Fair value accounting for liabilities: The role of disclosures in unraveling the counterintuitive income statement effect from credit risk changes

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A B S T R A C T

When liabilities are accounted for at fair value, a deterioration of a company’s credit risk results in the reporting of an income statement gain; an improvement in a company’s credit risk results in a loss. Many argue that these income statement effects are counterintuitive and that financial statement-users are likely to misinterpret fair value gains as positive signals and fair value losses as negative signals. Utilizing an experiment with CPAs as participants, we find that these arguments are indeed valid. Specifically, we find that over 70% of the participants incorrectly assess a company’s credit risk as improving (deteriorating) when a fair value gain (loss) is recognized. We also find that disclosures that explicitly specify the relation between the direction of the credit risk change and the income statement effect significantly reduce participants’ misinterpretations, and are more beneficial when fair value gains versus losses are recognized. These findings provide empirical evidence in the debate over the recognition of company-specific credit risk changes and offer direction for improving disclosures in the area of fair value accounting.

Introduction

When liabilities are accounted for at fair value, changes in their values are recognized as gains or losses in the income statement. Specifically, a deterioration in a company’s own credit risk leads to the reporting of a fair value gain, while an improvement in a company’s own credit risk leads to the reporting of a fair value loss. Many argue that the resulting income statement effects are counterintuitive and that even knowledgeable financial-statement users are likely to misinterpret fair value gains as positive signals and fair value losses as negative signals about the company.

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from $11 million to $3.6 billion (Katz, 2008, p. 52). Thus, we experimentally examine whether financial-statement users incorrectly view gains (losses) from changes in the fair value of liabilities as being associated with decreases (increases) in company credit risk.

The Financial Accounting Standards Board (FASB), in an attempt to address the potential confusion arising from accounting for liabilities at fair value, requires disclosure about the fair value changes attributable to changes in credit risk (SFAS No. 159). However, the disclosures need only present the amount of gain or loss associated with a change in credit risk and a qualitative reason for the change (hereafter referred to as basic disclosures). Both the Securities and Exchange Commission (SEC) and the International Accounting Standards Board (IASB) have questioned the effectiveness of these “basic” disclosures, yet neither group has recommended an alternative (SEC, 2008, p. 5; IASB, 2009).

We suggest, based on prior research (specifically, see Clor-Proell, Proell, & Warfield, 2010; Dietrich, Kachelmeier, Kleinmuntz, & Linsmeier, 2001; Hodder, Koonce, & McAnally, 2001), that basic disclosures are likely to be ineffective in unraveling the counterintuitive income statement effects of fair value accounting for changes in credit risk. We offer, instead, that disclosures explicating the directional relation between the credit risk change and the resulting fair value gain or loss (hereafter referred to as relational disclosures) might be necessary for proper interpretation of the income statement effects. Therefore, we also examine whether relational disclosures improve financial-statement users’ interpretations of the fair value gains and losses.

Finally, while we anticipate users to benefit from relational disclosures, research in psychology demonstrates that negative information is weighted more heavily than positive information (Siegrist & Cvetkovich, 2001) and that more evidence is required to revise an initial “bad news” belief to “good news” than is required to adjust an initial “good news” belief to “bad news” (Rothbart & Park, 1986; Siegrist & Cvetkovich, 2001). Consistent with this, accounting research finds that financial-statement users are more skeptical of management-provided good news explanations than bad news explanations (c.f., Barton & Mercer, 2005). Thus, we expect relational disclosures to be more effective in convincing users that fair value gains arise when credit risk deteriorates rather than persuading users that fair value losses reflect improved credit risk.

We experimentally address three research questions. First, to what extent do users misinterpret fair value gains and losses arising from changes in a company’s credit risk? Second, do relational disclosures (i.e., those explaining the directional relation between the change in credit risk and the resulting income statement effect) improve financial-statement users’ assessments of the change in the company’s credit risk? Finally, are relational disclosures more effective when a fair value gain (i.e., credit risk increase/deterioration) is reported relative to when a fair value loss is reported (i.e., credit risk decrease/improvement)?

