Assessment of Long Term Performance of Credit Rating Agencies in India

A Study by

National Institute of Securities Markets,
Navi Mumbai 400 705

March 2009

Contents

Terms of Reference

This Study has been commissioned by NISM as desired by the Committee set up at the behest of HLCCFM, to look into the legal and policy framework for regulating the activities of Credit Rating Agencies (CRAs), vide letter bearing Reference No. F.No.12/11/07-PM, dated 16.1.2009.
The Terms of Reference are listed as under:

1. Assessment of the performance of CRAs in India in terms of parameters like default and transition data
2. How much information asymmetry is bridged by CRAs
3. How far CRAs assessment helps financial regulation
4. Accountability, corporate governance issues of CRAs
5. Disclosures of methodologies of rating
6. Rating of complex products like structured obligation
7. Uniformity or otherwise in definition and rating nomenclature of CRAs in India
8. Consistency of rating data with accounting data
9. Overall evaluation of what CRAs have done in terms of value addition or the Indian economy

CRAs have agreed to nominate officials and provide data and inputs for facilitating this Study.
A time frame of two months, commencing has been granted for submission of the report.
NISM constituted a two-man Project Team to carry out the Study.
The Team used an array of approaches, including a Literature Survey, accessing Actual Data with CRAs, Structured Questionnaires with CRAs, Unstructured Interviews with various CRAs, Issuers, Institutional Investors, and Subject Experts. The outcome of these interactions were gauged against the results of this independent study to identify strong and weak areas and suggest improvements in the processes and provide inputs for policy formulation and regulation.

Executive Summary

CRAs have been in operation since the late 1890s, signifying an existence of over 100 years. Rating standards by Moody's and S&P were known to be stringent. From 1970 onwards, financial literature has been commenting on the superior information efficiency of the markets, in comparison to information disseminated by the CRAs. With the advent of securitization and its offshoots, a complex web of contracts are stitched together to service structured obligations. CRAs overestimated the enforceability of the structured obligations and fissures in the structures resulted in the post-Enron, post-Worldcom debacle. Lack of corporate governance standards and vigilance by accountants were identified as the root cause, while the CRAs were accused of abetting the intricate structures with high credit ratings. CRAs (together with accountants) have once again come under sharp criticism after the sub-prime debacle, with the root cause being poor originations standards of banks and excessive, opaque structures designed by aggressive merchant banks. Structured finance, which commenced with class markets, moved into mass markets with the impetus from investment bankers. It is said that CRAs once again overestimated the credibility of the contracting parties to honour the structured obligations and were led to base their ratings on complex quantitative 'black-box' models, with data from benign periods. This has led to investors being saddled with poor quality, illiquid paper with systemic implications.

The situation in India is different on account of conservative origination standards and lower complexity levels in securitized transactions (mostly Pass-Through-Certificates or PTCs) with very little systemic implications. There is, however, the possibility of asymmetric information between the issuers and all others due to reasons mentioned in this study.

CRAs have been operating in India since 1988. CRISIL, ICRA and Fitch India have collaborative arrangements with S&P, Moody's and Fitch respectively. CARE is promoted by IDBI & Canara Bank. This demonstrates the pedigree and parentage of Indian CRAs. The quality of their staff is also observed to be competent. Brickworks, the latest entrant, was established in 2008. Thus, a total of 5 major CRAs operate in India at present. Most of the ratings by CRAs relate to Bank Loans, on account of ascertaining the Credit-related capital adequacy.

The two known incidents of CRAs under public scrutiny were the CRB (the NBFC) collapse in the mid 1990s and the default by BPL on its loans from LIC. Barring these two incidents, there has been no widespread criticism of the CRAs. The objective of this study is to gauge the robustness of the operations of the CRAs with a view to suggest measures for improvements in their performance.

PhD level studies in India have shown that (i) Ratings in India are more lenient than their counterparts in USA (ii) CRAs in India are more subjective in their assessment and (iii) the deterioration in ratings is not captured in time by CRAs, if compared with financial information in the public domain. These studies were completed in 2001.

The present study is another attempt to assess the performance of CRAs, particularly in the light of the significant events in the global financial system and the criticism being faced by CRAs in USA. It covered 5 CRAs, 40 Ratings, 34 Analysts and 10 Institutional Investors.

Under study, a simple model, built around Net Worth, Leverage and Interest Cover, was used to detect deteriorations in creditworthiness. When compared with the actual ratings, it was found that the actual ratings did not always reflect the falling creditworthiness in a timely manner. The team has also suggested use of Artificial Neural Networks (ANN) which can be deployed by CRAs and Investors, to cross-verify the rating process and do a quality audit.

Over the years, CRAs have been disseminating information on ratings and rationales, free of cost to the investing public, Many firms are coming into the public domain through the rating exercise, especially SMEs that approach banks for loans. Hitherto, it was difficult to obtain information unlisted firms. The credit rating exercise is likely to instill discipline into SMEs early enough at their stage of growth. For the investing community, any additional information at a zero- or low-cost, presents an opportunity to bridge the information gap on firms and industries. As regards structured obligations, CRAs have already introduced 'complexity grading' to forewarn investors about the intricacy of structures.

While the CRAs have been staffed with very competent personnel, it is also felt that there is room for improvement in the work systems, to address the problem of asymmetric information. *Ab initio*, there is asymmetric information between the management of rated companies and their auditors. In turn, the CRAs depend on auditors. Further information is obtained from the bankers. The CRAs also rely on projections made by the company managements. Due to this over-reliance on information from the company and the auditors, other formal and informal sources of information are not utilized. Many good banks go beyond Financial Statement Analysis before taking credit decisions. Hence, the asymmetric information problem will continue to exist. It is strongly suggested that the Due Diligence Review Process (DDR) goes beyond Financial Statement Analysis. More broadly, development of DDR skills is important to improve the efficiency of CRAs, Merchant Banks, Lending Banks, Accountants and Auditors. The existing approach of relying on company managements may be insufficient in detecting falling creditworthiness in weaker or not-so-well governed firms.

There is no standard process of analysis across various Analyst teams. There is also a variation between the rating judgments of the individual Analysts and the final ratings arrived at by consensus. Notes of dissent are not recorded, resulting in loss of valuable check-points for further monitoring. There seems to be a high level of subjectivity in the final ratings process.

Operational Audits, covering matters of record-keeping, minutes, surveillance, periodicity of reviews etc need to be made mandatory. This will result in the reviews being conducted at shorter levels, as also a proper monitoring trail.

For the benefit of the public, it is necessary to display the various rating symbols of various CRAs on a common website (say of regulators), on a comparable scale.

While rating structured obligations, CRAs need to constantly update their rating models current with realistic cash flow estimates, and communicate the same to investors, so as to mitigate the effects of model risk and counterparty risk.

Some investment institutions blindly rely on the ratings given by CRAs. Most of the investment institutions, however, use the credit ratings as a filter and perform their own DDR before making the final investment decision. This system of additional cross checks is a healthy practice on the part of users of ratings.

During the year 2008-09, a turbulent period for financial systems all over the world, a number of Indian companies opted for Corporate Debt Restructuring (CDR). A risk-averse market also saw the reluctance of many investors in opting for the conversion of their FCCB into stocks, while opting for the redemption of the instrument itself. This placed additional strain on the financial resources of issuers, coupled with the fact that it became extremely difficult to raise equity from the markets after January 2008. The tumultuous year showed the strain on the finances of many companies. It also threw up questions on the lax attitude of corporations towards governance and accounting – where form was given precedence over substance. In light of the above, Accountants, Auditors, CRAs, Banks, Merchant Banks and Investors need to exercise extra vigil in gauging the creditworthiness of issuer companies.

A survey of CRAs and their Analysts revealed that there was a very low level of awareness among Indian accountants of International Financial Reporting Standards (IFRS) which Indian corporations need to comply with effective from financial year 2011. Awareness levels and competence needs to be raised on a war footing across the entire financial community, with an emphasis on substance, not merely formats. This would be a major step in strengthening the Indian financial system.

It is often said that Balance Sheets seldom repay loans – but people do. This brings back the issues of good governance and accounting to the fore. The existing 'form-over-substance' style of governance goes against the grain of true corporate governance. To address this deeper issue, the subject of corporate governance – or lack of it, merits further research for a timely detection of falling corporate governance standards. Some suggested parameters to detect ‘form-over-substance’ governance styles are: aggressive expansion, diversification, mergers & acquisitions, frequent fund-raising sprees, leverage and related party transactions, to name a few. The outcome of such research could result in inputs to strengthen the financial markets and CRAs in particular.

The paragraphs above represent the gist of our findings, based on the Terms of Reference. Details of this study, carried out from January through March, 2009, are contained in this report.

Acknowledgements

Thanks are due to several persons who have contributed to this study.

Dr KP Krishnan and CKG Nair of the Ministry of Finance, Government of India, provided the critical preliminary inputs. MS Ray and Suresh Menon of SEBI also provided vital inputs. Pratip Kar, former ED-SEBI, also provided tremendous insight into the various aspects of Credit Rating. The Board of Governors, NISM also provided guidance from time to time in shaping this Report.

From the rating community, Raman Uberoi and Ajay Dwivedi of CRISIL, Amit Tandon and Dipesh Patel of Fitch, Naresh Takkar and Anjan Ghosh of ICRA, DR Dogra, Rajesh Mokashi, Sathees Kumar and Naveen Jain of CARE and Ramaswamy Annam and Rajender Walia of Brickworks provided the bulk of the data and information based on which the findings of this report are based. Thanks also to the various Analysts from all the rating agencies that helped in providing data through the Questionnaire. Some of the issuers and investors also participated in the deliberations and thanks are due to them too.

Each of the persons mentioned above have spared their valuable time despite their busy schedules.

Thanks are due to the students of NMIMS University, School of Business Management, who participated in the various excercises on credit ratings during the course of their studies in Fixed Income Securities and Computational Finance.

Thanks are due to various libraries, such as NMIMS, IICM, and the British Council Library for the researching facilities.

For NISM

Dr Sunder Ram Korivi
Mr Suneel Sarswat
Dr T Geetha

Vashi - Navi Mumbai, March 31, 2009

Chapter 1

CRAs: Relevance and Perspective

The study is a proactive initiative, with a view to assess the preparedness of the CRAs to communicate signals and reduce the informational asymmetries that generally exist between issuers and investors. CRAs have been rating instruments and subjecting them to periodic review, sometimes necessitating a transition to a lower or higher grade. The timeliness of the transition is also a matter of informational asymmetry. Thus far, CRAs have obtained the approval of SEBI, giving them the status of approved rating agencies. The RBI also has put regulations in place with reference to credit rating agencies and credit information companies. There are five Credit Rating Agencies registered with SEBI, viz. CRISIL, ICRA, CARE, Fitch and Brickworks. Of this, CRISIL has been the oldest, having been in operation since 1988 followed by ICRA (1991), CARE (1994), Duff & Phelps, subsequently taken over by Fitch (1999) and Brickworks (2008). This makes it an opportune time to assess the quality of services that the CRAs have been rendering to the investing community in risk mitigation. SEBI put in place the Regulations for CRAs in 1999 this has been followed by a Code of Conduct for CRAs. The desire for this study is truly proactive since its pre-dates the outbreak of the 'sub-prime' type of crisis of a scale and magnitude witnessed in USA and Western Europe. In those countries, CRAs are facing the heat for the high ratings for complex structures, laced with enhancements, through guarantees, by entities that ultimately did not have sufficient risk capital. This left several investors, including institutional investors saddled with substantial investment losses and illiquid paper. It is not the objective of this exercise to pass any moral judgement on the performance of the CRAs in India. The CRAs, on their part, have consented to cooperate in such a study. The study presents a timely opportunity for introspection by all concerned entities – policy makers, regulators, investors, rating agencies, issuers and intermediaries.

