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Credit Rating Agencies – A Theoretical Review

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Abstract

The paper aims at identifying and studying the theoretical works that have been done so far in the area of credit rating agencies (CRAs). The review indicates that the concepts of credit rating services are carved mainly out of four prominent theories; they are, The Information Asymmetry Theory, The Theory of Reputation, The Principal Agent Theory and The Theory of Efficient Markets. This theoretical framework helps us to understand the evolution of CRAs and its impact on Deficit Spending Units and Surplus Spending Units. It also helps us to comprehend the present status of CRAs. The CRAs which came into existence to resolve the information asymmetry got engulfed in the principal agent problems; and lost their reputation. It is also found that they have contributed very minimum to the efficiency of the securities markets.

Key Words: Credit Rating Agencies, Asymmetry theory, Reputation theory, Principal Agent theory, Efficient Market theory

Introduction

The principal objective of this paper is to create a framework of theory for the CRAs. The literature survey indicates that the concepts of credit rating services are carved mainly out of four prominent theories; they are, The Information Asymmetry Theory, The Theory of Reputation, The Principal Agent Theory and The Theory of Efficient Markets. CRAs undoubtedly play a significant role in amassing, fusing and disclosing the information about DSUs and their instruments, which helps to bridge the information asymmetry between SSUs and DSUs. However, there are problems associated with disclosure practices of CRAs which either discloses selectively or maintains confidentiality of information. Apart from it, the principal agent problems (conflict of interest) are innate in credit rating industry. This problem is perceived to be more serious and exacerbating owing to the issuer pay model. A few researchers have suggested that it is better we move towards investor/subscriber pay model or switch on to regulatory pay model. In this backdrop, it is intended to review the works related to all the four theories associated with credit ratings.

Objectives:

To review the works related to information asymmetry theory and also the works on impact of this theory on the capital markets.

To study the works belonging to theory of reputation and its importance for the survival of CRAs.

To review the works on principal agent theory, highlighting the significance of the theory.

To study the works on the theory of efficient markets

Information Asymmetry Theory

Information asymmetry refers to lack of transmission of information between any two parties in general; and SSUs and DSUs in particular (SEBI Report, 2009). The Seminal works on information asymmetry are the works of George A Akerlof (1970), Spence (1973) and Stiglitz (1974), who have won the 2001 Nobel Prize in Economics for their analysis on markets with asymmetric information. Rothschild and Stiglitz (1976), Myers and Majluf (1976) and Diamond (1984) analysed the impact of asymmetric information in insurance markets; Leyland and Pyle (1977) and Williamson (1987) studied the impact of asymmetric information on credit rationing. Ramakrishna and Thakor (1984), Diamond (1991), Smith and Walter (2001) illustrated the prominent role played by financial intermediaries in minimising the information disparity between different parties. On the one hand, works of Sylla (2001) and Olegario (2001) show that CRAs as financial intermediaries play a pivotal role in bridging the information asymmetry, where as the works of Duan et al., (2012), Frost (2006) and Hunt (2009) criticise CRAs for revealing biased information (lack transparency) to the investors. With this, the present section discusses on the works of information asymmetry and reviews the works on the disclosure practices of Credit Rating Agencies (CRAs).

The significance of information was highlighted for the first time by George A Akerlof (1970) in his paper titled “The Market for Lemons: Quality Uncertainty and Market Mechanism”. He identifies that the sellers in many markets have better information about the quality of the product than the buyers. This difference in information is called asymmetry by him, he terms it as Asymmetric Information. This asymmetric information creates a gap about the quality of the product. Buyers who do not have access to information will suspect the quality of the product. This in turn, will diminish the price that he is willing to pay for the products, which discourages the sellers of high quality goods. Akerlof finds that in the presence of asymmetry in information, the good quality merchandise sellers are driven out of the market, leaving behind only sellers of poor quality products, which hinders mutually beneficial transactions and eventually the markets will collapse. This, indicates the reappearance of Gresham's Law (the bad money drives out the good). Akerlof explains the need to distinguish the good quality goods from the bad in business models and also suggests some counter acting institutions such as guarantees, brand names, chains/franchisee and licensing to minimise the information asymmetry problem.

Spence (1973) in his paper titled “Job Market Signalling” identifies that individuals possessing better information about markets make some efforts to improve their market outcome. He also observes that certain characteristics such as age, gender, qualification, experience and race act as signals in transferring information from one party to others and thereby reduce information asymmetry. In this study, he also identifies the characteristics or attributes which cannot be altered as 'Indices' (Age, Gender, Race) and the attributes which can be altered as 'Signals' (Experience, Qualification). Both indices and signals together decide the wage schedule. He also recommends that, sellers (job applicants) of high quality must take observable measures such as training and pursuing extra qualification that are costly for low quality sellers to replicate and concludes that potential employees signal their productive capabilities and reduce information asymmetry between themselves and the buyer (employer).