Using Certified Public Accountants (CPAs) as participants, we employ a $2 \times 2$ between-participant design by varying (1) the direction of credit risk change (decrease versus increase) and (2) the fair value disclosure type (basic versus relational). A fair value loss is reported in the credit risk decrease condition, while a fair value gain is reported in the credit risk increase condition. In the basic disclosure condition, consistent with disclosures required in practice, the amount of and qualitative reason for the reported fair value gain or loss is presented. In the relational disclosure condition, the disclosures explicitly state that the fair value gain (loss) is attributable to an increase (decrease) in credit risk. Participants received comparative financial information for two companies that had the same credit risk in the prior year. The first company reported its liabilities at historical cost and, in the current year, experienced no change in credit risk. The second company reported its liabilities at fair value and either experienced an increase or a decrease in credit risk. Participants were asked to identify the company with the lower credit risk in the current year.

We find that over 70% of participants presented with basic disclosures selected the higher risk company, consistent with users’ incorrectly associating fair value gains (losses) with decreases (increases) in credit risk. In fact, of those participants who selected the higher risk company in the fair value gain (loss) condition, 100% (97%) indicated that the fair value company had experienced a(n) decrease (increase) in credit risk. These findings echo concerns expressed by regulators (e.g., IASB, 2010; SEC, 2008) and professional groups (e.g., FEI, 2004; Moody’s, 2010) that users will misinterpret gains and losses reported from changes in the fair values of liabilities arising from credit risk changes.

As predicted, we also find that relational disclosures significantly improved users’ abilities to properly interpret the fair value gains and losses. Specifically, an average of 24% more of the participants correctly assessed the credit risk changes when provided with relational versus basic disclosures. Our results also show that the improvement in properly identifying the lower risk company from relational disclosures is greater when the disclosures address a recognized fair value gain (34%) versus fair value loss (12%).

Our study complements prior research that finds financial-statement users likely possess preconceived notions about the attributes of financial statement items based on where they are presented and how they are labeled (Hirst & Hopkins, 1998; Maines & McDaniels, 2000). Our findings show that participants assessed the change in

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1 For example, Citigroup’s first quarter 2009 earnings showed almost $3 billion of pre-tax gains which were directly due to the company’s deterioration of its creditworthiness. As reported by Encima Global (Pegg, 2009), “This gain was caused by Citigroup’s decision to elect the use of fair value accounting for certain of its liabilities and fair value accounting for derivatives whose value was impacted by Citigroup’s reduced creditworthiness” (emphasis added).

2 Our participants were CPAs attending a Continuing Professional Education training seminar and proxy for knowledgeable financial-statement users. We selected CPAs because they are likely to be as informed, if not more informed, about fair value accounting issues than the average non-professional investor.
credit risk in a manner consistent with gains (losses) reflecting decreases (increases) in risk. We further demonstrate that while relational disclosures help financial-statement users properly interpret fair value gains and losses, the disclosures are differentially effective in addressing fair value gains versus losses. These findings are consistent with prior research suggesting that users are more skeptical of management-presented “good news” relative to “bad news” (e.g., Barton & Mercer, 2005; see also, Kennedy, Mitchell, & Sefcik, 1998).

This paper is organized into five sections. The next section provides background and develops the hypotheses. The third and fourth sections describe the experimental method and present the findings, respectively. The final section concludes the paper.

Motivation and hypotheses development

Controversy surrounding the accounting for changes in credit risk

To increase the use of fair value measurements in financial reporting and to converge US and international standards (i.e., IAS 39), the FASB (2007) issued SFAS No. 159, The Fair Value Option (FVO) for Financial Assets and Financial Liabilities. The adoption of fair value accounting for financial liabilities has generated considerable debate, particularly regarding the position that the fair value measurement should reflect changes in the company’s own credit standing (Barth, Hodder, & Stubben, 2008).

Proponents of recognizing these fair value changes in income argue that reporting a gain when a company’s own credit risk increases correctly reflects the underlying economics facing equity holders. Specifically, an increase in the company’s own credit risk decreases the fair value of its underlying liabilities. This fair value decrease reflects the potential that the company will not repay its debts and “the losses in liquidation will be borne by someone other than the stockholders” (Lipe, 2002, p. 177; see also, Barth & Landsman, 1995).

Critics of income statement recognition of gains and losses attributable to credit risk changes express that while the economics of the accounting are “…completely legitimate, [it] doesn’t make sense by any way we currently have of thinking of net income” (Keoun, 2008). The IASB (2009, para. 48) notes, “when liability measurement includes credit risk, an entity reports a gain from a decline in the credit quality of its liabilities. This gain (or loss, in the case of improving credit quality) is counter-intuitive…[and] is potentially misleading.”

