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Market pricing of banks' fair value assets reported under SFAS 157 since the 2008 financial crisis

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ABSTRACT

We investigate how investors price the fair value estimates of assets as required by Statement of Financial Accounting Standards No. 157 (SFAS 157) since the financial crisis in 2008. We observe that Level 3 fair value estimates are typically priced lower than Level 1 and Level 2 fair value estimates between 2008 and 2011. However, the difference between the pricing of the different estimates reduces over time, suggesting that as market conditions stabilize in the aftermath of the 2008 financial crisis, reliability concerns about Level 3 estimates dissipated to some extent. Next, we examine whether Level 3 gains affect the pricing of Level 3 estimates because managers have discretion to use Level 3 gains to manage earnings and asset values upwards. We find that differences in Level 3 gains do not lead investors to price Level 3 estimates differently. Finally, we find evidence that the pricing of the Level 1 and Level 2 fair value estimates of assets is lower for banks with lower capital adequacy. Overall, our study contributes to an improved understanding of the relation between valuation and fair value information.

1. Introduction

Fair value, defined as the price that would be received for selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (SFAS

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157), can be derived from market prices (Level 1 estimates) or from models that use either market inputs (Level 2 estimates) or internally generated inputs (Level 3 estimates).[1] The disorderly market conditions experienced in 2008 raised concerns about the reliability of fair value estimates. An important study by Song et al. (2010) investigates investors' pricing of the fair value estimates during the financial crisis in 2008. The authors find that in the first three quarters of 2008, investors priced Level 3 estimates lower than they did for Level 1 and Level 2 estimates. These findings are consistent with investors' concerns that Level 3 estimates were less reliable because of inherent measurement error in estimating these values or managerial incentives to inflate them.

In this paper, we first extend Song et al. (2010) by examining how investors price the different fair value estimates since the 2008 financial crisis. We conduct this analysis because it is important to understand how fair value estimates are perceived by investors when market conditions change (Laux and Leuz, 2009, 2010). For example, while the stock market in the United States fell dramatically from 2008 to March 2009, there has been a sharp reversal in recent years. According to the National Bureau of Economic Research (NBER), the recession that started in December 2007 ended in June 2009 and the economy has been expanding since then, though economic conditions remain weak with high unemployment rates.[2] Perhaps more importantly, the FASB issued Accounting Standards Update (ASU) No. 2010-06 *Improving Disclosures about Fair Value Measurements* in January 2010 and ASU No. 2011-04 *Fair Value Measurement: Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRS* in May 2011. These updates were issued in response to calls for more fair value disclosures.[3] Given these changing conditions, we argue that investors' concerns about the reliability of fair value estimates, particularly Level 3 estimates, might have evolved over time and it is therefore important to examine the pricing of fair value estimates in the aftermath of the financial crisis.

Consistent with Song et al. (2010), we regress stock prices on the three levels of fair value assets, where pricing, as reflected by a significant positive coefficient on the fair value asset variable in the pricing regressions, refers to the ability of the fair value asset amounts to reflect information that is useful to investors. In the empirical analyses, we rely on the fair value estimates provided by banks in their 10-K filings between 2008 and 2011 to examine how the market pricing of the fair value estimates based on the fair value hierarchy changes over this time period.

Our empirical results show that investors price each dollar of Level 1, Level 2, and Level 3 assets at \$1.02, \$0.96, and \$0.87, respectively, during our sample period from 2008 to 2011. Consistent with the pattern documented in Song et al. (2010), these results suggest that investors discount the market pricing of fair values as the reliability of the reported fair value estimates decreases across the three-level fair value hierarchy. More interestingly, we observe that investors discount the reported fair value estimates to varying degrees across all three levels of the fair value hierarchy during and after the 2008 financial crisis.

Specifically, the market pricing of Level 1 (Level 2, Level 3) assets is \$0.96 (\$0.85, \$0.79) for firms that reported these fair value estimates in fiscal year 2008.[4] However, there is a marked improvement with regard to how investors perceive these fair value estimates as market conditions stabilize. The market pricing for Level 1 estimates is \$1.07 (\$1.04, \$1.00) for fiscal year 2009 (2010, 2011). Likewise, the market pricing for Level 2 estimates improves to \$0.96 (\$1.00, \$0.95) for fiscal year 2009 (2010, 2011) respectively. Similarly, the market pricing for Level 3 estimates improves to \$0.85 (\$0.88, \$0.88) for fiscal

[1] SFAS 157 stipulates the disclosure of fair value hierarchy information as a footnote disclosure. The disclosure of the fair value hierarchy provides information about how much of a firm's assets and liabilities are valued based on: (1) market prices directly (Level 1 inputs), (2) other observable market-based inputs (Level 2 inputs), or (3) firm-supplied unobservable inputs (Level 3 inputs). Prior to SFAS 157 adoption, these fair value measurements were not disclosed to market participants.

[2] source: http://www.nber.org/cycles/cyclesmain.html.

[3] SFAS 157 is classified as Accounting Standards Codification (ASC) 820 in the updated FASB Codification. Both ASU No. 2010-06 and ASU No. 2011-04 significantly expand ASC 820's existing disclosure requirements on fair value measurements, especially in relation to disclosures regarding Level 3 measurements.

[4] Our market pricing results for 2008 differ slightly from the reported results shown in Song et al. (2010). Specifically, the valuation coefficient for Level 1 estimates (\$0.968) in their paper is similar to ours but they document different valuation coefficients for Level 2 estimates (\$0.972) and Level 3 estimates (\$0.683). However, we note that their tests are based on the first three quarters of 2008.