Stiglitz (1975) in his work “The theory of screening, education and the distribution of income” introduces the concept called 'screening' (an instance of signalling) and defines it as a way of identifying the different qualities of goods, individuals, brands and other items. Stiglitz opines that the process of screening can reduce information asymmetry in labour markets. He finds that without the screening process in the labour markets, the asymmetric information leads to grouping of all individuals identically irrespective of their productivity, and receives same wages. Asymmetric information acted as wage tax for high productive labours and as wage subsidy for less productive labours. He showed that the screening process identifies the good workers and provides them the incentive. He also concludes in this work that the process of screening bestows with both private and public returns. Private return is in the form of redistribution of wages and social returns are in the form of trade off and job matching.

Michael Rothschild and Joseph Stiglitz (1976) extend the process of screening by analysing the Self Selection Mechanism in their work “Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect”. They found and suggested that the information about the insurance market in general and the details of the transactions in particular be made known to the parties involved in such transactions. They also explain how and when less informed individuals can extract information from better informed individuals in insurance markets. Like signalling, (Spence explained); screening (through self selection mechanism) also promotes mutually beneficial transactions.

To put in nut shell, the works of Akerlof, Spence and Stiglitz point out that there is a need to protect and increase the welfare of various stakeholders in the market. Based on this, Akerlof (1970) opines that the Government or the third party intervention is necessary to minimise the information asymmetry and enhance the functioning of markets.

Leyland and Pyle (1977) explain the role of financial intermediaries in resolving ex- ante information asymmetry (adverse selection problem) and Diamond (1984) provides the model of financial intermediation for ex-post information asymmetry (Moral hazard problem). Both the works exhibit that financial intermediaries expend resources to produce, monitor and disclose the information at minimum cost and thereby resolve the problem of information asymmetry between the borrowers and the lenders.

Diamond (1991) in his work finds that in the presence of information asymmetry, the SSUs cannot successfully distinguish the good borrowers from the bad borrowers, and because of this, the investment decisions made by SSUs become inefficient (Stiglitz and Weiss, 1981; Myers and Majluf; 1984).

Sylla (2001) in her work “Historical Primer on Credit Ratings” identifies that the CRS and the financial press were created to address the problem of information asymmetry between SSUs and DSUs before the establishment of other channels of information; CRS and financial press were the only transmitters of information (Olegario R, 2001); these information transmitters could not mitigate information asymmetry completely (Deb and Murphy, 2009).

In this backdrop, CRAs emerged to level the playing field between SSUs and DSUs by issuing a rating that describes the DSUs and their instruments creditworthiness, and thereby disclose vital information to the SSUs (Marwan Elkhoury, 2008).

Smith and Walter (2001) opine that CRAs perform a valuable function of analysing and assembling the information into alpha numeric code called rating. They also explain that the rating provided by CRAs help avoid both Type I error (extending credit when it must have been rejected) and Type II errors (rejecting the credit when it was supposed to be lent) in the lending process. They also explain the two folded role of CRAs – signalling and certification. The signalling role of rating agencies provides new information or interpretation to the market and the certification role of CRAs gives the eligibility to a debt issue.

Tang (2006) examine the effect of information asymmetry on firms credit market access, financing decisions, and investment policies and suggests that CRAs help to reduce information asymmetry in credit markets by revealing new information about firm's credit quality.

Stephen Rousseau (2006) opines that the CRAs eliminate the redundant and wasteful efforts of investors who individually engage in research activities. In the absence of the CRAs, investors should have conducted their own research which would be expensive for investors (Estrella, 2000). Despite the critical role played by CRAs, all the stakeholders are questioning the ability of CRAs in assembling and disclosing the information particularly after the default of issuers (Enron, Lehman Brothers and Kingfisher) and their instruments (MBS, ABS and CDOs).

Duan et al (2012) identify that the CRAs are criticised for revealing biased information to the investors, i.e., CRAs are not transparent and they face problems in disclosing the information.

Disclosure (transparency) Practices Of CRAs

Frost (2006) identifies three problems in disclosure practices. They are CRAs Disclosure Adequacy (CRAs fail to adequately disclose information about their procedures), Selective Disclosure (they might selectively disclose information to their subscribers), and Maintaining Confidentiality (might inadvertently disclose confidential information about the entities they rate).

Disclosure Adequacy

Hunt (2009) identifies two issues in disclosure adequacy, namely disclosures related to rating methodology of CRAs and disclosures related to CRAs performance. The Regulatory bodies such as SEC and SEBI emphasize that the CRAs should disclose all the information about their ratings procedures, determinants (criteria) considered while ratings and analytical methods on their websites. IOSCO (2003) also recommend that CRAs should disclose:-

a) The meaning of each rating category

b) The definition of default

c) The time horizon of CRA for making a rating decision

d) The information about historical default rates and

e) The rating variability over time

The above disclosures are recommended to promote transparency and enable the markets to assess the performance of the ratings by drawing comparisons from ratings issued by different CRAs. SSUs particularly seek more detailed information about the rationales behind rating decisions and the information on which the agencies rely (SEC 2003). SEBI has also recommended that the CRAs should disclose the information pertaining to ratings revision (upgrade/downgrade) in the standard format as prescribed by it and also disclose the information about the ratings unaccepted by issuers on their websites.