CRAs have enjoyed operating in an unfettered manner, and are free to independently report their findings. This is true of sovereign ratings as well as other instruments including those issued by state governments, local governments, corporate entities, financial institutions and special investment vehicles. A rating exercise, by itself, is a complex process and is a mix of objective and subjective judgment. On their part, the regulators have also appreciated the CRAs' need to operate in an independent manner and kept up with the spirit of independence. The rating exercise would also involve many methodological aspects, some of which are intellectual proprietary in nature. It is to be understood and appreciated that CRAs may not be in a position to reveal the intimate Intellectual Property (IPR) part of the rating process. Further, the intended study itself is of a broad macro nature of the CRAs in totality, without going too much into the mechanical, micro details. To gain a further perspective, it may be useful to gauge the feedback from some users of the ratings, viz. life insurance companies, provident funds, pension and superannuation funds etc. It would be useful to conduct an ethnographic study to understand and experience the manner in which the ratings are used and match up to the expectation of this crucial investing community. On the whole, the exercise will be useful in broadly evaluating the useful role by CRAs in de-risking or mitigating risk related to the investment climate in India, and hence made a contribution to economic development.

The study could begin with a brief historical perspective, mainly revolving around the lessons to be drawn. Rating involves higher-level judgement, and a mechanical, check-list approach to gauge the efficiency of CRAs transaction-by-transaction is not desirable. A wide range of instruments are rated, ranging from simple to complex. In case it is found that the simpler products are not analyzed appropriately, it could raise doubts on the ability to raise more complex products. This applies to initial ratings as well as migrations/transitions on renewal of ratings. Even the migration speeds become relevant in order to gauge reaction times. It would be pertinent to look for correlations between ratings of simple products and the actual performance of the rated instruments, vis--vis the corresponding variables for the complex products.

This is a classic case wherein CRAs operate in domains regulated by different entities. SEBI recognizes CRAs, who rate instruments that are purchased in the capital markets (regulated by SEBI), and a diverse community of investors including banks (regulated by RBI), insurance companies (regulated by IRDA), pension funds (regulated by PFRDA). This necessitates inter-regulatory coordination. It is also necessary to identify areas wherein the policy-makers could facilitate an optimal environment for removal of asymmetric information. It relates to the design, structure and extent of the regulatory structure pertaining to the operations of CRAs, and an enquiry as to whether the prevailing policy regulatory regime has helped or harmed the functioning of CRAs. There also exists the conflict-of-interests issue, wherein the CRAs garner fees from the issuer (not the user), thereby creating an obligation which could impinge upon the independence. Further, CRAs also engage in consulting and advisory services, resulting in personal relationships which further impair independent thinking.

Today, the need for ratings permeates boundaries beyond credit rating; for instance, Brickworks rates the services of hospitals, something of immediate use to the regulators of health insurance (IRDA) as health policy makers and the general public. It is also learnt that the relationship that prevails between the CRAs is one of mutual respect and healthy competition.

This study aims at reporting various facts to be confirmed on the role of CRAs in India, with a view to also make recommendations to enhance the operating environment for CRAs so that they can collate and disseminate value-added information to the investing community in the times to come.

The High-Level Coordination Committee on Financial Markets (HLCCFM) met on December 23, 2008 and obtained the consent of the CRAs for the conduct of this study. The Committee has, vide its letter dated January 16, 2009, mandated NISM to carry out this study over a 2-month time frame, with the following terms of reference:

1. How far CRAs assessment helps **financial regulation**
2. **Accountability, corporate governance** issues of CRAs
3. Consistency of rating data with **accounting data**
4. Disclosures of **methodologies** of rating
5. Assessment of the performance of CRAs in India in terms of parameters like **default and transition data**
6. Uniformity or otherwise in definition and **rating nomenclature** of CRAs in India
7. How much **information asymmetry** is bridged by CRAs
8. Rating of **complex products** like structured obligation
9. Overall evaluation of what CRAs have done in terms of **value addition** or the Indian economy
10. Approaches followed for **credit enhancements**
11. Experiences with **structured obligations** and desirability of such practices
12. Matters related to **conflicts of interest** faced by rating agencies
13. Cases of **instruments being rated higher than the issuer**

Each of the CRAs volunteered a nodal officer for interacting with the NISM study team.

Based on the internal discussions at the Board of Governors level at NISM, the scope was extended to cover the last 4 points mentioned above.

'Rating the raters' has been a hotly debated issue in the press after every crisis of confidence in financial markets. There is also a widespread view that the financial markets are more aware of the weakness in issuing companies and factor this information into asset prices before the financial markets react. This places the role and functioning of CRAs under critical public review. To address this question, it needs to be considered as to whether there is any person or entity that is superior to the CRAs in skill and knowledge to pass judgement. It would be more practical, therefore, to ascertain whether reasonable standards of due diligence have been exercised in order to mitigate credit risk. *This logically* *results in the need for CRAs to put in place approaches and methodologies that are disclosed to the public and that such methods could result in providing consistent results that can be fairly relied upon to base a credit judgement. It is not clearly as to how much importance is given to probability of default and subjective judgement factors.* As regards Government Securities, there is certainty as to the dates and amounts that can be received on each due date; this is not true in the case of other instruments.

Notably, regulators in India have not specified methodologies but have left it to the choice of the CRAs. Practices tend to vary around a broad theme of approaches and methodologies.

SEBI (Credit Rating Agencies) Regulations were issued in 1999. This was amended in 2003 and followed up with a Code of Conduct, also in 2003. Each of these efforts by SEBI preceded the sub-prime crisis in USA and Europe, and can be construed as pro-active measures. Some of SEBI's observations are as under:

1. CRAs need to undergo thorough Operational Audits in order to tone up their systems. This is in addition to the financial audits they undergo for balance sheet purposes.
2. Dissent notes are not captured
3. CRAs also need to cross-verify their analysis with the Registrar of Companies (ROC), Debenture Trustees, Stock Exchanges, and Institutional Investors etc.
4. The Appeals Committee needs to be constituted with members who are completely different from the original committee that recommended the rating being disputed
5. There are issues related to conflict of interest, in relation to composition of review committees.
6. Compensation paid to analysts is not revealed
7. Rating Symbols are different across CRAs
8. CRAs adhere to the SEBI Code of Conduct but all of them do not adhere to the IOSCO Code of Conduct for CRAs
9. As regards the 'issuer pays' model, it continues to be the best option, until a better method arises.
10. There is also a need for the general public to know the Ownership Structure of the CRAs to reduce the possibility of conflict of interest.
11. The usage of the word Credit Rating needs to be restricted only to CRAs registered with SEBI.

12. The general public also needs to be educated on the usage of ratings. Disclaimers need to be made upfront by CRAs on the use of the ratings.

The SEBI (CRA) Regulations provide for a continuous, periodic review and monitoring. The exact periodicity and rating methodologies are best left to the judgement of the CRAs.

There was a case wherein an issuer defaulted on a debt obligation and a leading Domestic Financial Institution (DFI) brought the fact to the notice of the concerned. This brought a probable lacuna in the rating process to the notice of the regulators.

The activities of CRAs cover multiple jurisdictions – banks and insurance companies who lend/invest in to rated instruments. It is desired that SEBI be the nodal agency for the registration and inspection of CRAs. Members from other regulatory bodies such as RBI, IRDA, PRFDA could be a part of the joint inspection team.

This SEBI inspection was an intensive, detailed and exhaustive by a strong inspection team which spent considerable amount of time with each CRA. The study served as a valuable eye-opener on the operational and procedural aspects.

The current study by NISM is on the rating processes, methodological aspects, and the effectiveness of the CRAs' rating exercises. This is based on a three-way interaction with the CRAs, the investors and the issuers. The study is also aimed at making suggestions for the better functioning of the CRAs so as to serve the financial markets with quality information on a consistent basis. It is based on a detailed Questionnaire as well as unstructured interviews and was conducted over a period of 2 months.

In recent times, 3 PhD level theses were carried out in areas related to CRAs in India. The authors are Mamta Arora of University of Delhi (South Campus), Sen Choudhury of IGIDR and T Geetha of IIT Bombay.

Mamta Arora concluded that the CRAs use more of judgement and subjectivity in their rating exercises. Sen Choudhury concluded that the rating process of Indian CRAs is less robust and they showed a greater degree of leniency in comparison to their western counterparts such as Moody's and S&P.

On the subject of financial markets beating the CRAs in reacting to adverse news, it has been observed that the CRAs have exhibited slower response. The major study in this genre was by T Geetha (PhD thesis, IIT Bombay) concluded in 2001, whose preliminary findings were presented at the UTI Capital Markets Conference in 2000. The researcher has concluded that the markets react faster in incorporating fresh news into asset price movements. A combination of accounting and econometric tools was used in that study. It was also found that, in actual practice, the CRAs use a lot of subjectivity in their final judgement.

This current study also uses a similar methodology to validate that conclusion and suggests viable alternatives. The objective is to place a simple tool in the hands of the public that will enable a cross-verification of the reports by CRAs in a cost-effective manner and raise the quality standards bar of the CRAs. The study also suggests practical ways in which the CRAs can improve their rating processes and help reduce the information gap.

Chapter 2

Raters and Ratings: Evolution and the Current State of the Art

The Raters

A credit rating agency (CRA) is a commercial concern engaged in the business of credit rating of any debt obligation or of any project or program requiring finance in the form of debt or otherwise. CRA is different from a mercantile credit agency, which usually supplies general information on corporates. It is also different from a credit bureau, which collates information on credit record of corporates or even individuals. Nor is it a credit-assessing agency like the credit department of a commercial bank. The most significant aspect of credit rating is that it is an opinion made available for public, influencing decisions by participants in financial markets.

The following information on the origin and growth of credit rating has been collected from two sources, *viz.*, Cantor and Packer, 1995 and ICRA, 1994. The precursors of bond rating agencies were the mercantile credit agencies, which rated merchants' ability to pay their financial obligations. After the financial crisis of 1837 in the US, Louis Tappan established the first mercantile credit agency in New York in 1841. Robert Dun subsequently acquired the agency, which first published its first ratings guide in 1859. In 1849, John Bradstreet formed another mercantile rating agency, which published a ratings book in 1857. In 1933, the two agencies were merged into Dun and Bradstreet, which became the owner of Moody's Investors Service (Moody's) in 1962. Credit goes to John Moody for introducing formally the credit rating symbols in 1909 using 'Aaa through C' notations when Moody's started rating US railroad bonds.

Meanwhile, Henry Varnum Poor published, 'The History of Railroads and Canals of the United States' in 1860. The railroads were the principal engine propelling the Industrial Revolution. In 1906, Standard Statistics began publishing financial information on US industrial companies. Rating for various other corporate bonds followed in 1923. In 1941, Poor's Publishing Company and Standard Statistics Company merged to form Standard & Poor's Corporation (S&P). S&P was a publicly owned corporation till 1966 when its controlling interest was acquired by McGraw Hill Incorporated which acts as the holding company.

