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Global Financial Crisis and Credit Ratings – A Review of Literature

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ABSTRACT

The value of ratings assigned by credit rating agencies (CRAs) is widely of prime importance particularly in the scenarios of global financial crises. The role of CRA's during emergencies like financial crisis is most crucial and therefore cannot be ignored. The present study aims at extensively reviewing research studies across the world pertinent to CRA's process with timely revisions (rating downgrading and upgrading) within the categories of investment and speculative. Further, the study was reviewed from the point of three time periods - Pre-crisis, during the crisis period and post-crisis period. The impacts of announcements of revision in ratings on investment and speculative category for the three aforesaid events have been reviewed. The lower information content of rating changes in the post-crisis period suggests that the market's confidence in the rating information had reduced. Therefore, a reinforced regulation of CRA's would strengthen the credibility of the credit rating agencies and help them regain the market's trust in the rating information helping the market participants to measure the credit risk in the securities and would in turn help support the development of Indian capital markets.

Keywords: Global Financial Crisis, Credit Rating Agencies, Rating Downgrades, Rating Upgrades, Investment Category Bonds, Speculative Category Bonds, Regulation of Rating Agencies

INTRODUCTION

The value of ratings assigned by credit rating agencies (CRAs) is a widely debated topic, particularly after the global financial crisis (GFC). Despite their role in the GFC, CRAs continue to remain a vital mechanism of the financial system (White, 2010).

The efficacy of the credit rating process is an essential requirement for the development of an active corporate bond market in India. The availability of information is relatively limited for emerging markets such as India compared to developed markets, and credit ratings can help bridge the imperfectness in the market. Credit rating is expected to reduce information asymmetry in the Indian financial market and lower costs for both borrowers and lenders. Greater information disclosure by CRAs will help market participants gauge the credit risk in financial instruments and bring in more transparency in the corporate bond market. Compared to developed markets, the corporate debt market in India remains relatively shallow with firms mostly dependent on bank lending. According to the RBI, Corporate debt to GDP ratio in India stood at a meagre 17 per cent in June 2017 as compared to 123 per cent in the US and 19 per cent in the case of China. It is mostly the large Indian banks and the government that issue tradable bonds in the market, while other entities use private placements.

The significance of credit ratings to debt issuers, investors and regulatory agencies is recognised in the literature. Bond ratings first appeared in the financial system in the early 1900s, and have gained significant popularity over the years. Ratings are crucial for debt issuers as they impact the cost of borrowing.

Furthermore, these ratings are the key source of investor information about the quality and marketability of a bond issue (Pinches & Singleton, 1978). A rating downgrade can raise borrowing costs as investors demand compensation for the added risk. Credit rating changes have a direct effect on bond and stock prices (Hand, Holthausen, & Leftwich, 1992). Credit ratings impact managerial decision-making with managers concerned about improving/ maintaining the firm's credit rating (Graham & Harvey, 2001). Credit ratings are employed in financial contracts for covenants, and institutional investors require certain minimum credit rating levels before they invest in a firm. Hence, ratings and rating changes contain relevant information for both the supply and demand sides of the market.

Rating agencies have often been criticised for their slow response to new developments, particularly negative events and for rating revisions being made after the market has already compounded the new developments in the price. However, CRAs have the dual goals of timeliness and stability, and the rating action happens when it is not likely to be reversed in the short term (Loffler, 2005). The question of whether rating changes bring new information to financial markets, and to what extent, is still unresolved in the literature (May, 2010).

The GFC in 2008 has resulted in major criticism in terms of the value addition provided by CRAs. The international rating agencies' role in the financial meltdown of 2008 is well established. The CRAs overrated highly speculative structured financial securities backed by mortgages during the housing bubble, which triggered the global turmoil in the financial markets (Rhee, 2014).

The crisis period (July 2007–June 2009) is defined based on deHaan (2017). The results show that the magnitude of reaction is lower in the post-crisis period compared to the pre-crisis period. This suggests that the

incremental value addition by rating agencies has reduced after the crisis. Also, there is no evidence of significant reaction during the crisis period. The stock market discounting the value addition by rating agencies could be due to the market evolving or the confidence in the CRAs declining after the crisis. However, we find that the difference in the cumulative abnormal returns (CAR) before the GFC and after the GFC is not statistically significant.

The studies have found evidence for a significant and negative stock price reaction to bond downgrades, but there is no significant reaction to upgrades. Downgrades are significant in the pre- and post-crisis period; however, the magnitude is lower in the post-crisis period. The negative abnormal returns for the downgrades could be explained by the information content of bad news. The ratings contain some information about the firm which is publicly unknown, and hence the market reacts negatively to a rating downgrade. A rating revision could be a signal to the market about the firm's future earnings and cash flows. A downgrade announcement restores the market's expectation of drop in firm's quality, which could result in significant negative excess returns.