Frost (2006) divulges that CRAs have certain advantages disclosing the information, such as, gaining stronger reputation and credibility, quality credit ratings and increased market value for the securities. However, CRAs are worried of the potential costs that they incur owing to disclosure practices, such as release of proprietary information to competitors, release of proprietary information to users of credit ratings who might no longer require the CRA's services; and increased vulnerability to litigation. However, disclosure adequacy is not precisely defined. Frost puts it (disclosure adequacy) as providing sufficient information to comprehend the information by the investors and precisely use the letters of the alphabets and the associated commentary of the ratings.

Selective Disclosure

According to SEC (2003) two issues related to selective disclosures are,

The information pertaining to the rating is made available to subscribers prior to public issuance of the ratingfl

The extent of the information about rating is made available only to subscribers and not to general public.

The works of Kothari et al (2009); Lougee and Marquardt (2004) conclude that managers disclose information strategically, i.e., they either withhold bad news or emphasize good news. However, the CRAs state that the ratings information is disclosed at the same time to both, their subscribers and the general public.

Maintaining Confidentiality

The SEC's regulation fair disclosure (Reg FD) makes it mandatory to the issuers to disclose confidential information to CRAs, provided that CRAs use that information solely for the purpose of rating. Kliger and Sarig (2000) state that issuers/DSUs disclose confidential information to CRAs; this confidential information is used by CRAs only in analysing and assigning a rating and not to be explicitly disclosed to the general public. The CRAs also confirm with issuers about the factual information before releasing it to the general public to protect against any misuse and unauthorized disclosure of non public information (Frost, 2006). Strauss (2003) says if confidential information makes a difference in the rating decision, then, that information is material and should be disclosed to credit rating users/DSUs.

Reputation Theory

The importance of reputation was highlighted for the first time by Shapiro (1983), in his work "Premiums for High Quality Products as Returns to Reputations". He describes that the reputation acts as an important mechanism through which the businesses gain trust and relationships in the markets. Macey (2010) opines that reputation is critical in fostering high trust environment for the business of CRAs, and it plays a far greater role than religion or social networks. Partnoy (1999) opines that the CRAs survived and prospered mainly on their ability to build and retain reputation capital. The CEOs of CRAs in their speeches and reports also highlight the importance of reputation capital in their business. Standard and Poor's state that reputation is more important than revenues. Moody's claim that reputation is the bread and butter of their business and they prosper based on their ability to acquire and retain reputation capital. Reputation forms the core competence of CRAs (Hunt, 2009). Hemraj (2008), Klien and Leffler (1984), Diamond (1991), Partnoy (1999), Cantor and Packer (1994), Becker and Milbourn (2011) and Hunt (2009) in their works explain the radical shift in the focus of CRAs from reputational view to regulatory view.

Hemraj (2008) having observed the fall of investment grade rated issuers such as Enron, Worldcom, Paramlat and Lehman Brothers, insist that the reputation of CRAs should have prevented them from assigning and retaining investment grade ratings till they became bankrupt. These defaults show that the CRAs have compromised their integrity in the ratings, to appease the issuers – their paying customers — by either issuing an undeservedly high rating or by failing to downgrade the rating on issuers when circumstances warranted. The works of Coffee (2006); Cox, (2010); Jiang et al, (2012) also share the same opinion. The opinion about the CRAs favouring issuers rather than investors was confirmed and they (CRAs) started came under sharp criticism, when CRAs started rating structured financial instruments such as MBS, CDO, ABS (Cox, 2010). In a nutshell, the findings of the said researchers have tarnished the reputation of CRAs completely. It is shocking to see that, despite the loss of reputation; the CRAs have continued to garner their business of rating, that made the stakeholders to question the very reputation theory itself (Govt reform report, 2008).

Partnoy (1999) in his work "The Siskel and Ebert of Financial Marketsfl: Two Thumbs Down for the Credit Rating Agencies", observes that in the investor pay model the reputation of the CRAs is important. Here, according to him, the agency's name, its integrity and its credibility are subject to inspection by the investment community. Partnoy in his work observes the following:-

a. The reputational considerations were very acute when investors paid CRAs for their services, as they protected the interest of investors.

b. The shift in the payment model from investors pay to issuers pay have diverted the focus of CRAs in protecting issuers rather than investors, leading to the demise of reputation theory in CRAs.

c. The CRAs survived, despite the loss of reputation, because of the regulatory importance attached to the ratings. The ratings have been used as a criterion for various acts of banking, insurance, pension and real estate to name a few.

d. The CRAs have thrived, profited, and have become exceedingly powerful because they began selling regulatory licenses. The CRAs are successful not because of their ability to provide information, but on their legally privileged position which allows them to sell regulatory licenses to issuers.

Hill's (2004) observation in his work "Regulating the Rating Agencies" is not different from Partnoy's observations. The genuine demand for CRAs and their services fuelled by market forces is displaced by ersatz demand fuelled by regulatory requirements leaving very little choice for investors to decide if they wish to use the ratings. Thus, the issuer pays the rating fees to purchase not only the credibility with the investment community, but also the licence from the regulator.