While the rating of corporate bonds started in the early twentieth century, sovereign ratings represent a relatively new line of business for the agencies. The first industrial country to be rated was France, by S&P in 1959. Both Moody's and S&P rated Venezuela, a non-industrial country, in October 1977. Fitch IBCA entered the business of sovereign rating only in 1975. In cases where a sovereign does not seek a rating, but a corporate entity of such a country seeks a rating, CRAs do assign an implicit sovereign rating. The scope of rating in international arena broadened in 1960s to include sovereign states and public agencies raising funds in international financial markets.

With the increasing number of companies and sovereigns entering into the international capital market for raising funds, the credit rating operations of both Moody's and S&P have expanded and, hence, they maintain offices in major countries of the world. Besides these two world famous credit rating agencies in USA, there are a few more famous agencies that offer sovereign ratings. These are Canadian Bond Rating Service, Dominion Bond Rating Service Ltd., Duff & Phelps Credit Rating Co., The Fitch IBCA Group, Japan Credit Rating Agency Ltd. and Thomson Bank Watch Incorporated. While normally CRAs assign a rating on the request of an issuer, there are occasions when unsolicited ratings are assigned, and in many such cases, the fact that they are unsolicited is made explicit with an asterisk.

There is also the criticism against the structure of CRAs in USA, with an oligopolistic market largely carved out between Moody's. S&P and Fitch. This quest for market shares is viewed as a reason for a lack of commonality in the rating symbols. Also, the argument put forward for maintaining the oligopoly is that size begets experience and expertise, hence a larger number of smaller firms is undesirable in the interests of quality standards.

All of these agencies are represented in India through their collaborations:

S&P : CRISIL
Moody's : ICRA
Fitch : CARE (for 1 year only)
Fitch : Fitch India (formerly Duff & Phelps India)

These collaborations bring in financial capital, and more importantly, know-how, experience, depth of expertise, research capabilities and manpower synergies. The global orientation received by CRAs in India is further enhanced by two factors

Affiliation to the Association of Credit Rating Agencies in Asia (ACRAA), an ADB sponsored body. Indian CRAs are founder members.

Alignment with the IOSCO Code of Conduct, to the extent they coincide with the SEBI Code of Conduct for CRAs.

These collaborations, affiliations and alignments enable the Indian CRAs to benefit from an exposure to an international environment.

It is also a notable feature that Indian CRAs, in turn, provide technical expertise and knowhow to CRAs in Mexico and other countries in the SAARC and ASEAN regions. This provides an emerging markets perspective. Indian CRAs have a leadership position in Asia, behind only Japan, whose CRAs show a greater affinity in interacting with CRAs from the developed (G7) countries.

As on date, there are 5 CRAs in India:

CRISIL (est. 1988), ICRA (est. 1991), CARE (est.1993), Fitch India (formerly Duff & Phelps India, est. 1996, taken over by Fitch in 1999), Brickworks (est. 2008).

Notably, India has 5 CRAs in comparison to 3 of USA. Thus, competition is stiffer since there are more CRAs for a financial market that is smaller than USA in value, and hence dilutes oligopolistic power. However, in terms of number of firms and issues, India could be a market of considerable size. During the current downturn from 2008, the number of rating assignments has increased, and to some extent, issuers have got away with discounts in rating fees (which range from Rs.1 lakh to 2 lakhs per rating assignment). This is evidence of a dilution of the oligopolistic power.

At a smaller level, there is SMERA (Small & Medium Rating Agency) which rates loans availed by Small & Medium Enterprises. The rating fees are around Rs.40,000 per assignment, which the large CRAs find to be unviable; hence such assignments are either rejected or outsourced to smaller Chartered Accountant firms, supplemented by a cursory telephonic verification. The quality of personnel at SMERA or smaller agencies may not be the same as those at the SEBI registered CRAs. Outsourcing is a matter of policy and should generally be discouraged for reasons of quality as well as privacy.

Another phenomenon is the presence of Credit Information Companies (CIC) which are recognized by the RBI through the Credit Information Companies Regulation Act. Their services are availed by credit granting institutions for the sanctioning and monitoring of facilities to individuals who borrow loans, housing loans and avail of credit card facilities. The Credit Information Bureau of India Limited (CIBIL) is one such example.

The Rating Process

In 1934, *Benjamin Graham, David Dodd and Sydney Cottle* wrote their book 'Securities Analysis' a classic work that marked the beginning of the field. Until then, financial analysis was sketchy and bereft or analytical principles or rigour. They also pioneered the first steps in the Quantitative School of financial information for decisions on Securities investment. Securities Analysis is the classic textbook used in Columbia University till this day. This 1934 classic has come to the forefront once again in recent times, indicating how the tenets of conservative value investing protect the investor from overpaying when investing in securities, tenets which are overlooked as unfashionable during the periods of economic boom. The Graham approach involves an analysis over the past 10 years to ascertain the track record of an issuer.

Also in parallel, during the 1930s, a notable development was the emergence of *Philip Fisher*, who wrote his book 'Conservative Investors Sleep Well'. This is a recommended textbook at Stanford Business School. He stressed on the Qualitative aspects such as Management Vision and Integrity, Marketing &

Sales Capabilities, Employee Morale Levels, Product Development etc. The hallmark of this approach is the use of informal information in addition to formal sources so as to obtain a more complete evaluation of a company's prospects. This technique, currently known as the process of Due Diligence Review (DDR) is critical in any financial appraisal. With the onset of outsourcing, financial appraisal skill seems to be a dying art, viewed as a poor cousin to investment banking and financial engineering. Thus, Philip Fisher's Qualitative School neatly complemented the Quantitative School of Graham et al.

The 1930s are known for the disillusionment of the investing public with the quality of information disseminated by the financial community. It was also a period in which the dissatisfaction with the accounting community was made public. Thus, the 1930s are a period which witnessed the formation of the SEC, the imposition of the *Glass-Steagall* Act that separated Commercial Banking from Investment Banking. The repeal of the *Glass-Steagall* Act recently has exposed the systemic risks, seen from the downfall of Citigroup and other banks in the USA. European banks are further weakened by a total absence of an act similar to the *Glass-Steagall* Act.

Academic interest in financial analysis reemerged with studies by *Edward Altman* who used the statistical technique of Multiple Discriminant Analysis (MDA), which has the ability to filter data into two baskets: Safe and Default categories. It is a scoring model (revolving around a Z-score), with different weights to different ratios and variables. Based on the relevance of the various weights and variables, subsequent researchers have been able to tweak the Altman Z-Score Model to devise their own scoring models.

Supplementary to such studies, the Linear Probability Models (LPM) became popular in predicting bond defaults. These models were further improved upon by the LOGIT and PROBIT models, which are comparable.

In later developments, Credit Risk Measuring approaches such as Credit-metrics, Loss-Given-Default (LGD) and the KMV Models have extensively been used to measure credit default probabilities and assign ratings and rating transitions. In particular, Moody's, and Standard and Poor (S&P) have equipped themselves with these techniques.

A study of the sub-prime crisis in USA is illustrative of the functioning, through a paper by *Vikrant Vig* et al, presented at the Conference on Securities Markets organized by NISM in December 2008. The US CIC compiles a score and discriminates loan applicants into two baskets – credit-worthy or otherwise. The cut-off score was 620 for obtaining a mortgage loan. It was found that most of the defaults that occurred were by applicants who had obtained a score marginally above 620 (say, 621 to 630). This led to the massive sub-prime crisis and its global consequences. The lesson here is that the CIC and the applicants got around the system and weakened the mortgage loan systemically. Abetted by lax standards of loan origination in a quest to boost balance sheet size and adventurous investment bankers, elaborate structured obligations were created. Whereas the CICs failed in the loan-filtering process, the CRAs failed in detecting risks in the design of the pretty securitization structures.

By analogous reasoning, it is assumed that the maximum potential for default is by borrowers who artificially manage to get a rating barely above the acceptable credit rating or credit score. For example, the highest defaults would be in the BBB category and need a stronger level of sanctioning procedures and scrutiny of collateral security.

At the 2003 Conference by ISMA held in Madrid, one of the Hedge Fund managers mentioned that the International Rating Agencies lagged behind the market information. This was stated in the light of the collapse of WorldCom and Xerox, in the aftermath of the Enron fallout.

The RBI has rightly been very critical of the role of Direct Selling Agents (DSAs) which are ill-equipped to filter bad loan proposals due to the commission structures that are based on commissions. This perverse incentive structure results directly into a moral hazard and could pose a systemic risk. Likewise, in Mutual Funds (regulated by SEBI) and Insurance (regulated by IRDA), cases of mis-selling are more widespread than on evidence, due to the possibility of unreported complaints. This could be the genesis of premature redemptions and adverse claims. Along the same lines, tough norms need to be placed for recognition and renewal of registration of CRAs, SMERA and CICs. Although they operate in different segments, the basic Due Diligence Process (DDR) remains the same. This argument is extendable to auditors also, who are the first level in the filtering process. While there will always be asymmetric information between the issuer/borrower vis--vis the CRA and lender, steps need to be taken to minimize the asymmetry. Here, the DDR skills of the personnel will be the most important risk mitigating device.

CRAs and regulators need to be doubly careful in the 'blind spots' or grey regulatory zones. AIG for instance, was an insurance company whose unregulated affiliate strayed into Credit Default Swaps (CDS) that were traded in the unregulated OTC markets. Investment losses directly hit the capital and the vulnerability showed up after it was too late. In this regard, complexity grading is a good step and must be factored in to expose the heightened risks (counterparty risk) that is in addition to the basic credit risk, since one of the counterparties in the structured obligation who may be unregulated and hence possess inadequate risk capital.

The Rating Process was gauged firsthand through site visits to the various CRAs. A very detailed Questionnaire was administered and the generalised findings are compiled in the following page.

Activity	**Procedure**
Business Development (BD)	Separate from Analysis
Common Member – BD and Analysis	No
Fee structure and payment	Upto Rs.2 lakh. 100% in Advance
Knowledge of Fee structure to Analysts	No
Disclosure of Interest by Analysts	Self Declaratory
Separate Criteria Team	Not in all cases
Common Member – Criteria and Analysis	Yes, it is possible
Training and Training Manuals	Yes
Research Support	Yes. Some research output is sold outside. But CRAs do not buy/rely on research from outside
Outsourcing	For SME ratings in some cases
Nature of Assignments	Mainly debt instruments rating.
Advisory Services	Either shut down or hived off to separate company
Rating Inputs	Financial Statements, Site Visits, Management Meeting. Some third party visits such as Auditors and Bankers
Site Inspection Team	Minimum 2 members
Internal Meeting	All analysts or a group of 4 to 6
Internal Rating Committee Members	4 to 6
Rating Methodology	Mix of financial analysis and subjective factors. No fixed weights
Consistency of Result	No. Rating could change if Team Composition is different, due to subjective factors prevalent
Surveillance Schedule	Continuous by tracking team or event driven
Outlooks	Some CRAs put an outlook (positive or negative) but updates are not always prompt
External Committee Members	Not in all cases
Disclosure of Interest by Committee Members	Yes
Appeals	Yes. Maximum 2 appeals
Public Dissemination	Accepted ratings, via press release and website, together with name of contact person
Turnaround time to complete rating	3 to 8 weeks. Average time is 4 weeks

Rating Methodology

The Rating Methodology is generalised in the table below. It explains what is done and what is not done, with a view to provide a comparison between the current state of the art and the scope for improvement.

