Market pricing of fair value measurements for non-financial firms

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ABSTRACT

Prior research has examined the value relevance of fair value measurements for financial firms. However, prior research has not examined the value relevance of fair value measurements for non-financial firms since the issuance of SFAS 157. Non-financial firms represent approximately 80% of firms, and they hold significant amounts of fair value assets. Therefore, it is important to document investors' perceptions of non-financial firms' fair value measurements. This study provides evidence on the value relevance of fair value asset and liability measurements for non-financial firms. The results show that Level 1 and 2 fair value asset measurements are value relevant and positively associated with stock prices. However, Level 3 fair value measurements are negatively associated with stock prices. This is inconsistent with both predictions and the results for financial firm in prior studies and in this study. This result suggests that investors penalize non-financial firms for investing in Level 3 fair value assets, perhaps because investors perceive that better investments are available. Finally, the results show that in contrast to evidence for financial firms, Level 3 fair value liability measurements are not value relevant. Overall this study documents and provides evidence on the value relevance of fair value measurements for non-financial firms which has not been explored by prior research.

Keywords: Fair value, value relevance, capital markets, fair value assets, fair value liabilities

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INTRODUCTION

Statement of Financial Accounting Standards 157 (SFAS 157, currently Accounting Standards Codification 820) provides a framework for fair value measurement and disclosure and was required for financial reporting periods after November 15, 2007. In January 2010, the FASB updated this standard with Accounting Standards Update (ASU) 2010-06. The update amended ASC 820 to require new disclosure related to fair value measurements as a response to criticisms of fair value accounting following the financial crisis that began in 2008. This study examines the value relevance of fair value measurements for non-financial firms. Specifically, the study examines the relation between stock prices and Level 1, 2, and 3 fair value assets and liabilities.

Several studies have examined the value relevance of fair value assets and liabilities for financial firms. However, research examining the value relevance of fair value measurements for non-financial firms is limited to studies prior to SFAS 157. Because there are about four times as many non-financial firms, and they hold significant amounts fair value assets and liabilities, examining value relevance of fair value measurements of non-financial firms is warranted. Song, Thomas, and Yi (2010) examine the value relevance of fair value measures for the three levels of disclosure. They find that all three levels of fair value measurements are value relevant, and that Level 3 assets are less value relevant that Level 1 and Level 2 assets. This finding is consistent with Level 3 fair value asset measurements being less reliable. They find similar results for Level 3 liabilities. However, the study is based only on quarterly data from 2008. Goh, Le, Ng, and Yong (2015) extend Song et al. (2010) and provide evidence on the value relevance of fair value measurements following 2008 and show that the results in Song et al. (2010) hold.

Similar to Goh et al. (2015) and Song et al. (2010) this study examines the value relevance of fair value assets and liabilities. Unlike previous studies that focus on financial institutions, this study examines the value relevance of non-financial firms. While prior research has focused on the value relevance of fair value measurements for financial firms due to financial firms holding relatively more financial assets and liabilities than non-financial firms, the magnitude of fair value assets and liabilities held by non-financial firms is nontrivial. Therefore this study examines whether the value relevance of non-financial firms is similar to that of financial firms. Following prior studies, this study regresses stock price on earnings and several balance sheet determinants including both non-fair value and fair value assets and liabilities.

The results show that Level 1 and 2 fair value asset measurements are value relevant and positively associated with stock prices. However, Level 3 fair value measurements are negatively associated with stock prices. This is inconsistent with both predictions and the results for financial firm in prior studies and in this study. This result suggests that investors penalize non-financial firms for investing in Level 3 fair value assets, perhaps because investors perceive that better investments are available. Finally, the results show that in contrast to evidence for financial firms, Level 3 fair value liability measurements are not value relevant. Overall, this study contributes to the literature regarding fair value accounting by extending Song et al. (2010) and Goh et al. (2015) to provide evidence on the value relevance of non-financial firms for the period of 2008 to 2014.

The rest of this study is organized as follows. Section 2 discusses prior research and presents the hypotheses. Section 3 describes the sample selection and data used in this study. Section 4 presents the research design and Section 5 provides the results. Section 6 concludes.

1. PRIOR RESEARCH AND HYPOTHESES DEVELOPMENT

The use of fair value accounting has been a subject of debate due to the trade-off between relevance and reliability in financial reporting. While fair value accounting potentially provides more relevant information by valuing assets and liabilities at their current value rather than at historical cost, the increase in relevance may be offset or overcome by decreased reliability. Fair value measurements often require estimation which decreases the reliability of the measurements reported in the balance sheet. This is especially true of Level 3 fair value measurements that rely on unobservable inputs used by firms, often in inactive markets. In November 2007, SFAS 157 (currently ASC 820) was issued. SFAS 157 did not introduce fair value accounting. Instead, SFAS 157 provided clarification regarding the definition of fair value and measurements of fair value. As a result, fair value is defined as "the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date." SFAS 157 also introduced a hierarchy for fair value measurements.