Hunt (2009) in his work "Credit Rating Agencies and the Worldwide Credit Crisis: The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement", identifies the two main reasons for compromising on the reputation (by the CRAs), they are: a) high entry barriers (because the CRAs are in the oligopoly market structure) and b) The benefits of over rating are greater than the costs of such ratings to CRAs (since, CRAs are not subject to civil or criminal liability for malfeasance as they fall under limited agency liability). Similarly, Macey (2010) opines that CRAs would not mind to monetize the value of their reputations by participating in one-shot frauds as they (CRAs) do not find any rationale in building strong reputations. Bonewitz (2010) is of the view that the regulatory component attached to credit rating gives an incentive to the issuer to purchase untrustworthy ratings even if the investors do not value them (ratings).

The Credit Rating Agency Reform Act of 2006 (CRARA) and the SEC regulations assume that the quality of credit ratings can be enhanced by making the credit rating industry more competitive. But, the review of works on competition in CRAs report diametrically opposite views. That is, on the one hand, Becker and Milbourn (2010), Malik (2014), and Coffee (2006) show that the competition in CRAs will reduce their quality and thereby reputation, while, Klein and Leffler (1983) on the other hand, demonstrates that competition in CRAs will improve the quality and thereby increase their reputation and accountability.

Competition in Credit Rating Agencies

According to AMF Report (2010), the market structure of CRAs is oligopolistic, where, the three global CRAs – Standard and Poor's, Moody's Investor Service and Fitch Ratings – together have 94% share of the global market and the remaining CRAs have only six per cent of the global market share. The Securities Exchange Commission's CRA Reforms Act (2006) intends to promote competition in the credit rating industry by allowing more CRAs to apply for NRSRO certification (in accordance with the provisions stipulated in the act). This certification is necessary for the regulatory purposes in the USA. To get the NRSRO certification, the CRAs should have a) Adequate staffing, financial resources and organizational structure, b) Widespread recognition, c) Systematic rating procedures that are designed to ensure credible and accurate ratings, d) Internal control procedures to prevent misuse of information, e) A system of disclosing their procedures and methodologies for assigning ratings and f) Procedures in place to disclose public specific performance measurement statistics (including historical downgrades and default rates).

The new entrants in credit rating industry find it thorny to fulfill the conditions laid down by the act in getting the NRSRO certification. In this way, the NRSRO certification itself has become a hindrance to new entrants to compete with the global three CRAs and survive (Tse, 2008). They (new CRAs) eventually end up as niche agencies (Jean-Marc Moulin, 2008).

Tse Tin Shing (2008) identifies two barriers for lack of competition in rating industry, they are, the natural barrier and the artificial barrier. The natural barrier comes with the CRA's expertise, the economies of scale in gathering the information, the network externalities and the reputation which is already created (Raymond W Daniel, 2005). The artificial barrier is largely attributed to the increased regulatory importance attached to ratings in investment mandates (Kyl, 2006).

Becker and Milbourn (2010) in their work on “How did increased competition affect credit ratingsﬀ” observe that the dilution in the quality of ratings owing to increased competition amongst the rating agencies (themselves).

Malik (2014) in his research on “Is Competition The Right Answerﬂ A Case Of Credit Rating Agencies” develops a game theory model to address the question: would an increase in competition among the CRAs improve the quality of the ratingsﬂ The model concludes that a) Competition in the credit rating industry is not always healthy (as reputational consideration decreases among the players competing) and b) The possibility of collusion will increase among CRAs leading to assigning inflated ratings. Likewise, Coffee (2010) opines that the impact of increased competition among CRAs is problematic; as it encourages ratings arbitrage (issuers pressure competing rating agencies to relax their standards).

Klein and Leffler (1983) opine that increased competition can strengthen the CRAs methodologies and their accuracy. While, Camanho, et al (2012) in their work explain that regulatory initiatives aimed at increasing competition in the ratings industry may reduce overall welfare, unless new entrants have a higher reputation.

The majority of works related to competition in CRAs is of the opinion that the increased competition dilutes the quality of ratings.

Accountability of CRAs

Jonathan and Stephen (2007) in their work on “Rating Agencies: Civil Liability Past and Future”, identifies that the rating agencies lack accountability towards market participants. Despite their erroneous ratings, they go unpunished (under the pretext – the right of free speech protection). Subsequently, this right is removed through CRAs Reforms Act in 2006.

Principal Agent Theory

Daniel (1996) state that the CRAs act as conduits between the issuers and investors. The works of Smith and Walter (2003); European Central Bank (2004); Johansson (2010); Katz (2009); Kerwer (2001) and Iva and Vukasin (2010) explain the diverging role played by CRAs, that is, they (CRAs) act as agents for both investors and issuers. Thus, CRAs operate in the opposing interests of two principals i.e., Issuers and Investors.

Emmenegger (2006) says that conflicts of interest are typical in principal-agent relationships as both the parties (issuers and investors) aim on maximizing their economic benefits, while having different goals. Issuer expects the best possible rating from CRAs and the investor expects the CRAs to give accurate ratings, by preparing rating with caution (Jensen and Meckling, 1976).