What is Done	**What is Not Done**
Financial Statements Analysis	Audited Statements not questioned
Site Visit	Usually not more than 1 Site visit
Management Meeting	Usually not more than 1 Management meeting. Subsequent interactions by email
Nature of queries is general and clarificatory	Nature of queries is not too probing
Financial Projections sought from issuers	Projected figures are not probed too much
Meeting third parties: Auditors and Bankers	Besides Auditors and Bankers, not much of corroboration is sought
Formal sources of information	Informal sources of information not tapped
Rumours cannot be factored in unless confirmed	Rumour verification mechanism is reactive, not proactive
Building a consensus on ratings at rating committee meetings	Dissenting view is subsumed by the consensus view. Dissent note or reasons for dissent are not recorded
The basis of rating is a blend of objective and subjective factors	No fixed weight between objective and subjective factors
Sophisticated tools such as Credit-metrics, LGD and KMV models are used by S&P and Moody's in USA	No sophisticated models are used. Final ratings could be based more on judgement
Rating is an outcome of judgement	Neither a precise model nor a black box
Rating could be based on inputs of Analyst, followed by discussion and review	Depending on the composition of the teams and the pattern of the discussions, ratings could change, based on perception of inputs

A careful look at the right hand side (What is Not Done) reveals that there is scope for improvement. It is no surprise, therefore, that financial markets, which, in totality have a greatest number of surveyors and is equipped and empowered to price even unconfirmed news into asset prices, react faster to new information than the CRAs. By contrast, CRAs are required to be more guarded and restrained in either upgrading or downgrading issues on account of protocols – namely, to wait for a confirmation. Until then, the CRAs can, at best, place an issue under Rating Watch.

During the same period as this study, SEBI conducted site inspection visits to the CRAs. It was a through, detailed inspection of the records and procedures. It was found that the record-keeping was not sufficient, particularly proofs of CRA's visits to rated entities, minutes of meetings with clients, minutes of meetings of rating committees etc. It was also observed that a more in-depth probing by the CRAs need to be conducted.

Interactions with some rated entities confirmed these findings. Some entities were pleasantly surprised to get an AAA within a month, after one site visit and management interaction. Queries to the Projections were raised and settled through email. In this regard, it was felt that CRISIL was a more probing than the other CRAs. Further enquiry with other rated entities revealed that the officers of CRISIL are far superior to the other agencies; hence it would be unfair to paint all CRAs with the same brush. However, CRISIL also have lesser rating mandates to other CRAs since some large entities that are rated have significant shareholding in CRISIL and ICRA. As per the SEBI inspection reports, it is found that CRISIL has further strengthened its systems especially after 2007.

There is a view that the ratings by S&P and Moody's are more stringent than those of their Indian counterparts. More specifically, it is said that an AAA by an Indian CRA could be equivalent to an AA by their US counterpart. The table above reflects areas for improvement. Apart from this, there is another dynamic – that of the treatment of Non-Performing Loans (NPL) as they are called in USA, corresponding to the terminology of Non-Performing Assets (NPA) in India. In USA, a firm that has declared itself insolvent under 'Chapter 11' can get fresh loans for fresh assets; the NPL tag does not cut its funding lifeline. Going by such an environment, the rating agencies can be as tough as possible without harming the future prospects of the rated entity. However, in India, there are no such supporting devices the NPA tag will result in an en-masse withdrawal of credit lifelines and permanently destroy the future of the rated entity. Hence, Indian CRAs may be more cautious in confirming adverse indications before a downgrade. It comes as no surprise, therefore, that the markets react faster than the CRAs. However, this cannot be verified in case of unlisted entities/instruments. Generally, investors in such debt instruments are large Domestic Financial Institutions (DFIs) who adopt a buy-and-hold strategy and are not affected by short term swings in the fortunes of companies, so long as the payment obligations are not seriously threatened. At this stage, it is more pertinent to remedy the existing lacunae in the rating processes than to focus on the market-efficiency-versus-CRA-efficiency.

On the balance, the arguments that the financial markets respond faster to incorporate new information into asset prices is tabulated as under:

Markets	**CRAs**
Markets are answerable to no one and are free to over-react	CRAS are responsible to the investing public and for being fair to issuers
Mispricing and volatility are inherent. Rumours are incorporated instantly	Knee jerk reactions could result in repeated re-ratings, hence rumours need verification
Markets consider all risks	CRA are responsible only for credit risk
Markets factor in price corrections and market microstructure issues	CRAs factors in significant credit risks
Markets have more traders and more noise. Markets are also known to overreact, especially to short term noise.	Long term bond investors generally buy and hold longer. Need not react immediately if long term prospects not endangered
Everyone brings news into the market, hence surveillance is more comprehensive. .	CRA surveillance teams are smaller, with limited information resources and cannot act on unconfirmed news. Too much of re-rating also damages credibility of both issuer and CRA
Details of transactions factored instantly	CRAs get to know of bulk deals, block deals and insider trades simultaneously or after the market trades are completed

The table above shows that Markets, collectively, are information-superior. However, this does not render CRAs redundant nor can the motives of CRAs be questionable *a priori*. The main function of CRAs is to factor credit risk so that the bond investors can base their judgement on factual data. The major point is, CRAs will always trail the market, but need to take all possible steps to improve their functioning by a comprehensive and contemporary DDR process. Investors will be doing themselves a favour by keeping CRAs informed of all delays/defaults as and when they occur. Investors, in turn, could also access the files maintained by CRAs on an ongoing basis. CRAs also need to maintain databases for further processing through advanced applications such as Data Warehousing and Data Mining. It is also a part of the overall Knowledge Management (KM) initiatives within their organizations and serves as an aid to Research and Training.

Without any attempt to defend the CRAs, it must be stated that large institutions in Bonds, Debentures and Loans do not react instantaneously to adverse quarterly changes since they have sufficient collateral security and enjoy a direct rapport with the investee/companies (issuers) so as to enforce performance. Moreover, in most cases, corporate debt instruments are illiquid and the investing institutions adopt a buy-and-hold strategy. Hence, instantaneous downgrades are not expected.

The role and performance of CRAs has resulted into a raging debate in the recent times, which have been highly turbulent, especially after October 2008. Some of the observations and issues raised by experts are encapsulated below for consideration during this study.

Some myths in Credit Rating need to be demystified and placed in a right, healthy perspective.

First, the myth that rating is an opinion and therefore, the CRAs are not accountable to any failure to detect weakness. This is a loose interpretation. A correct interpretation would be that CRAs remain accountable to the investing public, regardless of the freedom provided to them on matters of methodology.

Second, the myth that the rating of an instrument is unconnected with the standing of the issuer needs to be revisited carefully. While it is true in the case of Structured Obligations (SO) with a maze of credit enhancements, in the case of plain vanilla debt, the credibility and cash flow projections of the entity are closely intertwined with the ability to honour obligations on its debt instruments.

In general, CRAs are believed to have a good model for first time ratings. However, the important and difficult part is to maintain the currency of the rating throughout its tenor. This will establish whether ratings are proactive or reactive. A reactive approach needs to be eschewed, since it implies a hurriedly convened meeting ex-post-facto. The track record of an issuer is important and adds to the credibility of the issue. The past repayment track record needs to be considered favourably, except in cases where the new debt instruments of a very high magnitude are on offer. Timeliness and currency of the ratings are of utmost importance especially since the investors would like to buy or sell debt investments based on reliable information. CRAs have an important gap-filling role between the investors and the debenture trustees. The real test of a CRA is quick response time.

As regards projections, it is believed that very long term projections are not useful (viz., beyond 5 years).

Rating symbols need to be placed at one central point for reference by the general public. The meanings of the symbols need to be clarified and placed in a comparable table.

From the investors' perspective, Ratings are a fortification to their own due diligence process, and not to be considered as a crutch or substitute to appraisal. It is necessary for the investing community to place facts before the CRAs and elicit responses. This will tone up the systems and operations of the CRAs.

The primary role of CRAs is rating of credit instruments. IPO Grading was introduced on an experimental basis, mainly at the behest of the Investors Associations. Most of the issues received poor grading ratings and also failed to raise funds (say 1 to 2 marks on a total of 5). It is a different matter that the turn of events and the high valuations prescribed by Merchant Bankers led to the total drying up of the IPO market post January 2008.

In view of the events in the financial markets it needs to be concluded that the US systems are no longer the standard of reference. With all the chronicled experience available on hand, India should now seek to create its own standards and mechanisms in addressing the issues related to CRAs.

In the next chapter, the actual performance of CRAs is gauged by an analysis of select data.

Appendix to Chapter 2

Apart from the detailed elicited through the structured Questionnaire, interactions with the top managements of CRAs revealed the following information.

CRISIL

The basic concept of 'Default' is not defined and remains a subjective term. Consistency demands that it needs to be defined, so as to be reliably measured and understood in the same sense by all the concerned stakeholders.
Also, it is observed that some sudden downgrades are taking place to the extent of greater than 1 notch, within a short time span. This is a matter of concern and needs to be addressed.
It is learnt that the choice of the rating agency is, to an extent, guided by the investors, especially institutional investors and lenders. This tends to reduce the instances of conflict of interest in the appointment of rating agencies, who also offer advisory services to the rated entity.
Sometimes, a 'tendering' process is followed for choice of a rating agency. This may not be the best method for selecting an agency, as comparison of capabilities is lost.
The number of management declarations being relied upon by the auditors could be a metric for ascertaining the robustness of the audit process.
There is a need to come up with a comprehensive set of metrics, open to all stakeholders.
Rating symbols need to be standardized.
The way the rating committee is formed also needs to be understood, in order to determine the robustness of the rating process.
Brickworks awards an AAA+, a symbol not hitherto not used or awarded. Such practices, like AAA+ or AAAA need to be standardized.
A study of the business model for rating agencies is required.
All ratings are not public.
There is no common website for CRA information and comparison.
Competence reduces asymmetric information when adverse information is not shared by the issuer.
Regulation will facilitate a commonly accepted matrix.
A rating exercise generally raises the competence of the issuer company in de-risking the business.
Advisory services shifted to a separate company

ICRA

Assignments can be completed in 3 weeks if all information is received
Rating criteria are published
After sales services are important. In constant touch with investors
Dissemination of information is free of cost
Analysts disclose their interests as per the SEBI Code
Rating transitions published
Surveillance is on an annual basis or earlier, if situation demands
A reasonable due diligence is carried out. Third party confirmation is more an exception
Constantly adding manpower resources
Cannot assign ratings based on unconfirmed
Can reduce information asymmetry if both issuer and investors keep ICRA in the loop
No fixed weights for rating criteria
Ratings could change since they are based on the judgement of the team. Due to subjectivity, judgement could vary.
Bankers of borrowers are more concerned if ratings are downgraded, since they have to set aside more capital to cover additional credit risk
CRAs depend on the audit report and their job is not to police. The primary responsibility for financial statements is on the managements of issuer companies
Issuers shop for informal ratings and get the final rating done by the most favourable CRA. The solution to this is to get all ratings published
Advisory services shifted to a separate company

CARE

The business is manned by Finders, Minders and Grinders

Press releases contain the names of analysts and contact persons
A Quarterly review is carried out on all ratings
A detailed review is carried out if there is a specific reason. Event driven also
Ratings are completed in 3 to 4 weeks provided the clients cooperate. Clients usually cooperate, since it is relevant to their working capital enhancements and banks insist on them for the Basel II compliance norms
Rating committee meeting every week
Due to competition and economic slowdown, there are instances of fee undercutting
A 150-strong analyst team provides comprehensive inputs and serve as a cross check. (However, this may bring in the view of analysts who do not have an arm's length relationship with the issuer).
There is an external committee consisting of 6 members
DFIs take ratings as one of the inputs. They do their own DDR
Rating scale uniformity required across CRAs
An operational audit, in addition to a financial audit, will enable better housekeeping and sprucing up of systems.
CRAs have provided early warnings to the financial markets by giving non-investment grade ratings to Collective Investment Schemes (CIS) and IPOs.
SEBI and other regulators could take the initiative to prevail upon issuers to display better governance and disclosure standards.