The concern for misinterpretation due to the counterintuitive accounting is echoed by researchers as well as practitioners (Barth et al., 2008; Chasteen & Ransom, 2007; FEI, 2004; Lamonte, 2009; Moody’s, 2010). In particular, the FEI (2004) argues that it would be more confusing to investors and creditors, even professional ones, to observe increases in income when a company’s risk standing is deteriorating. Consistent with these views, Moody’s (2010) recommends that its bondholders completely ignore the “misleading” fair value gains and losses arising from credit risk changes (Reilly, 2007) and requires its credit rating analysts to back out these fair value changes.

Interpretations of the accounting for changes in credit risk

The controversy over fair value accounting for liabilities centers on whether investors can properly interpret the underlying meaning from the accounting presentation. Specifically, the classification within the income statement and labeling of the credit risk changes as gains and losses will likely affect how investors interpret the information. In the case of accounting for liabilities at fair value, we expect financial-statement users to erroneously interpret a gain as a positive signal and interpret a loss as a negative signal about the company’s credit risk.

Research in psychology supports this position and demonstrates that presentation format influences how information is interpreted, classified, and utilized (Hogarth, 1993). Presentation, including categorization, can also affect what concepts or attributes are primed or triggered in memory (Sherman et al., 1990). Further, how information is labeled can trigger the activation of concepts and constructs that influence judgments and decisions (Bettman et al., 1986; Neely, 1991).

Accounting research also supports this position. Hirst and Hopkins (1998) and Maines and McDaniel (2000) find that investors’ judgments about the importance and/or reliability of reported information are influenced by the presentation of the information. Both professional and non-professional investors consider an item’s financial statement placement as a performance signal with greater weight being placed on items presented in the income statement versus comprehensive income or disclosure (Libby, Nelson, & Hutton, 2006; Maines & McDaniel, 2000). Hopkins (1996) demonstrates that classification also communicates information about the item’s underlying attributes and suggests that professional users tend to rely on prior experiences and expectations with respect to the characteristics of similarly classified items for their judgments. Archival research supports that items classified or labeled as gains (losses), particularly ones arising from non-traditional sources, are likely to be associated with positive (negative) signals. Conedes (1975) finds that stock returns are positively (negatively) associated with special item gains (losses), suggesting that reported gains (losses) are perceived by investors as reflecting increases (decreases) in firm value. Riedl and Srinivasan (2010) also associate special item gains with “positive” signals and associate special item losses with “negative” signals. Finally, Hodder et al. (2001) find that reported gains are associated with lower risk. Thus, we hypothesize financial-statement users misinterpret an income statement gain (loss) arising from a change in credit risk as a positive...
(negative) signal and incorrectly assess the company’s risk. This leads to our first hypothesis:

**H1.** Presented with financial statements that recognize a fair value gain (loss) from a change in credit risk, financial-statement users will be more likely to **incorrectly** identify the company with credit deterioration (improvement) as having lower (higher) credit risk.

The role of relational disclosures in interpreting fair value gains and losses

Due to the placement and labeling of the recognized fair value gains and losses, we expect the accounting for credit risk changes to confuse even knowledgeable financial-statement users (Maines & McDaniel, 2000). While several professional investing groups encourage members to ignore the potentially misleading income statement effects (e.g., FEI, 2004; Moody’s, 2010), the SEC (2008, p. 6) offers a suggestion to mitigate the potential misunderstanding resulting from fair value accounting for liabilities. Specifically, the SEC calls for **improved** disclosure to benefit financial-statement users in interpreting the actual credit risk changes from the underlying accounting. While the SEC’s recommendation is very general and offers no specific guidelines for improvement, it is clear that it deems the present disclosure requirements as insufficient. This view is also consistent with recent evidence that SFAS No. 157 fair value disclosures fail to properly communicate information to non-sophisticated investors regarding risk (Clor-Proell et al., 2010).

One reason that basic disclosures might be insufficient is that they fail to address the source of the confusion underlying the fair value accounting. While research suggests that more detailed disclosures (Dietrich et al., 2001) and expanded disclosures would help users avoid judgment biases (Hodder et al., 2001), additional disclosure is likely to be ineffective if it does not provide necessary information to help unravel the counterintuitive income statement results. This is supported by research that finds users are more influenced by items reported in income than by disclosures (see Hirst, Hopkins, & Wahlen, 2004; Hodge, Kennedy, & Maines, 2004; Libby et al., 2006). In addition, the ability of disclosures to help users better interpret complex accounting is a function of how well the disclosures target the cause of the confusion (Koonce, Nelson, & Shakespeare, forthcoming; see also Libby, Bloomfield, & Nelson, 2002).