Sinclair (2005) in his work on "The New Masters of Capital: American Bond Rating Agencies and the Politics of Creditworthiness" believes that in the issuer pay revenue model, there is an incentive for cooperation between the issuers and the CRAs. This cooperation encourages the CRAs to issue inflated ratings, creating the conflict of interest between CRAs and investors (Kotecha and Ryan, 2011). The practice of charging fees based on the size of offerings also make CRAs more vulnerable to the pressure exerted by issuers (Stephen Rousseau, 2006).

Hill (2004) in his work on "Regulating the rating agencies" explains that the CRAs have begun to provide a large variety of ancillary services such as advisory, research and consulting. The issuers might subscribe to such ancillary services assuming that their failure to do so may have an impact on the rating. This creates conflict of interest between issuers and CRAs. However, SEBI has instructed the CRAs (in India) to separate their rating business from other ancillary businesses,

Rousseau (2006) describes that CRAs are compensated primarily by issuers (for rating/grading services) and secondly by investors (as CRAs continue to offer subscriptions about informational services). Therefore, there also exists conflict of interest between CRAs, Issuers and Investors. If controlling measures are inadequate, the agent (CRAs) has no obligations to consider the interest of the principal (Neubaumer, 2010).

Conflict of Interest (Issuer Pay model)

According to Cantor and Packer (1999) the transformation in the revenue model, that is, from investors pay to issuers pay, has created significant conflict of interest between issuers and CRAs. In the issuer-pay model, the CRAs are sensitive to the needs and desires of their paying clients—the issuers (Timothy E Lynch, 2009). As private and profit oriented enterprises, CRAs have a desire and an obligation to maximize the profits to their shareholders. Unfortunately, the interests of issuers (to receive high ratings) seldom align with the needs of investors (to receive reliable rating information). However, the interests of issuers and CRAs necessarily coalesce, which propels the CRAs to make more money by providing their paying customers—issuers—with higher ratings. This alignment of CRAs and issuers occurs at the expense of the investing public. Therefore, Partnoy (1999) state that the current model (i.e., issuer pay model) of the CRAs is built upon fundamental and blatant conflict of interest.

On the one hand, the Wall street report (2012), the works of Covitz and Harrison (2003) and Roopa Kudva (2010) support issuer pay model and assert that CRAs have implemented adequate measures to prevent or eliminate the perceived conflicts of interest. On the other hand, the Senate Report (2006), The Wall Street Hearings (2010), and the works of Becker and Milbourn (2011); Alp (2013); Baghai et al., (2014); Dimitrov et al., (2015), and Baghai and Becker (2015) affirm that the CRAs have failed to operate objectively.

According to former employees of Moody's and SandP, top priority is given to market share, revenues, and investment bankers opinions than to the ratings given by the CRAs. (US Senate Report, 2006). Rich Blake (2010) observes that the investment banks have hired former employees of CRAs (who possessed knowledge to structure the deals) to influence for better ratings. Becker and Milbourn (2011) in their work on "How did increased competition affect credit ratingsff" express that issuers are directly important to the CRAs because of the fee/income they generate, and therefore the ratings provided by CRAs cannot be free from bias. The internal e-mails showed that managers of the CRAs were willing to adjust the rating criteria to enhance their market share (Wall Street Hearing, 2010).

The CRAs started providing ancillary businesses such as risk management and consulting, advisory services, business process solutions, and other related services to complement their core ratings business. The DSUs might subscribe for these services out of fear that their failure to do so might have an impact on the rating (Partnoy, 1999)

The CRAs have time and again argued that issuing objective and credible ratings are important for them, and they would not put their reputation at risk to appease a particular issuer. The CRAs also state that they have a number of policies and procedures including substantial firewalls in place that separate the ratings business from the influence of ancillary businesses. CRAs say, to ensure the independence and objectivity in the ratings process, the rating analysts do not participate in the marketing of ancillary services. Added to this, the CRAs assert that the rating analyst compensation is merit-based (i.e., based on the demonstrated accuracy of their ratings), and is not dependent on the level of fees paid by issuers. However, it is not clear if such organisational measures can resolve conflicts of interest (SEC Report, 2003). Amadou (2009), Coffee (2006) and Jiang et al., (2012) feels that the investor pay business model is better and suggests that we should go back to investor/subscriber pay model or regulatory pay model. Egan Jones rating agency and CCR rating agency follow investor pay model.

Efficient Market Theory

Fama (1970) in his article on "Efficient Capital Markets: A Review of Theory and Empirical Work" (with three underlying assumptions for efficiency – First, investors are rational; Second, if they are not rational, their random trades will be cancelled; and the last, all arbitrage opportunities will be used) opines that in efficient markets, the prices reflect all the available information.

Jensen (1978) states that in an efficient market, it is impossible to make economic profits by trading on the basis of available information. The efficient-market hypothesis (EMH) asserts that financial markets may be efficient in weak or semi strong or strong form. If the markets are strongly efficient, one cannot consistently gain returns in excess of average market returns as the price of shares reflects all relevant information. If the markets are semi-strong in efficiency, the publicly available information like the credit rating changes (upgrades/downgrade) should be reflected in the firms' current market prices. In semi-strong-form of efficiency, it is implied that share prices adjust to publicly available new information very quickly and no excess returns can be earned by trading on that information (Malkiel, 1989; Ogden, et. al., 2003). Credit rating announcements (either upgrade or downgrade) are used to examine the information content of ratings and it is found that credit rating changes, most of the times, do not contain any new information which influences the stock prices (Weinstein, 1977; Wakeman, 1978; and Pinches and Singleton,1978). This may be because of the inaccurate and incompetent ratings.