Fitch India

No external committee members. Everything is internal
Minimum quorum for a meeting is 4.
Not overawed by the reputation of the issuer
Have international experts and expertise intertwined with operational personnel
International best practices ingrained in day-to-day operations.
Look at origination standards critically
Provide draft Press Release to issuers only to rectify factually incorrect details
Juniors vote first so as to avoid influence of seniors (this is a special procedure for Asia)
All dissents and rationale to be recorded in writing to remove emotional bias
Rationale for Appeals to be structured, logical and in writing
The issuer decides which CRA is to be appointed. Investors sometimes have a say
Decline assignments upfront if it is found that client's information is inadequate
As a matter of policy, no advisory services are rendered
Surveillance is on a rolling basis. It is a part of the tracking analyst's job to keep ratings fresh and current. There is also a provision for event-driven review of ratings
Review meetings schedule to be adhered to strictly to keep ratings current
Internal teams share information with each other
The rating agency is the bridge between the issuer and investors
Generally, the audited results are trusted
Both qualitative and quantitative factors are taken into consideration. Ratings are based on a simple EXCEL spreadsheet, to prevent model risk. It is not meant to be a black box
Training is through a mentoring process plus training and manuals
As regards Structured Finance, levels of complexity are low. Emphasis is on quality standards of the originators. This is the first filter for credit quality
Some originators are too aggressive in their pursuit for attaining balance sheet size. However, there are also good quality originators and all of them cannot be painted with the same brush
Loan against shares is a grey area. Pledging of shares by promoters has revealed the quality of governance and raised questions on the end-use of funds
Investors constantly seek improvement
Criteria determined in the US and displayed in public domain
A 'Satyam' cannot be prevented since the audit report is generally relied upon
Turnaround time for completing rating assignments is a maximum of 8 weeks

Brickworks

New CRA, having expertise from former employees of CRISIL and ICRA
Basic Research teams as well as sector specialist teams
All surveys are done by a minimum team size of 2 members
Reduced dependence on external experts
Consensus developed at each stage of rating
Investors can seek clarifications on ratings
Evidence is collected from sources other than Financial Statements also
Attempts made to build direct lines of information with issuers to reduce asymmetry
Identifies who is responsible in an issuer organization, for taking the onus of repayment
Ratings are subjective despite the availability of sufficient numerical information
Delays are counted as defaults.
The shorter the instrument tenor, the more severe is the impact of delay/default. Hence, short term instruments are subjected to greater scrutiny
Client-CRA relationship could help in reducing information gap
Credibility is the key to success in the long term

Chapter 3

Critical Evaluation of Ratings in India

Choice of Variables

A good scoring model for rating companies should be based on debt-service, tangible net worth, adequacy of reserves and profitability. These ratios indicate whether a company will be in a position to repay the debt as per the terms of the contract. Hence, the ratios with high correlation with the credit ratings are used in computation of the Financial Credit Score (FCS) (Gupta, 1993; Bathory, 1984).

However, it is possible that some ratios that are highly correlated with ratings are also highly correlated with each other. In order to avoid the problem of multi-co linearity, therefore, only a few of these have been chosen for the computation of FCSs. T. Geeta has found out that the ratios $\frac{C}{LTD}$, $\frac{C+STD}{LTD}$, $\frac{D}{E}$, $\frac{I}{PBDIT}$, $\frac{NW}{TL}$, $\frac{PBIT}{I}$, $\frac{RS}{TA}$, $\frac{PBT}{TA}$ and $\frac{TD}{TA}$ are significantly correlated. Similarly, $\frac{I}{PBDIT}$, $\frac{PBDIT}{I}$ and $\frac{PBIT}{I}$ are highly correlated with each other. This study has considered $\frac{NW}{TL}$, $\frac{TD}{TA}$ and $\frac{I}{PBDIT}$ for computing the score. $\frac{PBT}{TA}$ has not been taken into account, since NW is inclusive of share capital, reserves and surplus and profits after taxes. The inverse of interest-cover ratio $\frac{PBDIT}{I}$ (*i.e.*, $\frac{I}{PBDIT}$) has also been used, though this ratio did not emerge as significant in the case of the sample we considered. If this ratio assumes magnitudes below zero or above unity, the firm can be deemed as unworthy of obtaining credit. Thus, the ratios for the computation of the FCS are chosen in a manner such that the ratios are significantly correlated with the ratings and their magnitudes can facilitate convenience in obtaining the credit ratings.

Details of the Sample and the Data

The sample comprises group of the 40 companies from various sectors that have been included in the empirical investigation. The empirical analysis for this group of companies is based on the data for 2006 to 2008 depending on the availability of data. The financial ratios used in the computation of FCS for all the companies have been collected from various public domain websites like rediff.com, yahoo.com, moneycontrol.com etc. The ratings for 40 companies have been taken from CRA's websites.

Computation and Ranking of FCS

The steps involved in calculating the FCS are as follows.

1. The first step is obtaining the ratio $\frac{NW}{TL}$. This ratio usually ranges between 0 and 1. If all the assets of the company are financed only by debt, then net worth of a company will be zero. In this extreme case, $\frac{NW}{TL}$ will be equal to zero. This ratio can take a ceiling limit of unity, when all assets of the company are covered by the net worth of the company (*i.e.,* total debt is equal to zero). In abnormal conditions, this ratio can also assume negative values. This will hold true if the company has accumulated losses (*i.e.*, negative Reserves and Surplus, RS) or losses in the running financial year (*i.e.*, negative PAT). However, under such circumstances, the company is not creditworthy. Higher (lower) is the $\frac{NW}{TL}$ ratio, better (worse) will be the FCS of the company.

2. In the next step, $\frac{TD}{TA}$ is calculated. A negative relationship is postulated between $\frac{TD}{TA}$ ratio and the FCS. This is because higher is the debt in relation to the assets, greater is the risk in lending to such a company, other things remaining the same. The lowest value which $\frac{TD}{TA}$ ratio can take is zero. In general, it lies between 0 and 1. When total assets are financed only by debt (net worth is equal to zero), $\frac{TD}{TA}$ ratio assumes a value equal to unity. (It is pertinent to note here that TD does not include current liabilities. Current liabilities is subtracted from current assets and shown as net current assets or working capital in the asset side of the Balance Sheet.) If net worth is negative, $\frac{TD}{TA}$ can exceed unity. A company with $\frac{TD}{TA}$ ratio greater than unity is deemed to be credit unworthy.

3. The third step in calculating FCS is obtaining inverse of interest coverage ratio, *i.e.*, $\frac{I}{PBDIT}$. This ratio ought to range between zero and one for a credit-worthy company. However, this ratio can also take a negative value if the denominator of this ratio (profits) are negative. Due to the fact that this ratio can take values which are both positive or negative, an asymmetric treatment to this ratio is given. This is explained in step 4. Higher (lower) is the interest to be paid in relation to profits, lower (higher) will be the financial credit score.

4. The Financial Credit Score has been defined in this study as stated in below equations for FCS.

$$FCS = \frac{NW}{TL} - \frac{TD}{TA} - \frac{I}{PBDIT}\ ,\ (if\,\frac{I}{PBDIT} \geq 0)$$
$$FCS = \frac{NW}{TL} - \frac{TD}{TA} + 2 * \frac{I}{PBDIT}\ ,\ (if\,\frac{I}{PBDIT} < 0)$$

   We have multiplied the $\frac{I}{PBDIT}$ ratio by 2, in order to differentiate the companies which may have this ratio as '+1' and '-1'.

It was found that, there were cases wherein the ratings given by the CRAs for these 40 companies remained static and did not capture the deterioration signals by a downgrade. By implication, the investing public who did not cross-verify the ratings, was at a risk of overestimating the creditworthiness, due to dependence on the CRA.

In the USA, GE is losing its AAA status for the first time, and is reconciled to settle for an AA. The financial arm of GE has made losses due to the financial sector meltdown, demonstrating the vulnerability from conglomeracy.

During the period from 2002 to 2007, easy liquidity conditions prevailed and many firms raised capital both equity as well as debt. After January 2008, firms began to struggle in their fund-raising efforts. This was true of large players such as Hindalco and Tata Motors, and it is even more true in the case of smaller firms. During the first half of calendar year 2008, rising input costs placed a strain on the profitability of firms and in the second half, after the Lehman Brothers collapse and the panic in the global financial markets, credit lines dried up as lenders and investors became more risk averse. As a result of this, many firms opted for Corporate Debt Restructuring (CDR). Many corporations that had issued FCCBs with an option for redemption, needed to raise cash for redemptions. There were a large number of downgrades especially in the January-March 2009 period. Cracks in corporate governance and their impact on accounting also began to show up. It was found that the auditing and CRA community were basing their financial statement analysis on accounting information that was guided by managements whose governance standards are found wanting. In other cases, firms like Wockhardt that had leveraged for diversification found themselves unable to tap sources of finance that were hitherto easily available.

Of the 40 rated instruments studied in this survey, downgrades were delayed in 5 cases, and very timely in 2 cases; no further rating was action required in the balance 33 cases. Hence, there is scope for improvement in the performance of CRAs.

The lessons from the paper by Vikrant Vig are instructive. The paper observes that the maximum defaults in the sub-prime crisis were loans applications that obtained a credit score from 621 to 629, just above the cutoff score of 620. This safe zone exhibited the maximum asymmetric information, or, perhaps, the applicants managed to beat the system due to the leniency of the CRAs. By a similar reasoning, if institutional investors in India are permitted to invest in securities rated AA and above, there is a possibility that many securities meriting only an A or A- could obtain an AA due to lax CRA standards. Under such a situation, extra layers of DDR are required both on the part of the CRA as well as the investors. Particular care needs to be taken by investors when investing in bonds rated AA.

Survey of Analysts

A detailed Questionnaire was used to cover the Analysts. The observations are summarized in the paragraphs below.

Most of the Analysts state that the level of cooperation from the issuers was good at the time of the first rating, and also at the time of renewal. Thus, there is room for CRAs to probe further. This also implies that the CRAs need to improve their approach to be more vigilant, especially in the light of a large number of cases of Corporate Debt Restructuring (CDR). This dependence on the issuers for information, without a system of cross-checks, contributes to asymmetric information.