Disclosing the amount of the gain or loss associated with credit risk changes and the qualitative reasons for the change provide only basic information about credit risk gains and losses; they do not address the likely source of the misinterpretation. Based on the discussion for our first hypothesis, we believe the confusion arises from the seeming inconsistency between the gain/loss recognition and labeling and the underlying economics. Therefore, to be effective, disclosures must explicitly link the fair value gain (loss) to an increase (decrease) in the company’s credit risk. We investigate the extent to which providing relational disclosures improve financial-statement users’ abilities to interpret the economics underlying recognized fair value gains and losses arising from credit risk changes. This leads to our second hypothesis.

**H2.** Presented with additional disclosures that explain the relation between a recognized fair value gain (loss) and the underlying change in credit risk, financial-statement users will be more likely to **correctly** identify the company with credit deterioration (improvement) as having higher (lower) credit risk.

The differential effect of relational disclosures for fair value gains versus losses

H2 predicts that the presentation of relational disclosures will improve financial-statement users’ abilities to interpret the effects of fair value accounting for credit risk changes. Academic research, however, suggests that relational disclosures will be more effective in improving investors’ interpretations of fair value gains versus fair value losses. Recall that gains (losses) are likely to be initially interpreted as “good” (“bad”) news. As a whole, prior research provides support that disclosures will be more beneficial when they explain that gains are actually economic “bad” news versus when they explain that losses are actually economic “good” news.

In psychology, it is well documented that individuals tend to weight negative information more heavily than positive information in forming judgments. Siegrist and Cvetkovich (2001) offer several reasons: (1) negative information is typically more diagnostic than positive information; (2) individuals demonstrate a stronger tendency toward loss avoidance as compared to gain achievement; and (3) negative information is generally perceived as more credible than positive information.

In addition, Rothbart and Park (1986) demonstrate that it is more difficult to induce than to lose positive trait attributions. This finding in marketing research suggests that it is easier to persuade users who begin with the initial impression of “good news” to believe that information represents “bad news” (i.e., to lose a positive attribution) than to change a user’s initial impression of “bad news” to one of “good news” (i.e., to induce a positive attribution). Accounting research lends support to this notion. Mercer (2005) finds that voluntary management disclosures that present bad news are perceived as more credible relative to those that present good news. This supports the position that users tend to be more skeptical of management-presented good news relative to management-presented
bad news (c.f., Barton & Mercer, 2005). Finally, users are more likely to associate increased risk with losses such that the loss-risk association is greater than the gain-risk association (Hodder et al., 2001), implying the gain-risk association will be easier to unravel.

As a whole, research suggests that users will weigh more heavily, and be more likely to believe, disclosures presenting “bad” news. This latter finding is consistent with it being less difficult to lose an initial positive attribution than to change an initial negative impression to positive. If users initially interpret fair value gains as “good news” but subsequently read voluntary disclosures stating that a gain is actually “bad news,” this position is more plausible and credible than the position that losses represents “good news.” Thus, we examine whether relational disclosures are more effective in interpreting fair value gains versus fair value losses. This leads to our third hypothesis:

**H3.** The improvement from the provision of relational disclosures in financial-statement users’ abilities to **correctly** identify the company with credit deterioration (improvement) as having higher (lower) credit risk will be greater for fair value gains versus fair value losses.

Experimental method

**Design**

To test our three hypotheses, we employ a $2 \times 2$ between-participants design. The first factor, “Direction of Credit Risk Change,” relates to whether a company experiences a decrease or an increase in its own credit risk. We operationalize this factor by the recognized income statement effect. Specifically, we vary whether the company reports a fair value loss (arising from a credit risk decrease) or a fair value gain (arising from a credit risk increase). We operationalize the second factor, “Disclosure Type,” by varying whether the company provides basic disclosures or relational disclosures. Basic disclosures present the amount of and qualitative reason for a recognized fair value gain or loss (e.g., the gain “…is $18,309 and is solely due to a change in the company’s credit risk”). Relational disclosures provide the amount of and the directional effect associated with the reason for the fair value gain or loss (e.g., the gain “…is $18,309 and is predominantly due to a decrease in the company’s credit risk” (emphasis added)).