The hierarchy is based on the inputs to be used in measuring fair value assets and liabilities and provides three levels. The levels are based on the reliability of the inputs with Level 1 inputs being the most reliable. Level 1 inputs have the least subjectivity because that are based on quoted prices in active markets for identical assets and liabilities. Level 2 inputs are based on observable inputs, but for similar assets and liabilities, rather than identical assets, or for identical assets in inactive markets. Therefore, identifying Level 2 inputs introduces some level of subjectivity. Finally, Level 3 inputs are unobservable and require the greatest amount of estimation by management.

SFAS 157 requires firms to disclose fair value measurements based on the three level hierarchy. This provides financial statement users with information regarding the inputs used to measure assets and liabilities at fair value, and reduce information asymmetry between financial statement preparers and users. During and following the recent financial crisis, fair value accounting received a large amount of criticism. As a result, in January 2010 the FASB issued ASU 2010-06. ASU 2010-06 responded to the criticisms of fair value accounting by increasing disclosure requirements for firms to make financial reporting more transparent and reduce information asymmetry between preparers and users.

Prior research has examined the investors' perceptions of fair value measurements in a variety of ways. Riedl and Serafeim (2011) find that Level 3 fair value measurements have higher information risk than either Level 1 or Level 2 measurements, measured by examining betas and bid-ask spreads. Ryan (2008) finds that without quantitative disclosures, it is difficult to compare Level 3 fair value measurements across firms. Laux and Leuz (2009) do not find evidence that fair value accounting caused the financial crises. Value relevance studies related to fair value of securities prior to SFAS 157 (Barth, 1994; Barth, Beaver, and Landsman, 1996; Eccher, Ramesh, and Thiagarajan, 1996; Barth and Clinch, 1998) find that the market finds fair value estimates to be value relevant. More recently research has examined the value relevance of fair value measurements following SFAS 157. Song et al. (2010) examine the value relevance of fair value measurements, and find that all three levels of fair value measurements are value relevant. Additionally, they find that Level 3 assets are less value relevant that Level 1 and Level 2 assets. Thus, it appears that consistent with the fair value hierarchy, investors perceive Level 3 fair value asset measurements as less reliable. They find similar results for Level 3 liabilities. Finally, Song et al. (2010) find that value relevance is greater for firms with stronger corporate governance. Goh et al. (2015) extend Song et al., which was based on data only from 2008. Goh

et al. (2015) provide evidence that the results in Song et al. (2010) hold in more recent periods. However, the difference in value relevance between Level 3 fair value measurements and Level 1 and 2 fair value measurements appears to reduce over time.

Research related specifically to non-financial firms has been limited. Barth and Clinch (1998) examined disclosures in markets other than the United States for non-financial firms and found that revalued investments are consistently and significantly associated with share price. Simko (1999) examined the effect of fair value of financial instruments under accounting standards in place prior to current disclosure requirements. Based upon disclosures required under SFAS 107, financial instrument liability disclosures were significantly associated with equity values depending upon the year of study and financial instrument asset disclosures did not impact equity values. These results reflect lack of relevance of the disclosures to the market and the need for more substantive information.

In comparison to financial firms, which comprise similar types of firms in a small segment of SIC codes, non-financial firms include dissimilar firms in vastly different industries. Non-financial firms have a different profile of assets and liabilities from financial firms. Therefore, it is not clear that investors view fair value measurements similarly for non-financial firms compared to financial firms. On average, non-financial firms hold 17% of total assets as fair value assets and 5% of liabilities at fair value. In comparison, financial firms hold a larger percentage of assets, 22%, at fair value and only 2% of liabilities at fair value (Goh et al. 2015). Additionally, in contrast to non-financial firms, financial firms hold financial assets that are fair valued as part of their normal business transaction process. For example, in 2014, Wells Fargo held 22.4% of total asset base in fair value assets recorded on a recurring basis, which excludes cash and due from banks (1.1% of total assets). These assets are classified as federal funds sold, securities purchased under resale agreements, trading assets, investment securities (available-for-sale and held-to-maturity), mortgages held for sale, and loans held for sale. However, cash and cash equivalents are a nominal percentage of total asset base for financial firms. In comparison, large non-financial firms often include cash and cash equivalents in footnote disclosures of fair value assets, and cash and cash equivalents for non-financial firms can be a significant component of Level 1 asset balances or a significant component of total assets (Sanchez and Yurdagul, 2013). For example, Starbucks held 20.5% of asset base in fair value assets recorded on a recurring basis, including cash and cash equivalents (15.8% of total assets). The remainder of fair value assets recorded on a recurring basis includes short- and long-term available-for-sale securities, trading securities, and short- and long-term derivative assets. Smaller non-financial firms are less likely to include cash and equivalents in footnote disclosures of fair value assets. Regardless of the mix of disclosure practices, non-financial firms hold significant balances of cash and cash equivalents and fair value asset investments that the market deems relevant to share price determination. Given the differences between financial firms and non-financial firms, it is not clear that prior findings on value relevance of fair value measurements is generalizable to non-financial firms. Therefore, this study examines the value relevance of fair value measurements for non-financial firms and based on prior research that finds Level 3 fair value measurements are less value relevant for financial firms, the hypotheses are as follows.