Diligence and Competence of CRAs

Timothy E Lynch (2009) in his work on "Deeply Persistently Conflicted: Credit Rating Agencies in the Current Regulatory Environment" categorises inaccurate ratings to be a result of (i) poor due diligence or lack of research resources (inadequate research skills/financial/managerial resources), (ii) lack of analytical resources or (iii) good faith mistakes (Arthur R. Pinto, 2006).

Frost (2006) explains that CRAs fail to ask probing questions to the management/issuer and do not ensure the accuracy and adequacy of financial, analytical, and managerial resources provided by them (issuers) unlike accountants and auditors. They do not always use sound risk models; in short, CRAs do not always take the steps necessary to ensure that they issue credible and accurate ratings. The failure of Enron in 2001 is a clear example of CRAs being too lax in conducting due diligence and failed to audit the information provided by issuers.

Partnoy (1999) is of the opinion that the CRAs failed to invest adequate time and energy in evaluating the corporation's creditworthiness and hence retained investment grade rating on Enron until four days before it filed for bankruptcy.

SEC report shows that the CRAs apparently ignored the warning signs, and failed in assessing the firms accounting irregularities and overly complex financing structures. In this background, Frost (2006) identifies two important issues related to diligence, they are, the first, there is a gap in the way the CRAs understand their role, duties and expectations of the regulators and the users. i.e., CRAs deem that their duty is to ensure the accuracy of the released ratings based on the information provided by the issuers and not to ensure the accuracy of the financial statements and other issuer related information. Secondly, even if the CRAs suspect the information provided by issuers and probe further, they (CRAs) do not have the competence to carry out due diligence, as they lack the expertise and experience when compared to auditors. Hence, the problem here is to find the answer for the question - Does the duty of the CRAs include the duty of an auditor toofl

Conclusion

This theoretical framework is developed with the works pertaining to four prominent theories on credit rating services, viz., Information asymmetry theory and the disclosure practices of CRAs, Reputation theory of CRAs and CRAs accountability and competition, Principal agent theory and the perceived conflict of interest of CRAs and efficient market theory and the diligence of CRAs. This theoretical framework helps us to understand the evolution of CRAs and its impact on DSUs and SSUs. It also helps us to comprehend the present status of CRAs. The CRAs which came into existence to resolve the information asymmetry got engulfed in the principal agent problems; and lost their reputation. It is also found that they have contributed very minimum to the efficiency of the securities markets.

References

Akerlof, G.A. (1970). The market for lemons: quality uncertainty and the market mechanism, Quarterly Journal of Economics, Vol.84, No.3, pp. 488-500.

Spence, A.M. (1973). Job market signaling, Quarterly Journal of Economics, Vol. 87, No. 3, pp. 355-374.

Stiglitz, J.E. (1974). Incentives and risk sharing in sharecropping, Review of Economic Studies, Vol. 41, No. 2, pp. 219-255.

Michael, Rothschild., and Joseph, Stiglitz. (1976). Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information, The Quarterly Journal of Economics, Vol. 90, No. 4, pp. 629-649.

Myers, Stewart, C., and Majluf, Nicholas, S. (1984). Corporate financing and investment decisions when firms have information that investors do not have, Journal of Financial Economics, Vol. 13, No. 2, pp.187-221.

Diamond, D. (1984). Financial Intermediation and Delegated Monitoring, The Review of Economic Studies, Vol. 51, No. 3, pp. 393-414.

Leyland, H.E., and Pyle, D.H. (1977). Informational Asymmetries, Financial Structure, and Financial Intermediation, The Journal of Finance, Vol. 32, No. 2, pp. 371-387.

Williamson, D. Stephen. (1987). Costly Monitoring, Loan Contracts, and Equilibrium Credit Rationing, The Quarterly Journal of Economics, Vol. 102, No. 1, pp. 135-146.

Ramakrishnan, R., and Thakor, A. (1984). Information Reliability and a Theory of Financial Intermediation, The Review of Economic Studies, Vol 51, pp. 415-432.

Douglas, Diamond. (1991). Monitoring and Reputation - The Choice between Bank Loans and Directly Placed Debt, Journal of Political Economy, Vol. 99, No. 4, pp. 689-721.

Smith, R. C., and Walter, I. (2001). Rating Agencies: Is there an Agency Issuefl INSEAD Working Paper No 2001/29/EPS, Stern School of Business, New York University. Available at https://flora.insead.edu/fichiersti_wp/inseadwp2001/2001-29.pdf

Duan, J. C., Sun, J., and Wang, T. (2012), Multi period corporate default prediction - a forward intensity approach, Journal of Econometrics, Vol. 170, pp.191-209.

Frost, C.A. (2006). Credit Rating Agencies in Capital Markets: A Review of Research Evidence on Selected Criticisms of the Agencies, Journal of Accounting, Auditing, and Finance, Vol. 22, No. 3, pp.464-492.