The Quality of Accounting Information is stated as Good for listed companies and Poor to Fair for unlisted firms. The levels of preparedness of Indian accountants to meet IFRS a couple of hours from now, is very low.

The general fit between the ratings proposed by the Analyst and the Final Rating ranges from 60% to 90%. This shows the need to arrive at a better mechanism for the final rating process, to reduce the variation.

In some CRAs there is a voting system, whereas at others, a consensus is developed. There is no consistent system for recording dissent, leading to information loss at the time of subsequent reviews.

Institutional Investors – an Ethnographic Survey

The major institutional investors in bonds are insurance companies (which also offer annuity products), pension funds, superannuation funds, trusts and debt-oriented mutual funds. Investments by insurance companies are directed by the LIC Act for LIC, the GIC Act for GIC, and the Insurance Act, 1938 for other insurance companies. In this regard, the private insurance had a greater leeway in investing in the corporate sector (i.e., instruments other than G Sec). Subsequently, LIC and GIC had made requests to IRDA for untying their hands and permitting them to also have greater exposure in the corporate sector. The Insurance Act provides for investments in corporate debt instruments rated AA and above.

It is found that **LIC** considers the ratings given by CRAs at face value and does not perform a re-check.

Tata AIG also does not question the ratings given by CRAs. They go by the ratings rationale given by the CRAs and then come to a decision.

In the case of **Metlife**, however, a simple credit matrix is has been devised and the ratings given by the CRA serve as an initial criterion for developing a short list (debt rated AA and above). Thereafter, those issues that meet the stipulations in the credit matrix of the respective insurance companies come into play. This seems to be a sound approach. Liquidity is also a major consideration;

it is found that although issues by Tata Sons and Tata Investment Corporation are rated AAA, liquidity is not readily presumed, hence not preferred as a first choice.

Future Generali and **SBI Life** also perform an independent check before investing in bonds, despite ratings by CRAs.

As regards **GIC**, it earlier used to perform the investment function on behalf of its 4 subsidiaries. With liberalization, its subsidiaries, particularly **New India Assurance** and **National Insurance** have portfolios that are larger than GIC. Both New India as well as National Insurance do not question the ratings given by CRAs.

Among the Mutual Funds, **UTI Mutual Fund**, one of the oldest and largest, the ratings are treated as one of the inputs and a supplementary check is done, based on financial ratio analysis. This is true of the debt fund. Other funds like Morgan Stanley also perform additional checks. They perceive that, unlike S&P and Moody's in the USA, Indian CRAs may not be independent minded.

As regards pension and superannuation funds, it is revealed that the investments are directed by the Income Tax Act, for such funds to retain their tax-exempt status. Almost the entire investment is directed towards G Sec or Infrastructure Bonds issued by quasi-government bodies or PSUs, hence there is no significant investment activity in corporate securities. This information came from Actuaries advising such funds.

Issuer Survey

It is observed that the Issuers often approach more than one CRA. This is evidence of an informal 'rate shopping'.

There is a drastic increase in ratings of Bank Loans, a fair increase in Structured Obligations and a decline in Commercial Paper.

Structured Finance and CRAs
Special attention was given to structured finance or structured obligations, in view of the turmoil caused by such products in the global economy, and the resultant criticism on the CRA community there.

Our close interaction with the Analyst community resulted in some important findings and suggestions from them.

1. Structured Finance or Structured Obligations in India are mainly of the plain-vanilla Pass-Through-Certificate PTC genre. Apart from conservative origination standards, the credit enhancements are also mainly from quasi-government or government organizations. Institutional investors hold these securities and they do not percolate widely through the banking system. Two Indian banks suffered market losses on instruments purchased by their London branches, and had nothing to do with Indian

paper. CRAs have already evolved a 'Complexity Grading' to forewarn investors on complex structured obligations.

2. However, as a pro-active step, it is necessary to consider the following suggestions for safeguarding the Indian financial system from the dangers of structured obligations. The suggestions, endorsed by the Analyst community, are as under:
3. A transparent process of the various stress tests that the credit rating involves, including fat tail risk.
4. A clear definition of the complexity level of the financial instruments.
5. The strict norm of making the name of the client public, if he chooses not to be rated, in case of lower ratings.
6. The analysis of future cash flows, to be generated by the complex financial instruments, under various scenarios. Involving the highest of stress levels.
7. Stress testing of the credit enhancement levels of the complex financial instruments.
8. Identification of the percentage of the junk assets pooled in to form the pool of loans.
9. Usage of white box testing models, which reveal all the data, it has used to stress test these instruments.
10. As a business, CRAs need to focus on the quality of the instrument rated, rather than the quantity.
11. A thorough review of actual risk exposures of institutions and robustness of counterparty risk assessment.
12. Guard against over-valuation of assets, particularly real-estate and other collateral assets.
13. Extra care to guard against opacity in financial accounting and auditing practices.
14. Understanding the implications of moving class products to mass markets, thereby increasing systemic risk.
15. Guard against hidden credit risk: weak loan pools, when repackaged, do not reflect true vulnerability to cyclical downturn, hence credit risk gets underpriced.
16. Critically evaluate legal risk and counterparty risk to get a realistic estimation of cash flows, especially in guarantees and other credit enhancements.
17. Review risk disclosures more stringently in respect of structured obligations

Chapter 4

Emerging Trends and Alternate Approaches

Since precise methodologies by CRA are not in public domain, analysts and investors can use Artificial Neural Network (ANN) as a model for ratings. This could serve as an independent check on the creditworthiness of a rated instrument.

A smaller version of neural network model was developed as part of the computational finance exercises conducted during this study period, based on available data.

We considered following six variables, as defined by Moody's, as inputs to devise a model, as follows:

1. Interest Coverage
2. Leverage
3. Return on Assets
4. Volatility Adjusted Leverage
5. Revenue Stability
6. Total Assets

How the Model Works

Data is to be collected for a large sample size of rated instruments, over a long time series. This mass of data is to be fed into the computer memory to 'train the computer'. The trained computer then generates a rating for any new instrument, based on the variables it possesses.

The results given by the model are free of bias (assuming there is no sample bias) and can be used as a valuable input in the final rating process.

Experiment

Given the time frame, data covering 5 years (FY 2004 to 2008), the following 5 companies were used to 'train' and generate ratings using this neural network model:

1. Tata Motors
2. Tata Steel
3. TCS
4. Unitech
5. Reliance Industries

Based on the trained computer model, ratings were generated. The ratings generated by this model were compared with the actual rating awarded by CRAs. This was based on a smaller sample data gathered within the limited time frame. However, the test results are encouraging. The output from the model could be more reliable if the model is based on as large a mass of data as possible. Further research in this direction could be carried out in the near future.

In fact, the period post-October 2008 is of particular interest, since it represents some of the most turbulent months in global finance, with a significant impact on the Indian business sector. This could result in adverse swings on the profitability of Indian companies, and inability to raise fresh capital due to the market conditions. As and when this new data is also fed into the computer to 'train' the system, the results generated by the model will reflect reality in a better manner.

Moody's Rating Predictor (MRP), announced in 2006, is a process of constantly adjusting the weights for various parameters at regular intervals. This has dramatically improved the ratings results. However, the process itself should not result in the creation of a black box, so as to prevent model risk.

The search for a better rating model is a journey of constant improvement.

Chapter 5

Observations and Recommendations

CRAs are supposed to bridge the information gap between the issuers and investors. When this does not happen, the CRA is the last in the loop, when a default occurs. It is important to understand the nature of this problem, in order to surmount the same.

Mechanics of Asymmetric Information

1. Lower/Middle managers in issuing companies suppress bad news
2. Senior Managers and Directors have pressure to show quarterly information. This is the second stage of news suppression
3. Auditors get to know less adverse information than the managements of companies
4. CRAs depend on Auditors
5. CRAs are last in the loop when bankers and investors in debt instruments report defaults, or when insiders sell

It is important to note that the CRAs are not able to unearth a 'Satyam'.

The Mechanics of Asymmetric Information described above explains the phenomenon of Asymmetric Information. The problem is of a wider magnitude in smaller firms.

The findings of the study are fitted in line with the Terms of Reference. This is followed by Recommendations which list out concrete action points for the betterment of the CRAs and the financial markets in which they operate.

Observations on the Points Raised in the Terms of Reference

1. **How far CRAs assessment helps financial regulation**

   At present, bulk of the work is with respect to the ratings of loans, for banks to assign Credit-risk based capital for Basel II requirements. This has brought several smaller entities within the fold of rating for the first time.

   Firms that are subjected to a credit rating exercise benefit from the ratings rationale and tone up their operations. This is especially true of firms that face a rating exercise for the first time. Even in the case of unaccepted ratings, the rated firms do tacitly admit that they deserved a lower rating.

While a lower standard of probing does not impact the final rating of a good issuer, it does enable weaker borrowers to get away despite financial/business/management quality weaknesses. In this regard, the standards of scrutiny need to be raised. If the scrutiny levels are raised, the CRAs will be able to contribute more information to minimize asymmetric information.

Investors are free to contact the CRAs and seek more information on the rated entities, free of cost.

CRAs disseminate plenty of information on their web sites as well as in print. It is easy for a member of the public to know more about a rated company from the web sites.

Some lending banks and insurance companies use the ratings as a filter and sometimes perform an additional check through an independent Due Diligence Review or credit matrix. However, this is not true of all investors.

By increasing the depth in probing and timely changes in ratings, CRAs can serve the financial markets with better information.

CRAs have assigned very poor ratings to Collective Investment Schemes and some IPOs, hence driving poor quality issuers out of the market.

2. **Accountability, corporate governance issues of CRAs**

   All agencies have separated business development from analysis.

   Code of Conduct. All of them do not follow the IOSCO Code in toto.

   CRA disseminate ratings rationale through press releases and website updates, with the names of the contact persons of analysts.

   The lack of quality in accounting and auditing cannot absolve the CRAs from their responsibility.

   Some CRAs have discontinued advisory services. Others continue advisory services and non-rating activities in sister companies.

   The external committee members may be able to bring in a bias in ratings, due to a conflict of interest. This is especially true if their views have a high weight in the final consideration.

   Interested persons who are excluded from the rating teams could come back to air their views in larger review meetings where entry is unrestricted.

Junior analysts must be given an equal weight in their views. Dissent must be permitted and be recorded in writing.

CRAs practice disclosure norms as per the SEBI ownership must be made public in respect of all CRAs, not just the public, listed ones.

3. **Consistency of rating data with accounting data**

   The high dependence on financial statements is a cause for concern. This is especially true in the light of the falling audit efficiency. This increases the chances of asymmetric information vis--vis the market information.

   The basic accounting figures: Total Income and PBDIT are contaminated due to the influx of 'other income' being merged into the Total Income.

   There are several instances where the Interest Coverage ratio has deteriorated but the ratings have remained the same, without any downgrade, despite adverse business prospects, mergers & acquisitions and forays into diversified areas.

   The true leverage of firms may be hidden on account of the promoters raising funds for unknown reasons, by pledging their shares.

4. **Disclosures of methodologies of rating**

   All CRAs reveal the processes flows. But they do not disclose the actual methodologies.

   Ultimately, there is no fixed methodology, as qualitative factors could outweigh the quantitative factors at a meeting.

