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The adjustment of credit ratings in advance of defaults

André Güttler [a,*], Mark Wahrenburg [b,1]

[a] *European Business School, Finance Department, Schloss Reichartshausen, 65375 Oestrich-Winkel, Germany*
[b] *Goethe University Frankfurt, Finance Department, Mertonstr. 17, Postfach 111932, 60054 Frankfurt, Germany*

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Abstract

This paper assesses biases in credit ratings and lead–lag relationships for near-to-default issuers with multiple ratings by Moody's and S&P. Based on defaults from 1997 to 2004, we find evidence that Moody's seems to adjust its ratings to increasing default risk in a timelier manner than S&P. Second, credit ratings by the two US-based agencies are not subject to any home preference. Third, given a downgrade (upgrade) by the first rating agency, subsequent downgrades (upgrades) by the second rating agency are of greater magnitude in the short term. Fourth, harsher rating changes by one agency are followed by harsher rating changes in the same direction by the second agency. Fifth, rating changes by the second rating agency are significantly more likely after downgrades than after upgrades by the first rating agency. Additionally, we find evidence for serial correlation in rating changes up to 90 days subsequent to the rating change of interest after controlling for rating changes by the second rating agency.

JEL classification: G15; G23; G33

Keywords: Credit rating agencies; Credit rating biases; Leader–follower analysis

* Corresponding author. Tel.: +49 6723 69285; fax: +49 6723 69208.
E-mail addresses: andre.guettler@ebs.de (A. Güttler), wahrenburg@finance.uni-frankfurt.de (M. Wahrenburg).
[1] Tel.: +49 69 79822142.

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1. Introduction

External credit ratings play an important role in international capital markets. Since John Moody started in 1909 with a small rating book, the market has developed into a multi-billion dollar industry. In the core of Basel II, credit rating agencies will play an even more central role than they have so far. However, their failure to predict the crises at firms such as Enron, WorldCom or Parmalat has cast a cloud over the shining future of credit rating agencies in recent years. The economic relevance of defaults is tremendous: Moody's reported defaulted bonds with a face value of around USD 390 billion between 1997 and 2004 (Moody's, 2004). Therefore, investors and regulators are growing concerned about the quality of external credit ratings given the rating agency's business model, i.e. the fact that they are paid by the issuers, and given the oligopolistic structure of the market for external credit ratings.

For the purpose of investigating and comparing long-run ratings performance, historical default rates by rating category are the first thing to check. If historical default rates are higher for riskier rating grades, then a rating agency has done a good job in the period under investigation. In addition, validation measures, such as the area under the receiver operator characteristic (ROC) curve, wrap these historical default rates into a single number for the forecasting quality of default risk (Stein, 2005). Moody's and S&P, as the leaders in the market for corporate ratings, provide these historical default rates and ROC statistics on an annual basis.

However, given the fast economic relevance of bond defaults it seems puzzling that almost nothing is known about rating adjustments in connection with near-to-default issuers. The question whether there are biases in credit ratings of near-to-default issuers should be of particular interest for investors and regulators. For example, investors in non-US markets should know if there is any home preference on the part of US-based rating agencies, i.e. if non-US issuers are rated lower by the dominant US-based rating agencies Moody's and S&P. The second question – which agency is the rating leader of near-to-default issuers – matters because producing credit ratings is very expensive given the vast importance of soft rating criteria,[2] which must be collected through intensive contact with the management. Therefore, it would seem rational for credit rating agencies to treat rating changes by another important rating agency as a trigger prompting them to check and review their own ratings in a timely manner, especially in the case of risky issuers. Hence following the competitors' rating changes is less costly than doing one's own research, especially since credit rating agencies are not forced to do so, given that the market for credit ratings is not regulated or very competitive. Just following the other agency's rating, which can be interpreted as a special form of herding, results in a loss of information (Kuhner, 2001).

We address these two research questions by analyzing a sample of 407 issuers – 172 of them with accounting data – with multiple ratings by Moody's and S&P, which defaulted in the years 1997–2004. We also add another sample with non-defaulted issuers for the years 2000–2004 (these years account for around 90% of all defaults) to control for potential biases due to our mapping of the rating agencies' different rating approaches. Though

[2] Soft rating criteria are, for example, the management quality or the issuer's product policies in comparison to those of its competitors.