Hunt, J. (2009). Credit Rating Agencies and the Worldwide Credit Crisis: The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement, Colum. Bus. L. Rev. Pp. 109-179.

Stiglitz, J.E., and Weiss, A. (1981). Credit rationing in markets with imperfect information, American Economic Review, Vol.71, No.3, pp. 393-410.

Deb, P., and Murphy, G. (2009). Credit Rating Agencies: An Alternative Model. London: London School of Economics.

Marwan, Elkhoury. (2008). Credit rating agencies and their potential impact on developing countries, Discussion Paper No 186 on United States Conference on Trade and Development (UNCTAD). Available at http://unctad.org/en/Docs /osgdp20081_en.pdf.

Tang, Tony. (2006). Information Asymmetry and Firms' Credit Market Access: Evidence from Moody's Credit Rating Format Refinement, University of Chicago working paper.

Stephen, Rousseau. (2006). Enhancing the Accountability of Credit Rating Agencies: The Case for a Disclosure-Based Approach, Mcgill Law Journal, Vol. 51, pp 617 – 664.

Estrella, A. (2000). Report prepared by a group on Credit Ratings And Complementary Sources Of Credit Quality Information, Basel Committee On Banking Supervision Working Papers No 3, Bank for International Settlements, Basel, Switzerland. Available at http://www.bis.org/publ/bcbs_wp3.pdf

IOSCO. (2003). Code Of Conduct Fundamentals For Credit Rating Agencies, prepared by The Technical Committee Of The International Organisation Of Securities Commissions.

SEC. (2003). Report on the Role and Function of Credit Rating Agencies in the Operation of the Securities Markets, prepared as required by Section 702(b) of the Sarbanes-Oxley Act of 2002.

Kothari, S. P., Shu, S., and Wysocki, P. D. (2009). Do Managers Withhold Bad Newsfl Journal of Accounting Research, Vol. 47, No. 1, pp. 241-276.

Lougee, B. A., and Marquardt, C. A. (2004). Earnings Informativeness and Strategic Disclosure: An Empirical Examination of Pro Forma Earnings, The Accounting Review, Vol. 79, No.3, pp. 769-795.

Kliger, D., and Sarig, O. (2000). The information value of bond ratings, Journal of Finance, Vol. 25, No. 6, pp 2879–902.

Strauss, Cynthia, L. (2003). Director of Taxable Bond Research, Fidelity Investments Money Management, Inc.

Shapiro. (1983). Premiums for High Quality Products as Returns to Reputations, The Quarterly Journal of Economics, Vol. 98, No. 4, pp. 659-680.

Macey, J. (2010). The Value of Reputation in Corporate Finance and Investment Banking (and the Related Roles of Regulation and Market Efficiency), Journal of applied corporate finance, Vol. 22, No. 4, pp. 18–29.

Hemraj, M. (2008). Credit Rating Agencies – Self regulation, Statutory regulation and case law regulation in the United States and European Union, Springer Publications.

Klein, Benjamin., and Keith, B. Leffler. (1984). The Role of Market Forces in Assuring Contractual Performance, The Journal of Political Economy, Vol. 89, No. 4, pp. 615-641.

Becker, B., and Milbourn, T. (2011). How did increased competition affect credit ratingsfl Journal of Financial Economics, Vol. 101, No. 3, pp. 493–514.

Cox, P.J.M. (2010). The announcement effect of changes in credit rating, Master thesis, submitted to Tilburg University.

Jiang, J., Harris, S., Mary and Xie, Y. (2012). Does it matter who pays for bond ratingsflHistorical evidence, Journal of Financial Economics, Vol. 105, No. 3, pp. 607-21.

Govt reform report (2008). CRAs and Financial Crisis.

Bonewitz, Paul, Lasell. (2010). Implications of Reputation Economics on Regulatory Reform of the Credit Rating Industry, William and Mary Business Law Review, Vol. 1, No. 2, pp. 391-430.

CRA reform Act (2006). Available at https://www.sec.gov/ocr /cra-reform-act-2006.pdf

Malik, Khyati. (2014). Is Competition The Right Answerfl A Case Of Credit Rating Agencies, The Public Sphere 2014.

AMF Report (2010).

Tse, Tin. Shing. B. (2008). Role of credit rating agencies in legal context (an empirical study on subprime mortgage crisis in the U.S.), Dissertation submitted to the faculty of architecture for the degree of Bachelor of Science in surveying, Hong Kong.

Raymond, W. McDaniel. (2005). President of Moody's Investor Services, in testimony before the U.S. Senate Banking Committee, February 2005.

Kyl, J. (2006). Removing a Regulatory Barrier: Breaking up the Credit Rating Cartel, U.S. Senate.