**Participants**

Participants in prior experiments on financial reporting have generally included analysts as sophisticated financial-statement users (Barton & Mercer, 2005; Hirst & Hopkins, 1998; Hopkins, 1996) or MBA students as unsophisticated financial-statement users (Clor-Proell et al., 2010; Maines & McDaniel, 2000). While recent research (Hewitt, 2010) finds no difference in the accuracy of analysts’ and MBA students’ earnings forecasts, Elliott, Hodge, Kennedy, and Pronk (2007) find that using MBA students in experiments is not appropriate when judgments involve recognition and integration of various concepts or relations.

Our task involves interpreting a reported gain or loss from accounting for liabilities at fair value in order to assess the change in the company’s credit risk. We believe that, in this context, CPAs are likely more sophisticated in their abilities to “undo” the fair value financial information to assess risk relative to MBA students. Therefore, we engage 184 CPAs as our participants. See participant demographic data in Table 1.

**Procedure**

We collected our data on the first day of a two-day continuing professional education seminar in the southeast United States and prior to a seminar on the fair value measurement standard (i.e., SFAS 157). Upon arrival at the conference facility, each participant located their seat in which a packet containing an instrument was already placed. One of the co-authors attended the conference and provided a short introduction requesting the attendees to voluntarily participate in a study that addressed fair value accounting measurements.

Participants were then instructed to open their packet which included: (1) a brief description indicating that they were to assume the role of a portfolio manager and to choose between one of two companies to add to a new client’s existing nine-stock portfolio based on the client-expressed risk preference; (2) background information on two hypothetical companies, including comparative financial statement excerpts and select financial ratios; and (3) a one-page question set related to the primary decision. After completing the question set, participants were instructed to not refer back to the provided financial information and were asked to complete a final two-page question set containing manipulation check, explanatory, and demographic questions. The co-author in attendance collected all of the completed packets at the end of the session.

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6. We note that this is a relatively weak form of disclosure manipulation. We wished to test the effectiveness of a disclosure that could be relatively costless and voluntarily adopted by management, which would be within the spirit of current disclosure requirements (i.e., would not require a change in standards) and would not increase cognitive processing costs. We believe that the choice fits all requirements and, if weaker relative to other choices, reduces our chances of finding a result.

8. As reported in Table 1, we collected years of experience as a CPA and the type of company for which they are currently employed. No significant differences were noted across conditions; and inclusion of overall or individual experience covariates does not alter any of the reported results or interpretations.

9. We conducted numerous pilot tests with accounting faculty, Ph.D. students, and MBA students from a private university. The preliminary findings using MBA students were similar to the results reported here for the two basic disclosure conditions (the only disclosure condition tested with MBA students). Specifically, 76% of the MBA students failed to identify the company with the lower credit risk.
Participants were instructed to assume the role of a portfolio manager and to choose between one of two companies to add to a client's existing nine-stock portfolio. Each participant was told that the choice was to be based solely on the client's risk concerns, and he/she should select the company with the lower credit risk. Participants learned that in the prior year, both companies had similar risk-return profiles, were of moderate risk, and had identical revenue recognition and accounting policies. In the current year, the companies were approximately the same size and had similar financial ratios (return on assets, debt-to-equity, return on equity, and revenue growth) before the recording of the fair value gain or loss due to a change in credit risk. One of the companies reported its liabilities at historical cost and experienced no change in credit risk during the year. The other company reported its liabilities at fair value.

Participants were randomly assigned to one of the four credit risk change-disclosure type conditions. To manipulate credit risk change, the "fair value" company reported either a gain or a loss from the change in the fair value of the liability. Specifically, the company recognized either (1) a fair value gain rising from a deterioration of the company's credit (i.e., a credit risk increase) or (2) a fair value loss arising from an improvement in the company's credit (i.e., a credit risk decrease). The credit risk change conditions provided comparable, mirrored changes in fair value.

For the disclosure type manipulation, participants were presented with either basic or relational disclosures. These basic disclosures presented the amount of the fair value gain (loss) and stated that it was due to a change in the company's credit risk. Relational disclosures presented the amount of the fair value gain (loss) and explicitly stated that the change was due to an increase (decrease) in the company's credit risk. Disclosures for the comparative, historical cost company were held constant across all conditions and included a statement indicating that the company had experienced no change in credit risk during the year. An excerpt of the instrument is presented in Appendix A.