   The consensus approach buries dissent, especially if dissent notes are not recorded. This could result in information loss, especially at the time of subsequent reviews.

   Bias could also come in from seniors in the internal or external rating committees.

5. **Assessment of the performance of CRAs in India in terms of parameters like default and transition data**

   CRAs do publish studies on Default and Transition Data

   Our analysis, based on Quarterly Data, shows that there are many cases where a downgrade was in order, but the ratings were maintained.

6. **Uniformity or otherwise in definition and rating nomenclature of CRAs in India**

   The rating symbols given by CRAs are compatible with each other barring Brickworks

   There is no common website where the various ratings are placed in a comparable table.

   It is necessary to organize the various symbols in a comparable format to help the retail investors

7. **How much information asymmetry is bridged by CRAs**

   Unaccepted ratings are not published; hence information is asymmetric to that extent

   CRAs generally give information based on Credit risk. Markets factor in other risks also.

   With better probing and improved standards of Due Diligence Reviews, the asymmetric information could be further bridged.

   It is found in many cases where the Quarterly Profit Statements showed adverse trends, the ratings have been maintained at higher levels. In other words, there were many cases where downgrades were justifiable, but not carried out.

   'Rating-watch' could be effectively used as an interim measure during the process of verification of unconfirmed rumours

   The quality of the rating depends on the quality of financial statements. This, in turn, depends on the quality of the audits and the governance standards of the managements of issuing companies.

   There is a way of getting around the asymmetric information problem. Until the Due Diligence Review standards of the CRAs and auditors improve, it would be safe to assume a slightly lower rating than the one actually assigned. This is especially true owing to the fact that Corporate Governance standards are low, barring a few companies. According to some experts, if international agencies were to actually rate Indian domestic paper, the ratings assigned by them would actually be a notch lower.

   Many banks and insurance companies provide loans that are in the genre of social banking, or within the overall framework of development finance, e.g. loans to State Electricity Boards (SEBs). Considering the weak financials of the SEBs, the Credit risk on the balance sheet of the lending banks and institutions could be far higher than what is declared. This issue needs to be addressed by the policy makers. CRAs could play a vital role in assessing these risks.

8. **Rating of complex products like structured obligation**

   Most Indian loan originators have been conservative. This is the first filter in structured finance transactions. Merchant bankers are also not too aggressive. Structured obligations have also taken off recently in India, during the last 5 years. In view of these factors and the relatively fewer transactions that have taken place, a sub-prime loan crisis of the magnitude witnessed in USA and Europe has not occurred. The securitized transactions are simple structures and there are no complex derivatives which are floating around to contaminate the financial markets.

9. **Overall evaluation of what CRAs have done in terms of value addition or the Indian economy**

   CRAs have a cadre of analysts whose skills can be further honed to disseminate quality information to the financial markets. They provide some basic information which could be used as a filter, with additional cross checks wherever necessary (say, in case of companies with poor governance records).

   CRAs have driven out poor issuers, especially CIS and IPOs by awarding poor ratings and discouraging promoters with a poor record from accessing the markets.

   Most of the recent ratings are for loans by banks. The borrowers were rated for the purpose of determining Credit-risk based capital as per Basel II norms. This brought many smaller firms within the fold of credit rating. The rating exercise could stand the rated entities in good stead so that they could tone up their management systems and business models.

10. **Approaches followed for credit enhancements**

    As of now, most of the credit enhancements are from State Governments. There are no instances of enhancements by a private party with thin capital. This precludes the cascading of defaults (Credit Default Swaps = CDS) and the consequence of systemic risks. Besides, origination standards, particularly for housing loans, are quite high and experienced originators like HDFC and LIC Housing Finance are conservative lenders. Besides, as mentioned in the paragraphs above, the securitization structures in India are simple.

11. **Experiences with structured obligations and desirability of such practices**

    As mentioned above, the structures are simple, and based on conservative origination practices. In India, Merchant Bankers as well as Originating Banks have both been conservative. Unlike what was seen in USA and Europe, Originating Banks do not lower their appraisal standards with the attendant moral hazard of 'originate-to-distribute'.

12. **Matters related to conflicts of interest faced by rating agencies**

    Business development teams are separate from the analyst teams

    No analyst knows the fees structure

    Rating Fees are taken from the client 100% in advance

    It is quite possible that a particular analyst who has an investment interest/relative(s) in the rated entity is kept out of the rating team, but his inputs could bias the proceedings of subsequent open meetings.

    The role and nature of external experts needs to be watched carefully, since it is quite possible that they may be able to substantially influence ratings, especially if the junior analysts have lesser influence in the ratings processes.

    Ownership structure of all CRAs, including unlisted entities, need to be made public.

    CRAs need to be encouraged to adhere to the SEBI Code of Conduct as well as the IOSCO Code.

13. **Cases of instruments being rated higher than the issuer**

    At present, ratings are for instruments. The concept of issuer-rating applies in case of IPOs, where the ratings have been poor, for low-quality offerings.

    In structured obligations, there is a theoretical possibility of instruments being rated higher, wherein either the obligor or the credit enhancer (guarantor) has a higher credit standing than the issuer. In India, the obligations of SEBs are guaranteed by the State Governments, and hence, a higher rating for such instruments is justified.

    Such a situation is qualitatively different from the one prevalent in USA where sub-prime loans from weak originators were upgraded on the strength of guarantees by financial entities, in an unregulated market. It turned out that one of the affiliates of AIG, which offered credit enhancements (CDS) was exposed to risks beyond its capital. Thus, high ratings to instruments were based on enhancements that turned out to be higher than the actual strength of the enhancer. In this manner, an affiliate of an Insurance company strayed far away from insurance and got exposed to market risk and credit risk. Capital adequacy for unregulated entities go undefined and in the light of over-trading, such entities implode.

This brings to the fore an important lesson for regulators: affiliates of regulated entities also need to be monitored closely by one or more regulators, since financial engineers and lawyers tend to exploit regulatory arbitrage opportunities in precisely such grey areas.

Other observations made during the course of study:

Undercutting of Fees

It is observed Undercutting of Fees between CRAs is taking place. Issuers may take advantage of such situations.

Outsourcing of Rating Operations

To prevent instances like the damage caused by unscrupulous salesmen of Insurance, Mutual Funds and Personal Loan Products, it is necessary to place safeguards or prescribe standards on outsourcing of Credit Rating or Credit Information to any third party. This is in the interests of quality and confidentiality. Every person engaged in Credit Rating or Credit Information must be an employee of a registered CRA or CIC. The registered CRA or CIC needs to

bear the final onus of responsibility on quality of work as well as confidentiality.

Manner of Decision Making in Ratings

Practices vary in the weights given to the view of Junior Analysts. In some CRAs, the views of Junior Analysts are given the same weight as Seniors. In others, the final decision rests with the Senior-most members in the final rating committee members. Again, some CRAs go for voting whereas others consider each input with different weights. Dissent notes are not available for future reference.

Recommendations

1. **Standard Definitions of Default**

   There is no standard definition of default. Practices vary from CRA to CRA. Some consider even a single day's delay as a default. Others consider the grace period in case the debt covenants provide for it. Furthermore, the severity of the delay or default is inversely related to the tenor of the instrument. Delays in coupon payments in case of long-term debt instruments could be condoned or considered more sympathetically. There is a need for a framework to be agreed upon by all CRAs and regulators to have a standardized and operational definition of default.

2. **Comparability of Ratings and Display on Common Site**

   It is felt that the oligopolistic situation in USA has been maintained on account of the differing symbols used by various CRAs there. For a market in India, where financial literacy is at a nascent stage, multiple rating symbols could confuse the investing community. It could also result in 'rating inflation' and foster unhealthy competition. Rating scales, brought under comparable bands, need to be hosted on the websites of SEBI, RBI, IRDA and PFRDA and also on the sites of investors' associations.

3. **Timeliness of Ratings**

   'Rating Outlooks' (both positive and negative) and 'Rating Watch' have a limited life and must be replaced by a firm rating within a reasonable span of time, say a month.

4. **Compulsory Separation of Advisory Services to Separate Companies**

   Some CRAs have a clear-cut policy of staying away completely from services other than credit rating. This is a healthy sign. Yet, some other agencies continue to offer services other than ratings. It is to be ensured that the registered CRA, as a corporate entity, must not engage in any services other than ratings.

5. **Policy on Appeals**

   In the interest of unbiased judgement, it is necessary to constitute an Appeals Committee that is different from the one that was involved in the initial rating exercises.

6. **Policy on External Committees**

   The presence of External Committee Members brings with it a whole baggage of conflict of interest. Some CRAs have demonstrated that it is possible to develop the expertise either with full time employees from the domestic CRAs or in collaboration with the overseas CRAs.

   Alternately, External Committee members could be deployed for providing inputs, leaving the final ratings to an Internal Committee.

7. **Measures to Prevent Shopping for Ratings**

   Issuers attempt to seek informal ratings from various CRAs and pass the final rating mandate to the agency that could potentially offer the highest rating. To curb this unhealthy practice, it is necessary to come to a stage where all ratings, including unaccepted ratings, are published.

8. **Training in Due Diligence Review (DDR), Accounting, and Auditing Standards**

   There is excessive dependence on the auditors and bankers, to corroborate the information provided in the Financial Statements. There is a need to develop DDR skills to assess the overall credit worthiness of an entity. This calls for a national level effort to upgrade the skills of personnel in audit, accounting and credit appraisal. It combines the use of information from formal as well as informal sources. Young potential employees tend to gravitate towards merchant banking and investment management, leaving a paucity of talent in accounting, audit and credit appraisal, which are actually the backbone of financial systems. India is only 2 years away from the implementation of IFRS and the preparedness is woefully lacking, amongst professionals as well as academics. Skills in DDR are a crucial step in reducing asymmetric information.

9. **Operational Audit for CRAs**

   Along the lines of the compulsory Internal Audit for Stock Brokers, it is found necessary to stipulate an Operational Audit to ascertain that the rating processes leave a documentary trail. This could cover details of site inspections, management meetings, rating committee meetings, dissent notes, surveillance and monitoring schedules, minutes of the appeal process. It addresses the basic issue of good housekeeping and could be performed twice in a year. Some CRAs have taken the initiative to appoint a person with the task of Quality Control, and he is involved in all rating exercises.

10. **Public Education on Usage of Ratings**

    There is a danger that ratings may be accepted blindly without a self-check or giving due importance to the time gap between two review dates. Ratings are not to be construed as a guarantee. This is true of all intermediaries: Merchant Bankers, Bankers, and Mutual Funds etc – no one can provide a guarantee. Ratings must be one of the inputs in the decision making process. Of course, this does not absolve the responsibility of the CRAs for negligence.

    There is also the practice of issuers using ratings for marketing purposes – exhibited on all their business literature and office stationery.

11. **Policy on Disclaimer on Ratings**

    There could be information gaps that arise due to factors beyond anybody's control. In line with the Risk Factors highlighted on various products, CRAs also need to mention a disclaimer on all rating announcements as well as on the website. This is to the minds of the reader (user) of Ratings to the fact that credit related information is dynamic and subject to changes. Rating disclosures could also mention the latest review date.

12. **Public Disclosure on Ownership Pattern of CRAs**

    It is important for the members of the public to know that the relationship of the CRA is at arm's length with that of the rated entity, in letter and spirit. Hence, shareholding ownership patterns of all CRAs need to be made public.