Camanho, N., Deb, P., and Liu, Z. (2012). Credit Rating and Competition, Presented in 22nd Australasian Finance and Banking Conference 2009; AFA 2011 Denver Meetings Paper. Available at SSRN: https://ssrn.com/abstract=1573035

Jonathan, S. Sack., and Stephen, M. Juris. (2007). Rating Agencies: Civil Liability Past and Future, New York Law Journal, Vol. 238, No. 88. Available at http://www.friedfrank.com/siteFiles/Publications/Rating%20Agencies.pdf

Wang, T (2011), Can Reputation Concerns Always Discipline Credit Rating Agenciesfl Evidence from Corporate Bond Issuance Ratings. Available at SSRN: https://ssrn.com/abstract=1784537 or http://dx.doi.org/10.2139/ssrn.1784537

Daniel, F. Spulber. (1996). Market Microstructure and Intermediation, 10:3 Journal of Economic Perspectives, Vol. 10, No.3, pp. 147-48.

European Central Bank (2004). Report on Market Dynamics Associated With Credit Ratings A Literature Review.

Johansson, T. (2010). Regulating Credit Rating Agencies: The Issue of Conflicts of Interest in the Rating of Structured Finance Products, Journal of Banking Regulation, Vol.12, No.1, pp.1-23. doi: 10.1057/jbr.2010.3

Katz, S. (2009). Earnings Quality and Ownership Structure: The Role of Private Equity Sponsors, The Accounting Review, Vol. 84, No. 3, pp. 623-658.

Kerwer, D. (2001). Standardising as Governance: The Case of Credit Rating Agencies, Governance: An International Journal of Policy, Administration and Institutions, Vol.18, No.3, pp 453-475.

Iva, V., and Vukasin, K. (2010). The role and significance of rating agencies during the crisis period. International Conference OF Faculty of Economics Sarajevo, Sarajevo, October 14-15.

Emmenegger, S. (2006). The Regulation of Rating Agencies, SZW/RSDA 1/2006: 32–41.

Jensen, Michael. C. and Meckling, William. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure, Journal of Financial Economics, Vol.3, No.4, pp.305-360.

Kotecha, M. W. R., and Ryan, S. (2011). The Future of Structured Finance Ratings, Vol 28, pp. 28-30.

Timothy, E. Lynch. (2009). Deeply and Persistently Conflicted: Credit Rating Agencies in the Current Regulatory Environment, Case Western Reserve Law Review, Vol. 59, pp. 227-304.

Wall Street Report (2012).

Covitz, D. M., and Harrison, P. (2003). Public Debt Issuance and Ratings Migrations: Are Firms timing Their Debt Issuance Around Temporary Private Information, Federal Reserve Board Finance and Economic Discussion Working Paper Series 2000-10.

Kudva, R. (2010). Issuer-Pays Model Ensures Ratings are Available to the Entire Market, Econ. Times (India) (Oct. 22, 2010).

US Senate Report (2006). Credit Rating Agency Reform Act Of 2006.

The Wall Street Hearings (2010). Wall Street And The Financial Crisis: The Role Of Credit Rating Agencies.

Alp, A. (2013). Structural Shifts in Credit Rating Standards. The Journal of Finance, Vol. 68, No. 6, pp. 2435-2470. http://dx.doi.org/10.1111/jofi.12070

Baghai, R. P; Servaes, H., and Tamayo, A. (2014). Have Rating Agencies Become More Conservativefl Implications for Capital Structure and Debt Pricing, The Journal of Finance, Vol. 69, No. 5, pp.1961-2005.

Dimitrov, V., Palia, D., and Tang, L. (2015). Impact of the Dodd-Frank Act on Credit Ratings, Journal of Financial Economics, Vol. 115, No. 3, pp. 505-520. Available at https://ssrn.com/abstract=2444990

Baghai, R. P., and Becker, B. (2015). Non-rating revenue and conflicts of interest, Journal of Financial Economics, Vol. 61, No. 1, pp. 379-397.

US Senate Report (2006).

Rich, Blake. (2010). Sleeping with the Enemy – Rating Agency Conflicts Surface, ABCNEWS http://abcnews.go.com/Business/ratings-agencies-chiefly-sp-moodys-fitchfire-bed/storyflid=10481484

Amadou. (2009), The Systemic Regulation of Credit Rating Agencies and Rated Markets, IMF Working Paper No. 09/129.

Fama, Eugene, F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work, The Journal of Finance, Vol. 25, No. 2, Papers and Proceedings of the Twenty-Eighth Annual Meeting of the American Finance Association New York, N.Y. December, 28-30.

Jensen, Michael, C. (1978). Some Anomalous Evidence Regarding Market Efficiency, Journal of Financial Economics, Vol. 6, No. 2/3, pp. 95-101.

Malkiel, B. G. (1989). Is the Stock Market Efficientfl, Science, New Series, Vol. 243, No. 4896, pp. 1313-1318

Ogden, J. P., Jen, F. C. and O'Connor, P. F. (2003). Advanced Corporate Finance: Policies and Strategies, Pearson Education, Delhi, pp.274.

Wakeman, L. M. (1978). Bond rating agencies and the capital markets, working paper, University of Rochester, New York

Arthur, R. Pinto. (2006). Control and Responsibility of Credit Rating Agencies in the United States, 54 AM. J. COMP. L. SUPP. 341, 342.

Blume, M., Lim, F., and MacKinlay, A. (1998). Thee declining quality of US corporate debt: Myth or realityfl, Journal of Finance, Vol 53, pp. 1389 – 1413.