H1: The value relevance of Level 1and Level 2 fair value assets for non-financial firms is greater than the value relevance of Level 3 fair value assets.

H2: The value relevance of Level 1and Level 2 fair value liabilities for non-financial firms is greater than the value relevance of Level 3 fair value liabilities.

2. SAMPLE SELECTION AND DESCRIPTIVE STATISTICS

3.1 Sample Selection

The sample of firms was chosen by beginning with all firms identified in Compustat between 2008 and 2014 inclusive. The definition of financial firms follows Goh et al. (2015) by coding banks (SIC 6000 to 6299) as financial firms.[1] The sample further excludes firms that do not hold any fair value assets. This selection process results in 17,316 firm-year observations, which are comprised of 4,320 unique firms with annual fair value data for fiscal years from 2008 to 2014. This full sample includes 13,512 firm-year observations for non-financial firms (3,492 unique firms) and 3,804 firm-year observations for financial firms (828 unique firms).

3.2 Descriptive Statistics

Table 1, Panel 1A describes the sample including mean values for stock price, non-fair value assets and liabilities, and fair value assets and liabilities with all values on a per share basis for financial and non-financial firms. The mean stock price per share (PRICE) is 27.57. Mean non-fair value assets (NFVA) are 51.18 with fair value asset means at lower amounts for Level 1 of 1.61 (FVA1); Level 2 of 7.42 (FVA2); and Level 3 of 0.40 (FVA3). Mean non-fair value liabilities (NFVL) are 45.27 with fair value liability means also at lower amounts for Level 1 of 0.14 (FVL1); Level 2 of 0.73 (FVL2); and Level 3 of 0.10 (FVL3).

Table 1, Panel 1B describes the sample including mean values for stock price, non-fair value assets and liabilities, and fair value assets and liabilities with all values on a per share basis for only financial firms. The mean stock price per share (PRICE) is 19.60. Mean non-fair value assets (NFVA) are 127.38 with fair value asset means at lower amounts for Level 1 of 2.70 (FVA1); Level 2 of 30.16 (FVA2); and Level 3 of 1.03 (FVA3). Mean non-fair value liabilities (NFVL) are 141.12 with fair value liability means also at lower amounts for Level 1 of 0.41 (FVL1); Level 2 of 2.03 (FVL2); and Level 3 of 0.20 (FVL3).

Table 1, Panel 1C describes the sample including mean values for stock price, non-fair value assets and liabilities, and fair value assets and liabilities with all values on a per share basis for only non-financial firms. The mean stock price per share (PRICE) is 29.81. Mean non-fair value assets (NFVA) are 29.73 with fair value asset means at lower amounts for Level 1 of 1.30 (FVA1); Level 2 of 1.01 (FVA2); and Level 3 of 0.23 (FVA3). Mean non-fair value liabilities (NFVL) are 18.29 with fair value liability means also at lower amounts for Level 1 of 0.07 (FVL1); Level 2 of 0.37 (FVL2); and Level 3 of 0.07 (FVL3).

Table 1, Panel 2A provides information on the relative size of fair value asset and liabilities relative to total assets and liabilities for all firms. In order of relative size, fair value assets Level 2, Level 1, and Level 3 assets are 8.30%, 7.45%, and 1.13% respectively. Fair value liabilities are lower than fair value assets with Level 1 (FVL1) of 0.51%, Level 2 (FVL2) of 2.01%, and Level 3 (FVL3) of 0.78%. Similar to Goh et al., financial firms (Panel 2B) hold a larger percentage of assets, 20.44%, at fair value and smaller percentage of liabilities, 2.07%, at

[1] Firms with SIC 6300 to 6499, which are insurance firms, are also excluded from the sample.

fair value, compared to non-financial firms' (Panel 2C) fair value assets, 15.87%, and fair value liabilities, 3.65%.

