be for the analyst to assume that their firm has an underwriting relationship with the case company (Hunton and McEwen [1997]). However, due to immense regulatory pressure on brokerage firms to separate their underwriting and investing practices, we were not allowed (by the participating brokerage firm) to use a manipulation of this nature. Thus, we asked a pilot group of three analysts, who did not participate in the study, to help us develop a strong and meaningful incentive treatment. After much discussion, the pilot group told us that coupling a 'firm following'

incentive with a strong buy recommendation likely would comprise a strong incentive motivation.

8. We also used regression ANOVA with no rank ordering and found the same results, so our findings are not sensitive to the choices we made regarding the ordinal versus interval nature of the scale or ANOVA model used.
9. Using a cutoff of $p \leq .10$, ANOVA testing revealed that none of the 10 response items was significantly different across treatment conditions.
10. We also asked the analysts to write down the types of incentives that would lead analysts to be influenced by management's biased earnings estimates under the following conditions: 1) in the absence of a following relationship and 2) in the presence of a following relationship with no buy recommendation. There were no responses to either question.

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