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Informational efficiency of credit default swap and stock markets: The impact of credit rating announcements

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Abstract

This paper analyzes the response of stock and credit default swap (CDS) markets to rating announcements made by the three major rating agencies during the period 2000–2002. Applying event study methodology, we examine whether and how strongly these markets respond to rating announcements in terms of abnormal returns and adjusted CDS spread changes. First, we find that both markets not only anticipate rating downgrades, but also reviews for downgrade by all three agencies. Second, a combined analysis of different rating events within and across agencies reveals that reviews for downgrade by Standard & Poor's and Moody's exhibit the largest impact on both markets. Third, the magnitude of abnormal performance in both markets is influenced by the level of the old rating, previous rating events and, only in the CDS market, by the pre-event average rating level of all agencies.

JEL classification: G14; G20
Keywords: Credit ratings; Credit default swaps; Informational efficiency; Event study

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1. Introduction

Rating agencies are important institutions which mitigate problems of asymmetric information between participants of the capital market. Lenders consider a firm's rating to not only decide on credit approval but also to use for pricing, monitoring and risk provision purposes. Furthermore, in the near future, external ratings will be recognized as one possible approach for banks to determine regulatory capital (see Basel Committee on Banking Supervision, 2004).

Given the importance of rating agencies, one might think that rating announcements have a significant impact on the market. In particular, markets for financial claims that relate to an entity's credit risk should react significantly if credit ratings reveal new information. Some examples of credit risk sensitive markets are those for stocks, bonds, and related derivatives. A particular example of derivatives markets is the heavily growing credit default swap (CDS) market. [1] In a credit default swap, a protection seller assumes the credit risk of a reference entity against a fixed annual credit spread which has to be paid periodically by the protection buyer. If a pre-defined credit event (for example, bankruptcy of the reference entity) occurs, the protection seller has to pay the notional amount of the swap and receives in exchange the defaulted asset under physical delivery settlement terms. Under cash settlement, the protection seller has to pay the loss amount incurred by the protection buyer. If no credit event occurs, the contract terminates at maturity. Taking into account the different characteristics of these credit risk sensitive markets, one may ask how they respond to credit rating announcements. This question contributes to market efficiency research and it is also of interest for market participants and credit risk managers. If markets exhibit different responses to rating announcements, traders may take the opportunity to exploit these price differentials. Moreover, since credit risk managers always try to improve their early warning systems, they can complement ratings and model-based assessments with information implied in prices from different markets. [2] In particular, if some (or all) market prices anticipate rating announcements, credit risk managers can act earlier against unfavorable changes of credit quality.

In this paper, we apply traditional event study methodology to examine whether and how stock and CDS markets responded to rating announcements during the years 2000–2002. We leave the bond market aside because its prices reflect not only issuer risk, but also several aspects of issue risk. Rating announcement events are collected from the three major rating agencies: Standard & Poor's, Moody's and Fitch. Moreover, two different types of rating announcement events are taken into

[1] See Tavakoli (2001) and Bank for International Settlements (2003) for an overview of credit derivatives. Fitch Ratings (2003) presents results of a global survey of the CDS market. According to British Bankers' Association (2002) the global CDS market has increased from $ 180 billion in 1997 to $ 1952 billion in 2002.

[2] See Breger et al. (2003). They derive "market-implied ratings" from bond market data and show that these indicators can be used to predict the dynamics of agency ratings.