3. RESEARCH DESIGN

Following Barth and Clinch (1998), value relevance is measured as the relation between stock price and financial statement measurements. Barth and Clinch (1998) use the following model which deflates independent variables by number of common shares outstanding:

$$PRICE_{it} = \beta_0 + \beta_1 BV_{it} + \beta_2 E_{it} + \varepsilon_{it} \quad (1)$$

PRICE is stock price per share, BV is book value of equity, and E is earnings. Following Song et al. (2010) which deconstructs book value of equity into fair value and non-fair value assets and liabilities as reported on the balance sheet and to test for value relevance of fair value measurements the following model is used:[2]

$$PRICE_{it} = \beta_0 + \beta_1 NFVA_{it} + \beta_2 FVA1_{it} + \beta_3 FVA2_{it} + \beta_4 FVA3_{it} + \beta_5 NFVL_{it} + \beta_6 FVL1_{it} + \beta_7 FVL2_{it} + \beta_8 FVL3_{it} + \beta_9 EPS_{it} + \varepsilon_{it} \quad (2)$$

The dependent variable, share price (PRICE), is determined as closing price at fiscal year-end (PRCC_F). Explanatory variables include both fair value assets and liabilities by level, scaled by common shares outstanding (CSHO): Level 1 (FVA1, FVL1); Level 2 (FVA2, FVL2); and Level 3 (FVA3, FVL3)[3]. NFVA (AT minus AQPL1, AOL2, and AUL3, scaled by CSHO) and NFVL (LT minus LQPL1, LOL2, and LUL3, scaled by CSHO) represent non-fair value assets and liabilities, respectively, and EPS is earnings per share at fiscal year-end (IB scaled by CSHO). All variables are represented on a per share basis. Prior research on financial firms, suggests that coefficients of fair value assets (liabilities) will be positive (negative) and significantly different from zero. Consistent with hypotheses, Level 1 and Level 2 fair value measurements are expected to be more value relevant and expect that β_2 and β_3 are greater than β_4. This study also examines whether these coefficients differ from the theoretically predicted value of 1. Additionally, it is expected that β_6 and β_7 are closer to -1 than β_8, and this study also examines whether these coefficients differ from the theoretically predicted value of -1.

4. RESULTS

First, the authors replicate the results in Goh et al. for financial firms during the sample period. Table 2 reports the results of Model (2) for financial firms. Consistent with expectations, all asset measurements are positive and significantly different from zero. Additionally, the coefficient on FVA1 is not significantly different from the theoretical value of 1. However, the coefficients on FVA2 and FVA3 are significantly different from 1. Also, FVA1 is significantly greater than FVA2. However, FVA1 is not significantly greater than FVA3. Given that our sample includes more post-crisis years relative to the Goh et al. sample, our finding that FVA1 is not significantly greater than FVA3 seems to be consistent with their finding that the difference

[2] Song et al. (2010) combine Level 1 and Level 2 liabilities. This study separates these measurements.
[3] FVA1, FVA2, FVA3, FVL1, FVL2, and FVL3 are AQPL1, AOL2, AUL3, LQPL1, LOL2, and LUL3, respectively, scaled by number of shares outstanding (CSHO).

in pricing between Level 1 and Level 3 fair value assets reduces over time. With respect to liabilities, as expected all liability measures are negative and significant, and only FVL2 is significantly different from the theoretical value of -1. Finally, FVL1 is significantly more negative than FVL2, but not significantly different from FVL3. Overall, these results are consistent with prior research that shows fair value measurements are value relevant and that Level 1 are most reliable.

Next the authors examine value relevance of fair value measurements for non-financial firms. Table 3 reports the results of Model (2) for non-financial firms. Consistent with H1, more reliable fair value asset measurement have great value relevance. The coefficient on FVA1 is 1.086 and is significantly different from zero, the coefficient on FVA2 is 0.988 and significantly different from zero, and the coefficient on FVA3 is -0.780 and is significantly different from zero. Additionally, the coefficients on FVA1 and FVA2 are not significantly different from the theoretical value of 1. Of note is the negative coefficient on FVA3. While it is expected that Level 3 fair value assets are less value relevant than Level 1 and Level 2 fair value assets, the negative coefficient on Level 3 fair value assets is unexpected. The negative and significant coefficient suggests that Level 3 fair value assets are less reliable than Level 1 and Level 2 assets. In fact, the negative coefficient suggests investors perceive that Level 3 fair value assets for non-financial firms are overstated and more Level 3 fair value assets results in lower stock prices. Therefore, contrary to financial firms, the market seems to penalize non-financial firms for investing in Level 3 assets. The market may penalize non-financial firms for investing in more volatile unobservable investments, when better investments are available. Therefore investing in Level 3 assets could be seen as mismanagement of capital resources.