After reading background information for each company, participants answered two sets of questions. The first asked participants to identify the company with the lower credit risk in the current year. Participants then listed the single most important factor, and any other factors, in support of their selection. The second question set included manipulation check, control, and demographic questions.

Our instrument was constructed such that, given our directive to select the lower risk company for inclusion in the portfolio, there was a correct response. Specifically, Milo (the historical cost company) has lower credit risk in the fair value gain condition while Grant (the fair value company) has lower credit risk in the fair value loss condition. In the prior year, both companies were of similar credit risk. In the current year, the only income statement and balance sheet differences between the two companies relate to the recognized gain (loss) arising from a change in credit risk for the fair value company (Grant).

Based upon the financial statements presented, the fair value company (Grant) reports higher (lower) profitability and a lower (higher) debt to equity ratio than the historical cost company (Milo). If a participant backs out the recognized gain (loss) for the fair value company, the two companies have the same profitability and debt to equity.
ratios. However, the interpretation of the economics underlying the reported gain or loss is critical to understanding risk changes. Particularly, we note that the recognized gain (loss) from the change in the fair value of liabilities reflects negative (positive) information about Grant. Once this negative (positive) information is considered, it is apparent that Grant is less (more) profitable and has greater (lower) credit risk than Milo. Table 2 provides the supporting financial details and explanation.

Findings

Tests of hypotheses

Participants should select the fair value (versus historical cost) company as having lower credit risk in the current year in the fair value loss (i.e., credit risk decrease) condition. In contrast, they should identify the historical cost (versus fair value) company as having lower credit risk in the current year in the fair value gain (i.e., credit risk increase) condition. The dependent variable used to test our hypotheses is an indicator variable capturing whether the participant correctly identified the company with the lower risk (i.e., he/she selected the company consistent with the underlying change in credit risk) or not (i.e., he/she selected the company consistent with the income statement effect). As a manipulation check, we asked participants whether the company accounting for its debt at fair value recognized a fair value loss, a fair value gain, or neither. Seventeen participants responded incorrectly and, accordingly, were eliminated from all analyses. Table 3, panel A reports the percentage of participants in each condition who misinterpreted the credit risk change/income statement effect relation, and Fig. 1 represents these findings graphically.

We find that, on average, 73.3% selected the company with higher risk, consistent with the participant incorrectly associating the fair value loss (gain) with increased (decreased) risk. Specifically, 71.1% of participants incorrectly chose the company with the higher credit risk in the decreased credit risk (i.e., loss) condition, whereas 74.5% incorrectly selected the company with the higher credit risk in the increased credit risk (e.g., gain) condition. The chi-square test on the overall result, reported in panel B, indicates that the percentage of participants who selected the company with higher risk is significantly greater than 50% ($\chi^2 = 19.60, p = 0.000$). Thus, H1 is supported.

H2 predicts that when relational disclosures are presented, participants will be more likely to correctly select the company with the lower risk consistent with properly interpreting the gain or loss arising from a change in the company’s credit risk. To examine this hypothesis, we compare the percentages of participants who correctly selected the company with and without relational disclosures. As inferred from Table 3, panel A, we find that participants provided with only basic disclosures, overall, correctly selected the lower risk company 26.7% of the time; in comparison, 51.1% of those presented with relational disclosures selected the lower risk company. As reported in panel C, we find a significant main effect for disclosure type ($\chi^2 = 10.45, p = 0.001$). Thus, H2 is supported.

H3 predicts a differential effect from the provision of relational disclosures. Specifically, H3 states that relational disclosures will be more effective in aiding participants in correctly identifying the company with lower risk when the company reports a fair value gain (credit risk increase) versus a loss (credit risk decrease). We posit that the percentage of participants correctly selecting the lower credit risk company will be greatest in the relational disclosures/credit risk increase condition, followed by the relational disclosures/credit risk decrease condition and lastly by the two basic disclosure conditions. Although we report the results of the interaction in the model in Table 3, panel C, we also present the results of a more appropriate contrast test due to the fact that we predict an ordinal interaction. The weights used in the planned contrast are $-2, -2, 1$, and 3 for the following conditions, respectively: basic disclosures/credit risk decrease, basic disclosure/credit risk increase, relational disclosures/credit risk decrease, and relational disclosures/credit risk increase. As reported in panel D, the planned contrast is significant ($\chi^2 = 6.92, p = 0.009$). Thus, H3 is supported.

