An empirical analysis of changes in credit rating properties: Timeliness, accuracy and volatility

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Abstract

In recent years, credit rating agencies have faced increased regulatory pressure and investor criticism for their ratings' lack of timeliness. This study investigates whether and how rating agencies respond to such pressure and criticism. We find that the rating agencies not only improve rating timeliness, but also increase rating accuracy and reduce rating volatility. Our findings support the criticism that, in the past, rating agencies did not avail themselves of the best rating methodologies/efforts possible. When their market power is threatened by the possibility of increased regulatory intervention and/or reputation concerns, rating agencies respond by improving their credit analysis.

1. Introduction

In recent years, the nationally recognized credit rating agencies (e.g., Moody's, Standard and Poor's (S&P), and Fitch) have faced widespread criticism for their credit ratings' lack of timeliness in predicting some high-profile bankruptcies. These rating agencies maintained investment-grade ratings for Enron, California utilities, and other bankrupt companies, days before each declared bankruptcy.

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1 Before 2001, there were only three nationally recognized rating agencies: Moody's, S&P, and Fitch. Since 2001, the SEC also granted nationally recognized status to Dominion Bond Rating Service and A.M. Best Co.
Since the Enron debacle, some corporate financial officers and treasury professionals (Association for Financial Professionals, 2002; Kahn, 2002) have blamed the lack of competition in an industry dominated by several major agencies for the lack of incentives to timely respond to the needs of credit rating users. In addition, the oligopolistic structure of credit rating industry has received intense regulatory scrutiny. Both the Security and Exchange Commission (SEC) and the US Congress have conducted a series of hearings on the possibility of a new regulatory regime for credit rating agencies, one that promotes better competition and increased regulatory oversight by changing the way the SEC currently designates rating agencies as nationally recognized rating agencies.

This study investigates whether and how the nationally recognized credit rating agencies have changed the properties of their credit ratings in response to the recent increase in regulatory pressure and investor criticism. More specifically, we examine whether the agencies have changed the timeliness, accuracy and volatility of their credit ratings. We focus on these three rating properties, because prior academic literature (Altman and Rijken, 2004; Loffler, 2004; Beaver et al., 2006) and the credit rating agencies (Cantor and Mann, 2003) identify them as being important to credit rating users.

In recent years, the lack of timeliness was the most criticized and highly visible rating property in the aftermath of some high-profile bankruptcies. Given this increased investor and regulatory scrutiny, failing to timely downgrade a debt issue to predict a deterioration in credit quality (i.e., a type I prediction error) has become more costly to the rating agencies. Therefore, if the rating agencies are concerned about potential loss of reputation and additional regulatory burden, we expect the agencies to take measures to improve rating timeliness in the post increased regulatory pressure and criticism period compared to the pre period (hereafter, we refer to these periods as the PRE and POST periods). Improvements in this highly criticized rating property can help the agencies repair reputation damages and, even if not completely stop, at least limit the degree of regulatory intervention in their industry.

Conditional on finding an increase in rating timeliness, we also investigate how a shift toward improved rating timeliness affects accuracy. While, in recent years, investors and regulators focused explicitly on rating timeliness, it is important to recognize that timely ratings are not useful, as long as the ratings are not accurate as well. If the agencies were to downgrade debt issues very early (i.e., achieve improved timeliness), and in the end such downgrades would prove to be unnecessary, then the needs of credit rating users would be poorly served. Given the importance of both rating timeliness and accuracy, the national recognized agencies may attempt to improve their credit analysis and thus, achieve better credit ratings accuracy along with improved timeliness in the POST period.

However, ex ante, it is unclear whether it is possible to improve both rating timeliness and accuracy at the same time, despite both of them being important to rating users. The rating agencies (e.g., Cantor and Mann, 2006) argue that there are unavoidable trade-offs between these desirable rating properties. In fact, the agencies use the existence of such trade-offs between rating properties as an explanation for their perceived lack of timeliness. If the agencies are right and the trade-off between rating properties are unavoidable then, under pressure from regulators and investors, the rating agencies may improve rating timeliness at the expense of rating accuracy.

There are at least two ways rating agencies can trade-off rating accuracy for improved timeliness. First, since in the POST period the relative cost of failing to timely downgrade has increased considerably, rating agencies can tighten their credit standards to make sure they do not miss any defaulting issues. This strategy will result in more timely downgrades for higher risk issues, but less accurate (i.e., too harsh) ratings for lower risk issues. In this case, a reduction in type I prediction errors (i.e., a reduction in the number of missed defaults) will come at the expense of an increase in type II errors (i.e., an increase in the number of false warnings). Second, to increase timeliness, agencies can shorten the period of time spent on information collection and analysis before any rating change decision. Such a change in rating policy will lead to more timely but less accurate ratings.

Shortening the information collection period and reacting faster to new information (for example, reacting to information revealed in daily stock prices) can affect rating volatility as well. By its nature, a borrower’s credit risk changes only gradually over time. Therefore, the long-term credit risk implications of new information can be fully understood only over time, when new clarifying facts become available. If the agencies decide to shorten the period of time they wait for confirmatory/clarifying information before changing a rating, then they will have to reverse some rating changes when additional information invalidates the initial change. Such a decision would result in more timely, but more volatile credit ratings. Ceteris paribus, high volatility in credit ratings is not desirable (Beaver et al., 2006), since the use of credit ratings for contracting (e.g., the use of ratings for regulatory purposes and for portfolio governance rules for institutional investors) makes volatile ratings and unexpected rating reversals costly for the contracting parties.

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2 The credit rating industry is dominated by two rating agencies, Moody’s and S&P, with a market share of about 80% of the rating business. Moody’s operates with profit margins of more than 50%, according to testimony by Glenn Reynolds, chief executive of Credit Sights, an independent research group. He estimates profit margins at S&P (a segment of McGraw-Hill) to be more than 40% (Hughes, 2006).

3 In this study, we define type I error as missed defaults (i.e., instances where the rating agencies assign/maintain favorable ratings to defaulting issues) and type II errors as false warnings (i.e., instances where the rating agencies assign/maintain unfavorable ratings to non-defaulting issues).

4 We define the pre increased criticism and regulatory pressure period as the period between January 1, 1996 and July 25, 2002. We define the post increased criticism and regulatory pressure period as the period after July 25, 2002 until December 31, 2005, the end of our sample period (see Section 4 and Fig. 1 for a more detailed explanation).

5 To mitigate agency problems between investors in debt mutual funds and the fund managers, many funds include portfolio governance rules that require the fund managers to hold only debt issues with credit ratings above a certain threshold. Therefore, volatile and unexpected rating changes would force the managers to trade at inopportune times. In addition, frequent rating reversals over short periods of time would cause some institutional investors to sell and then repurchase the same debt securities with high frequency, imposing large transaction costs.
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