Table 3 also provides evidence on the value relevance of fair value liabilities for non-financial firms. Only FVL2 is negative and significant as expected. FVL1 is not significantly different from zero or -1. Similar to FVA3, FVL3 is not significantly different form zero, but with the opposite sign than expected. Finally, coefficients on Level 1 and Level 2 fair value liabilities are not significantly different from the coefficient on Level 3 fair value liabilities. This result is not consistent with H2. These results suggest that the market is uncertain about the valuation of fair value liabilities and that only Level 2 liabilities, which comprise the largest mean value of total fair value liabilities are value relevant.

Overall, the results in Table 3 show some differences in value relevance of fair value measurements for non-financial firms compared to results in prior studies. Specifically, investors penalize non-financial firms for holding Level 3 assets. Additionally, Level 1 and 2 fair value liability measurements are not more value relevant than Level 3 fair value liability measurements. It is possible that the market discounts Level 1 and Level 3 fair value liabilities altogether because non-financial firms hold very little of them.

Table 4 presents results to formally test for differences in value relevance of fair value measurements between non-financial and financial firms. Model 2 is modified by adding the main effect for FINANCIAL, and dummy variable equal to 1 for financial firms, and zero otherwise. Additionally, interactions with all variables in Model 2 and FINANCIAL are included to test for differences between non-financial and financial firms. This model is estimated for the full sample of non-financial and financial firms. The results in Table 4show that the only differences in value relevance between non-financial and financial firms is related to Level 3 measurements. The coefficient for FVA3 is significantly greater for financial firms as the interaction term FVA3*FINANCIAL is significantly positive. Also, the coefficient for FVL3 is significantly less for financial firms as the interaction term FVL3*FINANCIAL is significantly

negative. Overall, the results show that fair value measurements for Level 3 inputs differs for non-financial firms relative to financial firms.

5. CONCLUSION

Prior research has examined the value relevance of fair value measurements for financial firms. However, prior research has not examined the value relevance of fair value measurements for non-financial firms since the issuance of SFAS 157. Non-financial firms represent approximately 80% of firms, and they hold significant amounts of fair value assets. Additionally, it is not clear that fair value measurements are priced similar for non-financial firms compared to financial firms. Therefore, it is important to document investors' perceptions of non-financial firms' fair value measurements.

This study provides evidence on the value relevance of fair value asset and liability measurements for non-financial firms. The results show that Level 1 and 2 fair value asset measurements are value relevant and positively associated with stock prices. However, Level 3 fair value measurements are negatively associated with stock prices. This is inconsistent with both predictions and the results for financial firm in prior studies and in this study. This result suggests that investors penalize non-financial firms for investing in Level 3 fair value assets, perhaps because investors perceive that better investments are available. Finally, the results show that in contrast to evidence for financial firms, Level 3 fair value liability measurements are not value relevant. Overall this study documents and provides evidence on the value relevance of fair value measurements for non-financial firms which has not been explored by prior research.

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TABLE 1
Descriptive Statistics

Panel 1A: test variables (per share basis) for full sample

Variable	N	Mean	StdDev	25th percentile	Median	75th percentile
PRICE	17,316	27.57	23.14	11.24	19.94	36.36
NFVA	17,316	51.18	64.25	10.89	29.22	66.40
FVA1	17,316	1.61	5.40	0.00	0.23	1.47
FVA2	17,316	7.42	20.37	0.00	0.22	3.57
FVA3	17,316	0.40	2.15	0.00	0.00	0.02
NFVL	17,316	45.27	72.64	4.62	16.65	49.93
FVL1	17,316	0.14	1.38	0.00	0.00	0.00
FVL2	17,316	0.73	6.26	0.00	0.00	0.10
FVL3	17,316	0.10	0.72	0.00	0.00	0.00
EPS	17,316	1.11	2.29	0.18	0.96	2.08