There have been few studies which investigate whether the market reaction varies according to the category of the rating revisions and find that the overall market reaction is more pronounced for rating changes within the investment category compared to the revisions within the speculative category. They have found adverse response for downgrades which is significant only within the investment category. The negative reaction for upgrades is significant only for upgrades within the speculative category. Further, examination of downgrades revealed that the investor's reactions to downgrades within the investment category are more negative in the post-crisis period compared to the pre- crisis period, suggesting that investors have become more sensitive to downgrades within the investment grade category post crisis.

LITERATURE REVIEW

The literature has been analyzed for the information content of credit ratings by examining (a) whether bond yields are related to rating information and also by (b) reviewing security price reactions to rating changes.

The studies following the first approach relate yield spreads to ratings (Ederington, Yawitz, & Roberts, 1987). The second approach examines the security price reaction to the announcement of rating changes and finds mixed results about the pricing- relevant information of credit ratings. The presence of abnormal returns upon rating change announcements is considered as an indication that rating agencies provide new information to investors. If the rating agencies have access only to publicly available information, the announcement of rating changes should not have an impact on the security prices (Holthausen & Leftwich, 1986).

The rating agencies contribute to the information efficiency of financial markets by providing information economies of scale, filtering and extracting noise from market information (Gonzalez et al., 2004). The announcement of a rating change provides new information to the capital market only if the CRAs have the ability to forecast the financial and operating position of a firm before investors are fully aware of these changes.

Several studies have focused on the price reactions of bonds and equities to changes in ratings. A recent study

by Klinger and Sarig (2000), which focused on the refinement of Moody's rating system in 1982, shows that investors do indeed react to changes in ratings if they are unexpected, in the same way as they react to new information.

Reactions to bond rating downgrades also spread slowly from the affected company to its rivals, and from the bond market to equity prices. Equity analysts revise their earnings expectations downward for both the downgraded company and its rivals, and the extent of this reaction depends on the initial rating and the size of the downgraded debt (Caton and Goh, 2003).

The price reaction to rating changes, and in particular the effect on stock returns, is asymmetrical, i.e. the market reacts more strongly to rating downgrades than to rating upgrades, and ultimately this asymmetry appears less significant for bonds than for stocks. Several studies suggest that abnormal equity returns following bond downgrades are negative, whereas there is no significant abnormal equity return reaction to upgrades. Holthausen and Leftwich (1986) suggest that the difference between one-year pre- announcement returns to upgrade and downgrade is in the order of 20% to 30%. They find no abnormal returns after the announcement of upgrades, but do find evidence of abnormally low returns in the quarter following a downgrade. Dichev and Piotroski (2001) find negative abnormal stock returns in the order of 10% to 14% in the first year following downgrades. Furthermore, the underperformance is more pronounced for small companies with low credit quality.

A further explanation is that stock markets overreact to rating downgrades (see Dichev and Piotroski, 2001). It could also be argued that the overreaction to downgrades reflects the fact that a downgrade conveys additional information - downgrade signals that the rated company has either decided not to or proved unable to avoid the downgrade.

Hand, Holthausen and Leftwich (1992) found asymmetrical results with respect to reactions to rating downgrades and upgrades. They observe significantly negative average excess bond and stock returns for downgrades, and a weaker positive effect for upgrades. Similarly, Ederington, Goh and Nelson (1996) have found that the stock market reacts to downgrade information more quickly than analysts. They further found that in contrast to downgrades, upgrades do not evoke any market response.

A majority of these studies found evidence that there is a significant and negative stock price reaction to bond downgrades, but there is no significant reaction to upgrades. The asymmetric response of stock prices to upgrades and downgrades can be attributed to CRAs spending more resources in identifying a decline in a firm's financial position than an improvement. Also, the management has incentives to release good information and withhold bad information (Ederington & Goh, 1998; Holthausen & Leftwich, 1986).

While a majority of the studies have focussed on the efficiency of stock markets, very studies have analysed the bond market reaction (Grier & Katz, 1976; Hand et al., 1992; Hite & Warga, 1997; Steiner & Heinke, 2001)

The event study methodology has been widely used by researchers to investigate the impact of rating change announcements, but the studies have yielded mixed results. The differing conclusions of prior studies may be due to the use of monthly/weekly/daily data and different time periods of study.

However, Holthausen and Leftwich (1986), Cornell et al. (1989), Goh and Ederington (1993), and Purda (2007) found evidence of negative abnormal returns following rating downgrades. Zaima and McCarthy (1988) find that the information content of bad news dominates downgrades.

deHaan (2017) found no evidence of a decline in the performance of corporate credit ratings in the USA during or after the crisis period; however, he found that market participants decrease their dependence on credit ratings in debt contracting after the crisis.

Dimitrov et al. (2015) found that CRAs issue downgrades that are less informative and more in the nature of false warnings, after the passage of the Dodd–Frank Act 2010 in the USA. The Act caused CRAs to become conservative, decreasing ratings' usefulness in market pricing. Investors discount CRAs' actions that are meant to protect their reputation

INDIAN STUDIES

The two related studies in India which analyse the impact of rating changes on stock prices (Lal & Mitra, 2011; Sehgal & Mathur, 2013) find conflicting results. Using a sample of 117 long-term instruments from 98 companies, rated by CRISIL, ICRA, CARE and FITCH during the period from April 2002 to March 2008, Lal and Mitra (2011) found evidence of negative abnormal returns post downgrades and no effect for upgrades.

