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Fair value disclosures of level three assets and credit ratings

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A B S T R A C T

Using a large sample of U.S. firms, this study explores whether a firm's holdings of SFAS 157 level three fair value assets (level three assets) have an impact upon corporate credit ratings. The findings suggest higher holdings of level three assets negatively impact credit ratings. Both levels and changes analyses support this result. In additional cross-sectional analysis, this relation becomes stronger for firms with greater financial leverage, which suggests that a primary determinant of credit risk amplifies the documented main effect. Furthermore, higher magnitudes of level three assets are associated with an economically meaningful increase to corporate bond spreads.

1. Introduction

This study seeks to determine whether level three assets affect a firm's credit rating.[1] SFAS 157 standardized disclosures of ***how*** fair value assets and liabilities are valued for generally accepted accounting principles in the United States. Uncertainty in valuation increases with each level of fair value disclosure. By construction, level one measurements are the easiest to value as they typically have identical traded securities in liquid markets, level two measurements are the second easiest to value as they typically do not have identical traded securities in a liquid market, but have very similar securities being traded or involve the use of a commonly accepted valuation model with very few, but verifiable, assumptions being made. Level three measurements are the most difficult to value as they can involve unverifiable assumptions and proprietary valuation models. Thus, SFAS 157 disclosures, especially those with

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[1] SFAS 157 fair value disclosures are covered under the Financial Accounting Standard Board's Accounting Standards Codification Topic 820.

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level three measurements, quantify a firm's exposure to both measurement uncertainty and potential measurement bias, both sources of information risk.

This study extends the empirical work of Riedl and Serafeim (2011), Song et al. (2010), and Arora et al. (2014), each of whom determine SFAS 157 fair value measurements are value relevant to investors and have differential impacts depending upon the disclosed level of valuation uncertainty. Riedl and Serafeim (2011) find the presence of higher quantities of level three measurements has an impact upon equity risk for financial institutions. In a similar vein, Song et al. (2010) find the value relevance of level one and level two measurements for financial institutions is more pronounced than level three measurements. While Riedl and Serafeim (2011) document the impact of SFAS 157 fair value measurements on a firm's cost of equity, it is also important to examine what constitutes risk to debt holders as this risk cannot be directly inferred from the risks to equity holders (Barth et al., 2012; Blankespoor et al., 2013).

One key measure of credit (default) risk is the firm's credit rating. Credit ratings have material economic implications as changes to credit ratings have a direct effect on the pricing of stocks and bonds (Holthausen and Leftwich, 1986; Hand et al., 1992) and, because management is focused on the maintenance or improvement of their firm's credit rating, impact the decision processes of a firm's management (Graham and Harvey, 2001). Credit ratings are also employed in financial contracts for covenants and other purposes (Ayers et al., 2010). Many institutional investors require certain minimum credit rating levels before investing in a firm (Daniels and Jensen, 2005). Furthermore, allegations of bias in credit ratings during the financial crisis have increased the visibility of the ratings process and have raised questions regarding what information is actually used to determine a firm's credit rating or how this information is employed (Ayers et al., 2010; Griffin and Tang, 2011; Barth et al., 2012). Thus, understanding the determinants of credit ratings is an important question.

Theory suggests information risk impacts the pricing of assets (Duffie and Lando, 2001; Easley and O'Hara, 2004; Lambert et al., 2007). Level three assets would be representative of assets with the highest level of information risk. In addition, as level three assets are the most difficult to price and verify, an additional risk would be chronic bias in their valuation; management could potentially induce this bias to smooth or mask the true financial picture of the firm over substantial periods of time. However, such information risk and its impact upon asset pricing could potentially be mitigated with access to higher levels of private information.

The study most similar to this is Arora et al. (2014). The authors empirically test theory provided by Duffie and Lando (2001) and find that information risk has an effect on the term structure of credit default swaps. However, credit ratings are a different construct from the term structure of credit default swaps for a number of reasons. First, the credit rating process is opaque, incorporating a mixture of public and private information as well as quantitative and qualitative information (Damodaran, 2012; Griffin and Tang, 2012).[2] Second, ratings agencies tend to favor stability in credit ratings, have a longer term outlook and are more focused on credit worthiness of the firm as a whole (Hull et al., 2004). Third, credit ratings, in theory, are purely concerned with default risk while bond yields and credit default swaps potentially impound other features of risk (e.g. liquidity) (Longstaff et al., 2005; Bongaerts et al., 2011). Fourth, changes in ratings have an impact on the pricing of credit default swaps and help explain pricing differences in yield spreads; ratings are thus a potential source of information for both (Daniels and Jensen, 2005; Hull et al., 2004). Finally, credit ratings continue to persist as economic phenomena; the rise of the credit default swap market over the past two decades has not displaced this source of information or rendered it obsolete.

The results herein indicate that level three assets negatively impact credit ratings. This finding applies to both levels and changes models using credit ratings as the dependent variable. This finding appears to be attributable to financial industry firms and becomes stronger for firms with greater financial leverage. The main effect also appears to manifest itself in bond spreads, as spreads increase when firms possess more of these types of assets. This study builds upon the works of Song et al. (2010), Riedl and Serafeim (2011), and Arora et al. (2014) in further developing our understanding of the impact of level three assets upon market participants, especially within the context of credit markets.

[2] For instance, Standard & Poor's describes its data gathering process as one that incorporates data from audited and unaudited financial information, site visits, meetings with management, etc. (Standard and Poor's, 2014).

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