Panel 1B: test variables (per share basis) for financial firms sample

Variable	N	Mean	StdDev	25th percentile	Median	75th percentile
PRICE	3,804	19.60	15.73	9.66	14.71	23.59
NFVA	3,804	127.38	91.17	68.32	111.29	163.41
FVA1	3,804	2.70	10.56	0.00	0.07	0.88
FVA2	3,804	30.16	34.66	7.94	20.15	40.10
FVA3	3,804	1.03	3.78	0.00	0.00	0.35
NFVL	3,804	141.12	103.09	72.89	124.25	181.88
FVL1	3,804	0.41	2.79	0.00	0.00	0.00
FVL2	3,804	2.03	12.97	0.00	0.00	0.07
FVL3	3,804	0.20	1.43	0.00	0.00	0.00
EPS	3,804	1.13	1.74	0.42	0.99	1.80

Panel 1C: test variables (per share basis) for non-financial firms sample

Variable	N	Mean	StdDev	25th percentile	Median	75th percentile
PRICE	13,512	29.81	24.37	12.00	22.50	39.84
NFVA	13,512	29.73	29.26	8.44	20.86	41.40
FVA1	13,512	1.30	2.35	0.00	0.30	1.58
FVA2	13,512	1.01	2.63	0.00	0.07	0.78
FVA3	13,512	0.23	1.33	0.00	0.00	0.00
NFVL	13,512	18.29	21.37	3.29	10.87	24.95
FVL1	13,512	0.07	0.47	0.00	0.00	0.00
FVL2	13,512	0.37	1.48	0.00	0.00	0.10
FVL3	13,512	0.07	0.29	0.00	0.00	0.00
EPS	13,512	1.10	2.42	0.08	0.95	2.18

TABLE 1 (Continued)

Panel 2A: relative size of fair value assets and liabilities

Variable	N	Mean	StdDev	25th percentile	Median	75th percentile
FVA/total assets	17,316	16.87%	21.96%	1.11%	8.13%	23.80%
FVA1/total assets	17,316	7.45%	15.55%	0.00%	0.60%	7.13%
FVA2/total assets	17,316	8.30%	14.37%	0.00%	0.73%	11.63%
FVA3/total assets	17,316	1.13%	7.25%	0.00%	0.00%	0.05%
FVL/total liabilities	17,316	3.30%	13.26%	0.00%	0.06%	1.08%
FVL1/total liabilities	17,316	0.51%	4.40%	0.00%	0.00%	0.00%
FVL2/total liabilities	17,316	2.01%	11.15%	0.00%	0.00%	0.40%
FVL3/total liabilities	17,316	0.78%	5.17%	0.00%	0.00%	0.00%
ROA	17,316	1.74%	16.42%	0.42%	2.52%	6.62%

Panel 2B: relative size of fair value assets and liabilities financial firms sample

Variable	N	Mean	StdDev	25th percentile	Median	75th percentile
FVA/total assets	3,804	20.44%	15.49%	10.45%	17.52%	26.49%
FVA1/total assets	3,804	2.57%	8.98%	0.00%	0.05%	0.73%
FVA2/total assets	3,804	16.95%	12.83%	7.68%	15.33%	23.92%
FVA3/total assets	3,804	0.92%	5.32%	0.00%	0.00%	0.27%
FVL/total liabilities	3,804	2.07%	9.85%	0.00%	0.00%	0.14%
FVL1/total liabilities	3,804	0.47%	3.78%	0.00%	0.00%	0.00%
FVL2/total liabilities	3,804	1.14%	6.68%	0.00%	0.00%	0.07%
FVL3/total liabilities	3,804	0.47%	4.93%	0.00%	0.00%	0.00%
ROA	3,804	1.18%	5.55%	0.40%	0.74%	1.04%

Panel 2C: relative size of fair value assets and liabilities for non-financial firms sample

Variable	N	Mean	StdDev	25th percentile	Median	75th percentile
FVA/total assets	13,512	15.87%	23.36%	0.71%	4.52%	21.53%
FVA1/total assets	13,512	8.82%	16.70%	0.01%	1.18%	9.84%
FVA2/total assets	13,512	5.86%	13.83%	0.00%	0.22%	3.08%
FVA3/total assets	13,512	1.19%	7.70%	0.00%	0.00%	0.00%
FVL/total liabilities	13,512	3.65%	14.05%	0.00%	0.14%	1.46%
FVL1/total liabilities	13,512	0.52%	4.56%	0.00%	0.00%	0.00%
FVL2/total liabilities	13,512	2.26%	12.10%	0.00%	0.01%	0.57%
FVL3/total liabilities	13,512	0.87%	5.23%	0.00%	0.00%	0.00%
ROA	13,512	1.89%	18.35%	0.46%	3.95%	7.71%

TABLE 1 (Continued)

