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## Do bond rating changes affect the information asymmetry of stock trading?

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## ABSTRACT

Using a sample of 279 upgrades and 310 downgrades from 1996 to 2004, we find that bond rating changes affect the information asymmetry of stock trading and other measures of information risk. Specifically, when a firm's bond rating is upgraded, its stock information asymmetry and its analysts' earnings forecast dispersion are significantly reduced, while the institutional equity holdings of its shares are significantly increased. The reverse is true for a downgrade. In addition, the degree of change in stock information asymmetry is positively associated with the magnitude of the bond rating changes.

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## 1. Introduction

The credit crisis that originated from the U.S. sub-prime and real estate loans during 2007–2009 has been causing a lot of attention and has exerted a significant and negative impact on financial markets. As a result, the U.S. Federal Reserve has moved to tighten the rules on mortgage lending, seeking to promote greater transparency in loan terms and to curtail excessively risky lending practices. Similar to the real estate and sub-prime loans, a company's debt should also be continuously monitored and evaluated for its default probability. The current literature suggests that the uncertainty of debt creditworthiness may affect both the debt and stock values of the firm. Ederington and Goh (1998) study the relation between bond ratings (reported by bond rating agencies) and future earnings forecasts (reported by stock analysts). They find that the Granger causality flows both ways. Most bond downgrades are preceded by declines in forecast earnings, and forecast earnings tend to fall following downgrades, and vice versa for upgrades. Odders-White and Ready (2006) examine the relation between equity-market adverse selection measures and debt-market credit ratings, and point out that the private shocks of a firm lead to a linkage between the adverse selection of its equity trading and the credit rating of its debt. Therefore, the connection between debt value uncertainty and stock value uncertainty does exist, and it goes both ways, leading to two lines of studies. One line focuses on the impact of stock uncertainty measures on debt, and the other line focuses on the impact of debt uncertainty measures on stock.

The first line of studies has demonstrated that a firm's stock uncertainty measures (such as information asymmetry, bid–ask spread, earnings forecast dispersion, institutional ownership, and disclosure) affect its debt.<sup>2</sup> Odders-White and Ready (2006) report that firms with a greater risk of private shocks, and therefore higher levels of equity-market adverse selection, tend to have

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<sup>2</sup> A firm's stock uncertainty measures also affect its cost of capital. See, for example, Easley et al. (2002), Easley and O'Hara (2004), Coles et al. (1995), Botosan (1997), Botosan and Plumlee (2002), Sengupta (1998), and Yu (2005).