Additional analyses

We note that even though relational disclosures significantly improve participants’ abilities to correctly identify the lower credit risk company, 50% of the participants (60% in the credit risk decrease condition and approximately 40% in the credit risk increase condition) continue to select the higher risk company for the portfolio. To obtain further insight into our participants’ responses, we reviewed the open-ended responses for all participants. First, following the instruction to select the company with the lower credit risk, we asked participants to state the primary reason for their selection and to offer any other supporting reasons (i.e., the open-ended responses). The

11 We use 50% as the comparison that would indicate participants chose randomly between the two companies. We note that this is a conservative benchmark given that an alternative benchmark would be 0 percent (100%) relative to the correct answer.
results are consistent with the above findings. Specifically, 70.5% of the participants who incorrectly selected the higher risk company indicated financial results as their primary reason while fewer than 10% indicated disclosures as a predominant reason. In contrast, 53.7% of the participants who correctly identified the lower risk company indicated disclosure information as the primary reason while only 16.4% used the financials as support for their position.12

Participants were asked to indicate the direction of the credit risk change (i.e., increase, decrease, or no change) for the fair value company. As reported in Table 4, panel A, only 25.0% of participants provided with basic disclosures and who correctly selected the company with the lower credit risk indicated the appropriate direction of the fair value company’s credit risk. In contrast, approximately 90.0% of participants provided with relational disclosures and who correctly identified the lower credit risk company also properly assessed the direction of the fair value company’s credit risk change. These findings suggest that relational disclosures improved participants’ abilities to interpret the income statement effect of credit risk changes.

Overall, our results demonstrate that relational disclosures improve users’ abilities to correctly identify the company with lower risk; however, the findings also suggest that relational footnote disclosures might be insufficient to overcome categorization preconceptions from the presentation and labeling of the fair value gains and losses.

**Conclusions**

Little attention has been given in academic research to the issue of reporting financial liabilities at fair value and, in particular, to the accounting for credit risk changes as gains and losses. Specifically, deterioration in a company’s own credit risk leads to the reporting of a fair value gain, while improvement in a company’s own credit risk leads to the reporting of a fair value loss. Prior research suggests that financial-statement users develop perceptions about the attributes of financial statement items based on presentation (e.g., Hopkins, 1996) and labeling (e.g., Maines & McDaniel, 2000). Thus, financial-statement users could be misled by the reporting of such changes in the income statement (IASB, 2009).
In this paper, we provide experimental findings on financial-statement users’ interpretations of gains and losses from changes in the fair value of liabilities, showing that users are misled by the reported gains and losses. Specifically, the majority of participants incorrectly associated gains (losses) arising from a change in a liability’s fair value with a(n) decrease (increase) in credit risk. Proper interpretation of the fair value gains and losses was partially achieved by relational disclosures that stated the directional effect of the change in the company’s credit risk on the income statement. In addition, relational disclosures were more effective in mitigating the misinterpretations for fair value gains than for fair value losses.

These results are consistent with prior research that demonstrates it is more difficult to change an initial “bad news” view to a positive one. However, even relational disclosures are not sufficient to eliminate the misperceptions. This suggests, consistent with extant academic research, that while disclosure is important, it does not appear to be a substitute for recognition (see Hirst et al., 2004; Hodge et al., 2004; Libby et al., 2006; Maines & McDaniel, 2000).

This study is relevant to regulators and standard setters. Our results suggest that disclosure improvements alone may not mitigate investors’ misinterpretations of fair value gains and losses related to liabilities. Specifically, the results suggest that perhaps standard setters should consider excluding credit risk gains and losses from the income statement. This research may also be of value to the IASB and FASB as they deliberate the financial statement presentation project.

Our study provides interesting avenues for future research. First, future research, along the lines of Barton and Mercer (2005), could examine further the differential interpretation of good news and bad news explanations for items presented in the footnotes. Second, research could investigate whether financial-statement users interpret recognized gains and losses arising from changes in fair values of liabilities differently for decisions other than risk assessments. Third, consistent with the SEC’s position that “assistance in the form of guidance, education and training is warranted” (2008, p. 203), future research could examine the effects of other types of financial statement presentation and disclosure solutions on financial-statement users’ understanding of the recognized gains and losses arising from changes in fair values.

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Appendix A. Supplementary material

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.aos.2011.03.004.

References