PRICE = stock price at the end of fiscal year end
NFVA = non-fair value assets (AT-AQPL1-AOL2-AUL3), scaled by common shares outstanding (CSHO)
FVA1 = Level 1 fair value assets (AQPL1), scaled by common shares outstanding (CSHO)
FVA2 = Level 2 fair value assets (AOPL2), scaled by common shares outstanding (CSHO)
FVA3 = Level 3 fair value assets (AUL3), scaled by common shares outstanding (CSHO)
NFVL = non-fair value liabilities (LT-LQPL1-LOL2-LUL3), scaled by common shares outstanding (CSHO)
FVL1 = Level 1 fair value liabilities (AQPL1), scaled by common shares outstanding (CSHO)
FVL2 = Level 2 fair value liabilities (AOPL2), scaled by common shares outstanding (CSHO)
FVL3 = Level 3 fair value liabilities (AUL3), scaled by common shares outstanding (CSHO)
EPS = income before extraordinary items (IB), scaled by common shares outstanding (CSHO)
FVA1/total assets = Level 1 fair value assets (AQPL1), scaled by total asssets (AT)
FVA2/total assets = Level 2 fair value assets (AOL2), scaled by total asssets (AT)
FVA3/total assets = Level 3 fair value assets (AUL3), scaled by total asssets (AT)
FVL/total liabilities = sum of Levels 1, 2, and 3 fair value liabilities (LQPL1+LOL2+LUL3), scaled by total liabilities (LT)
FVL1/total liabilities = Level 1 fair value liabilities (LQPL1), scaled by total liabilities (LT)
FVL2/total liabilities = Level 2 fair value liabilities (LOL2), scaled by total liabilities (LT)
FVL3/total liabilities = Level 3 fair value liabilities (LUL3), scaled by total liabilities (LT)
ROA = income before extraordinary items (IB), scaled by total assets (AT)

Table 2

Value Relevance of Fair Values Hierarchy of FAS No. 157 for Financial Firms

DV= Price			
	Coeff.	**p-value**	
Intercept	5.990	(0.000)	***
NFVA	0.823	(0.000)	***
FVA1	0.944	(0.000)	***
FVA2	0.821	(0.000)	***
FVA3	0.714	(0.000)	***
NFVL	-0.846	(0.000)	***
FVL1	-1.159	(0.000)	***
FVL2	-0.792	(0.000)	***
FVL3	-0.803	(0.001)	***
EPS	3.671	(0.000)	***
Year Fixed Effects	Yes		
N	3804		
Adjusted R2	0.5530		
Coefficient Comparisons			
Test of	**F-stat**	**p-value**	
FVA1=FVA2	8.48	0.004	***
FVA1=FVA3	2.05	0.153	
FVA2=FVA3	0.49	0.486	
FVA1=1	0.35	0.552	
FVA2=1	5.7	0.017	**
FVA3=1	3.35	0.068	*
FVL1=FVL2	6.63	0.010	**
FVL1=FVL3	1.79	0.181	
FVL2=FVL3	0	0.966	
FVL1=-1	0.91	0.341	
FVL2=-1	6.31	0.012	**
FVL3=-1	0.61	0.435	

TABLE 2 (Continued)

OLS regression is used with clustered standard errors by firm. ***,**, and * indicate two-tailed significance at 0.01, 0.05, and 0.10 levels, respectively.
PRICE = stock price at the end of fiscal year end

NFVA = non-fair value assets (AT-AQPL1-AOL2-AUL3), scaled by common shares outstanding (CSHO)

FVA1 = Level 1 fair value assets (AQPL1), scaled by common shares outstanding (CSHO)

FVA2 = Level 2 fair value assets (AOPL2), scaled by common shares outstanding (CSHO)

FVA3 = Level 3 fair value assets (AUL3), scaled by common shares outstanding (CSHO)

NFVL = non-fair value liabilities (LT-LQPL1-LOL2-LUL3), scaled by common shares outstanding (CSHO)

FVL1 = Level 1 fair value liabilities (AQPL1), scaled by common shares outstanding (CSHO)

FVL2 = Level 2 fair value liabilities (AOPL2), scaled by common shares outstanding (CSHO)

FVL3 = Level 3 fair value liabilities (AUL3), scaled by common shares outstanding (CSHO)

EPS = income before extraordinary items (IB), scaled by common shares outstanding (CSHO)

Table 3
Value Relevance of Fair Values Hierarchy of FAS No. 157 for Non-Financial Firms