Sehgal and Mathur (2013) using 70 rating revisions by CRISIL and ICRA between November 2003 and February 2011 found evidence of significant pre-event returns for downgrades and post-event returns for upgrades.

DETAILED ANALYSIS OF A PIONEERING STUDY IN INDIA

Kaveri Krishnan, Sankarshan Basu, Ashok Thampy (2020) came out with their seminal work on credit rating in India. The following paragraphs discus in detail this pioneering work.

In this study, the authors have attempted to compare the stock market reaction to rating change announcements during the pre, during and post-crisis period to analyze the impact of the crisis on the efficiency of the rating process in India. They investigated whether the market reaction varies according to the category (investment or speculative) of the rating revisions.

Their initial data sample consisted of listed firms which were rated by any one of the five registered CRAs in India, namely, CRISIL, ICRA, CARE, India Ratings and Research Private Limited (FITCH), and Brickwork Ratings during the period 1996–2015. The credit ratings data and stock returns data were obtained from the Prowess database maintained by the Centre for Monitoring Indian Economy (CMIE).

The criteria they adopted was that long-term rating of the sample firms should have undergone at least one rating change (downgrade/upgrade) issued by the rating agency during the period of study. They used the data obtained from CRISIL as the market leader in terms of volume. CRISIL, at the time of research, covered approximately 50 per cent of the entire credit rating market in India and had the longest history of providing ratings compared to other CRAs in India. They used the Prowess database has credit rating information for the

period 1996–2015. They used only rating change announcements of market-based instruments to evaluate the impact of the GFC on the rating process.

The final sample for the analysis consists of 658 rating change announcements of market-based instruments. It includes 452 downgrades and 206 upgrades.

- They split the sample of 658 rating revisions into three time periods based on the date of the rating change. There are 426 rating revisions before the crisis period (1996–June 2007), 42 revisions during the crisis (July 2007–June 2009) and 190 revisions after the crisis (July 2009–2015) in the sample.
- A majority of the ratings (510 out of 658) in the sample were found to be in the investment rating category (BBB- and above).

In the pre-crisis period, they found evidence of an overall negative market reaction to rating change announcements. The negative reaction for rating upgrades was found to be not statistically significant. There found no evidence of significant market reaction during the crisis period. They hypothesized that the financial crisis would have caused market participants to doubt the value addition brought in by credit rating agencies.

They observed that the stock price reacted less to rating announcements during the post-crisis period compared to the pre-crisis period. They found evidence for significant reaction to downgrades, though the magnitude was found be very low. The negative reaction for upgrades was found to be not statistically significant during all time periods. The result of the study showed that the difference in the cumulative abnormal returns before and after the was not statistically significant.

During the post-crisis period, several regulations were enacted across the world to make the rating agencies more accountable and transparent in their rating process such as the Dodd–Frank Act 2010 in the USA. In India, SEBI, the regulator for CRAs, issued Transparency and Disclosure norms in June 2010 to impart higher credibility to the processes associated with credit rating during the post-crisis period. These regulatory changes would have influenced the market participants to react less to rating revisions during the post-crisis period.

The authors observed that the overall negative market reaction to rating revisions is more pronounced within the investment category compared to the speculative category. The negative reaction for downgrades is significant only for the Investment category. The negative reaction for upgrades is significant only for the Speculative category. They found the market reaction to be not significant for the change from the Investment to Speculative and Speculative to Investment category.

Further, their analysis revealed that downgrades within the investment category had negative cumulative abnormal returns in the pre and post-crisis period. Investors' reactions to downgrades within the investment category were more negative in the post-crisis period compared to the pre-crisis period, suggesting that investors had become more sensitive to downgrades within the investment grade category post-crisis.

To conclude, this seminal research study analyzed the differential market response to credit rating revisions in the pre-crisis, during the crisis and post crisis GFC period using data from India. The study reviewed the stock price reaction to the announcement of long-term rating changes during the period 1996–2015. The authors found

that the stock market reacts less to rating revisions after the crisis. They found evidence for an overall negative market reaction after rating change announcements suggesting that credit ratings added value to the Indian financial market. This could be because the rating revisions contained some information which was publicly unknown and relevant for security pricing. Further, they found that the magnitude of the adverse reaction is lower in the post-crisis period, suggesting that the incremental value addition by rating agencies had reduced after the crisis. The analysis of rating downgrades suggested that investors have become more sensitive to downgrades within the investment grade category post-crisis.

CONCLUSIONS

The lower information content of rating changes in the post-crisis period suggests that the market's confidence in the rating information has reduced. Regulators across the world are concerned about the value addition of credit ratings; they have introduced regulations to make credit rating agencies more accountable and to improve the transparency of the rating process in the post-crisis period. These regulations are expected to strengthen the credibility of the credit rating agencies and help them regain the market's trust in the rating information. Increased information disclosure by rating agencies would certainly help the market participants to gauge the credit risk in these instruments and support the development of Indian capital markets.

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