DV= Price			
	Coeff.	**p-value**	
Intercept	21.129	(0.000)	***
NFVA	0.543	(0.000)	***
FVA1	1.086	(0.000)	***
FVA2	0.988	(0.000)	***
FVA3	-0.780	(0.000)	***
NFVL	-0.410	(0.000)	***
FVL1	-0.283	(0.534)	
FVL2	-0.599	(0.003)	***
FVL3	0.881	(0.321)	
EPS	3.898	(0.000)	***
Year Fixed Effects	Yes		
N	13512		
Adjusted R2	0.4290		
Coefficient Comparisons			
Test of	**F-stat**	**p-value**	
FVA1=FVA2	0.21	0.646	
FVA1=FVA3	129.28	0.000	***
FVA2=FVA3	79.53	0.000	***
FVA1=1	0.42	0.516	
FVA2=1	0.01	0.943	
FVA3=1	261.23	0.000	***
FVL1=FVL2	0.39	0.533	
FVL1=FVL3	1.34	0.247	
FVL2=FVL3	2.64	0.104	
FVL1=-1	2.49	11.480	
FVL2=-1	4.08	0.043	**
FVL3=-1	4.48	0.034	**

TABLE 3 (Continued)

OLS regression is used with clustered standard errors by firm. ***,**, and * indicate two-tailed significance at 0.01, 0.05, and 0.10 levels, respectively.

PRICE = stock price at the end of fiscal year end

NFVA = non-fair value assets (AT-AQPL1-AOL2-AUL3), scaled by common shares outstanding (CSHO)
FVA1 = Level 1 fair value assets (AQPL1), scaled by common shares outstanding (CSHO)
FVA2 = Level 2 fair value assets (AOPL2), scaled by common shares outstanding (CSHO)
FVA3 = Level 3 fair value assets (AUL3), scaled by common shares outstanding (CSHO)
NFVL = non-fair value liabilities (LT-LQPL1-LOL2-LUL3), scaled by common shares outstanding (CSHO)
FVL1 = Level 1 fair value liabilities (AQPL1), scaled by common shares outstanding (CSHO)
FVL2 = Level 2 fair value liabilities (AOPL2), scaled by common shares outstanding (CSHO)
FVL3 = Level 3 fair value liabilities (AUL3), scaled by common shares outstanding (CSHO)
EPS = income before extraordinary items (IB), scaled by common shares outstanding (CSHO)

Table 4
Value Relevance of Fair Values Hierarchy of FAS No. 157 for All Firms

Full Sample			
DV= Price			
	Coeff.	**p-value**	
Intercept	20.130	(0.000)	***
NFVA	0.544	(0.000)	***
FVA1	1.078	(0.000)	***
FVA2	0.999	(0.000)	***
FVA3	-0.791	(0.000)	***
NFVL	-0.412	(0.000)	***
FVL1	-0.308	(0.497)	
FVL2	-0.599	(0.003)	***
FVL3	0.981	(0.272)	
EPS	3.910	(0.000)	***
FINANCIAL	-10.502	(0.000)	***
NFVA*FINANCIAL	0.253	(0.008)	***
FVA1*FINANCIAL	-0.161	(0.321)	
FVA2*FINANCIAL	-0.208	(0.267)	
FVA3*FINANCIAL	1.547	(0.000)	***
NFVL*FINANCIAL	-0.402	(0.000)	***
FVL1*FINANCIAL	-0.826	(0.088)	*
FVL2*FINANCIAL	-0.165	(0.446)	
FVL3*FINANCIAL	-1.859	(0.045)	**
EPS*FINANCIAL	-0.684	(0.217)	
Year Fixed Effects	Yes		
N	17316		
Adjusted R2	0.4570		

TABLE 4 (Continued)

OLS regression is used with clustered standard errors by firm.

***,**, and * indicate two-tailed significance at 0.01, 0.05, and 0.10 levels, respectively.

PRICE = stock price at the end of fiscal year end

NFVA = non-fair value assets (AT-AQPL1-AOL2-AUL3), scaled by common shares outstanding (CSHO)

FVA1 = Level 1 fair value assets (AQPL1), scaled by common shares outstanding (CSHO)

FVA2 = Level 2 fair value assets (AOPL2), scaled by common shares outstanding (CSHO)

FVA3 = Level 3 fair value assets (AUL3), scaled by common shares outstanding (CSHO)

NFVL = non-fair value liabilities (LT-LQPL1-LOL2-LUL3), scaled by common shares outstanding (CSHO)

FVL1 = Level 1 fair value liabilities (AQPL1), scaled by common shares outstanding (CSHO)

FVL2 = Level 2 fair value liabilities (AOPL2), scaled by common shares outstanding (CSHO)

FVL3 = Level 3 fair value liabilities (AUL3), scaled by common shares outstanding (CSHO)

EPS = income before extraordinary items (IB), scaled by common shares outstanding (CSHO)

FINANCIAL = 1 if 6000 <= SIC <6300, zero otherwise.