13. **Policy on Unsolicited Ratings**

    There have been instances in USA where S&P and Moody's have deliberately given low ratings to various issues on an unsolicited basis. This was used as a means of arm-twisting the issuers. This is a classic instance of abuse of independence provided to CRAs. Unsolicited ratings must not be permitted, in case the CRA community makes a representation to this effect in the future.

14. **Code of Conduct for CRAs**

    Some CRAs follow the IOSCO Code in addition to the SEBI Code of Conduct. One needs to look at the desirability and uniformity for the IOSCO code adherence in full, in addition to the SEBI Code.

15. **Enforcing Corporate Governance in Spirit**

Bad governance can contaminate financial statements, and hence annul the entire credit rating exercise. It is sad to know that CRAs heavily depend on the audited financial statements and do very little to gain the maximum from cross-verification from formal and informal sources. While this is a lacuna on the part of auditors and CRAs, much needs to be done on Corporate Governance, since a governance code works only on paper. It is much easier and practical for the Regulators rather than CRAs to enforce governance.

At the beginning of this chapter, the Mechanics of Information Asymmetry was described. Good governance is the starting point in order to remedy the situation.

It is necessary for CRAs, Merchant Bankers and Regulators to initiate studies on patterns of deviant behaviour. Some important variables being conglomeracy, forays into real estate & construction, aggressive chase for growth through mergers & acquisitions, leveraged balance sheet size, dictatorial management, 'inner circle of management', cartelization, influence-peddling, unfair trade practices and so on. Put simply, corporate governance addresses the issue of abuse of the corporate structure for personal gain. The links between these traits of bad governance and defaults need to be studied as part of more detailed research. Today, the entire edifice of corporate finance – shareholder wealth maximization is under question. The focus is shifting towards stakeholder satisfaction and societal well being. Auditors and CRAs are the watchdogs of society as also the conscience keepers of the nation, hence corporate governance is even more relevant as the first filter. It is often said, in credit wisdom, that balance sheets do not repay loans – it is the people behind the organization.

References

Altman E.I., (1968), Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy, Journal of Finance, Sept., pp. 589-609.

Altman E.I., (1995), Credit Scoring Models and the Valuation of Fixed Income Securities and Commercial Loans, in Sondhi A.C. (ed.), Credit Analysis of Non Traditional Debt Securities, Association of Investment Management and Research, USA.

Arora, Mamta (2001) Credit Rating in India – An Evaluation, PhD Thesis, Department of Financial Studies, University of Delhi (South Campus)

Bathory A., (1984), Predicting Corporate Collapse - Credit Analysis in the Determination and Forecasting of Insolvent Companies, Financial Times Business Information Ltd., London.

Blanco, Roberto, Simon Brennan and Ian W. Marsh (2005), An Empirical Analysis of the Dynamic Relationship Between Investment-Grade Bonds and Credit Default Swaps, Journal of Finance.

Boyadjian H.J., Warren J.F., (1991), Risks - Reading Corporate Signals, John Wiley & Sons, Singapore.

Cantor R. and Packer F., (1995), The Credit Rating Industry, The Journal of Fixed Income, Vol.5, No.3, Institutional Investor Inc., New York.

Dahiya S. K. John, M. Puri, and G. Ramirez. (2003) Debtor in Possession Financing and
Ederington, Louis H., and Jeremy C Goh (1998), Bond Rating Analysts and Stock Analysts Who Knows What When, Journal of Quatitative Financial Analysis, December.
Bankruptcy Resolution: Empirical Evidence, Journal of Financial Economics

Financial Times, (1996), Emerging Markets - Credit Ratings, Financial Times Publishing, Pearson Professional Ltd.

Fish M., (1999), Should Credit Rating Agencies be Regulated, Chartered Financial Analyst, May, ICFAI, Hyderabad.

Gupta L.C., (1983), Financial Ratios for Monitoring Corporate Sickness, Oxford University Press.

Gupta L.C., (1993), Corporate Financial Health - Building Reliable Ratio Indicators, Manas Publications, Delhi.

John Kose, Anthony W Lynch and Manju Puri (2003), Journal of Business, University of Chicago Press

Mays E.(ed.), (1998), Credit Risk Modeling - Design and Application, Glenlake Publishing Company, Ltd., Chicago.

Miller, Merton H. (1990), Leverage, Nobel Prize Memorial Lecture, © The Nobel Foundation, Stockholm, reproduced from Jagdeep Bhandari and Lawrence Weiss (Eds.), Corporate Bankruptcy – Economic and Legal Perspectives, Cambridge University Press, 1996

Moody's Credit Rating Predictor Model (2006 November)

Moody's KMV (2004, April)Moody's KMV Riskcalc^{TM} v3.1 Model, Next-Generation Technology for Predicting Private Firm Credit Risk

Partnoy, Frank (2005), How and Why Credit Rating Agencies are Not Like Other Gatekeepers, Brookings-Nomura
Pinches G. and Singleton J., (1977), The adjustment of stock prices to bond rating changes", Journal of Finance, pp.29-44.

Pinches G.E. and Mingo K.A., (1973), A Multivariate Analysis of Industrial Bond Ratings, The Journal of Finance, March, Vol.XXVIII, No.1, pp.18.

Raghunathan V. and Varma J.R., (1992), CRISIL Rating: When does AAA mean B?, Vikalpa, Vol. 17, No.2, Apr. - Jun., pp. 35-43.

Raman, K.K. (1981), Financial Reporting and Municipal Bond Rating Changes, The Accounting Review, American Accounting Association

Rangarajan C., (1997), Transformation of the Indian Financial System and Significance of Credit Rating, in Kapila R. and Kapila U. (ed.), Banking and Financial Sector Reforms in India, Academic Foundation Publication, Vol.2, 1997, pp. 89-96.

Ravi Mohan, (2000), "Credit Rating - A Paradigm Shift", Chartered Financial Analyst, ICFAI, Hyderabad.

Reddy Y.V., (2000), Credit Rating: Changing Perspectives, Fourth Prof. Nagaraj Memorial Lecture delivered at Osmania University Arts College Seminar Hall, Hyderabad, April 8.

Salmon, Felix, Recipe for Disaster: The Formula that Killed Wall Street,
http://www.wired.com/print/techbiz/it/magazine/17-03/wp_quant *, accessed on 18.3.2009*

Sarkar A.K. (1994), Credit Rating in India: A New Feather in the Capital Market's Cap, Management Accountant, July.

Satija, Kalpana C, Credit Rating Agencies – An Overview and Analysis in the Light of Various Acts and Guidelines (Unpublished Paper), Gujarat National Law School, Gadhinagar.

Sen Choudhury (1999), Comparative Analysis Between International and Indian CRAs, PhD Thesis, IGIDR, Mumbai.

Sikdar S., Hazarika P.L., (1992), Reporting and Evaluation of Corporate Financial Health: A Quantitative Analysis, The Management Accountant, Sept., pp. 718-723.

The Economic Times, (1999), Want a AAA from CRISIL? Have an Interest Cover of Six, 3rd Nov.

T Geetha (2001), Performance of CRAs in India, PhD Thesis, IIT Bombay.

Varma J.C., (1993), Credit Rating, Bharat Law House, New Delhi.

Varma J.C., (2000) Credit Rating, Bharat Law House, New Delhi.

Venkatesh S. and Gupta S., (1997), Investment Rating: On the Border, The Economic Times, Oct. 6.

Weinstein M.I., (1978), The Effect of a Rating Change Announcement on Bond Price, Journal of Financial Economics, pp.329-350.

Annexure
Questionnaire for CRA

1 General Information

Respondent Name:

Affiliation:

1. Please provide following informations:

No of Instruments Rated each year	**2006-07**	**2007-08**	**2008-09 (YTD)**
Municipal Bonds			
PSU Bonds			
Corporate Bonds			
Commercial Paper			
Structured Obligations			
IPO			
Corporate Governance			
Bank Loans			
Others (specify)			

2. Provide an illustrative listing of issuers and instruments rated/graded by you"

Issuers	**Instruments**
Sovereign (Governments)	G Sec / T Bills / Bonds
Urban Local Bodies	Bonds
PSU	Bonds
Private Sector Corporations	Debt
Listed Companies	Debt / CP / Loans / IPO / CG
Unlisted entities	Loans
Banks	Bonds / CD
Mutual Funds	Liabilities
Special Investment Vehicles / SPV	Structured Obligations

Note: Please attach a copy of your latest Annual Report

3. List some of the challenges faced during the rating exercises

4. Brief comment on how the challenges were overcome

5. General level of Cooperation extended by assessed firms: Excellent / Very Good / Good / Fair / Poor

   - At first assessment:
   - On renewals

6. Which are the more complex instruments that have come up for rating, over the years?

7. Have you received queries or feedback on your ratings?

   - From sophisticated, institutional investors or regulators or government bodies?

   - From the general public

   - From banks, whose loan applicants are rated

8. How do you deal with queries or feedback in improving your processes?

9. What steps are taken for improving?

   - Dissemination of rating information, clarifying/simplifying rating symbols

   - Investor education on general rating methodology, usage and caveats

   - Any other steps for strengthening the financial system

10. In your opinion, what is the robustness of your rating processes? Excellent / Very Good / Good / Fair / Poor

11. In the light of the current economic turmoil, what improvements or additional factors would you like to consider when rating instruments in future? What are your lessons from the sub-prime crisis in US and Western Europe?

12. What are the general procedures for recruitment, selection, training, retraining and skill development initiatives?

13. What is the level of usage of the following techniques (please mark $\surd$ on apropriate cell)

Technique	**frequently**	**medium**	**sometimes**	**never**
Discriminant Analysis				
Multiple Discriminant Analysis				
Logit/Probit				
Credit Metrics				
Loss Given Default (LGD)				
KMV				

14. How does the CRA create a speedy mechanism to incorporate new information?

15. Does the CRA have an alarm system to provide alerts on significant, relevant events?

16. What is the frequency of a rating exercise and a rating transition? What triggers a review?

17. How does the CRA deal with the conflict in interest between rating and advisory services for the same entity?

18. Have you come across attempts of malpractices by the firms being rated?

    (a) Influencing the ratings or exertion of pressure

(b) Rate shopping

(c) Incentives in the form of assignments that are conflicting in nature?

19. In general, what is the quality of Accounting Information?

20. How is the Accounting Information corroborated or verified from alternate sources?

21. In the light of the Satyam episode, what changes have you made in evaluation processes?

22. What support would CRAs require from policy makers or regulators? Please Suggest.

23. Are there any rules or regulations which are constraining or no longer serve a purpose?

24. Have rating agencies come to a consensus on rating symbols? How feasible is it?

2 Analytical Information

Respondent Name:

Affiliation:

1. How many analysts are assigned to a company in each rating exercise?
2. How many assignments does an analyst handle in a year, on average?
3. What is the average completion time for each rating assignment?
4. List some of the challenges faced during the rating exercises
5. General level of Cooperation extended by assessed firms: Excellent / Very Good / Good / Fair / Poor
    - At first assessment:
    - On renewals:
6. What data does the CRA measure and how do they measure these?
7. What are the general methodologies followed and how does one decide on the choice of methodology?
8. Are CRAs updating skills and knowledge? How effectively have these skills been used?
9. What is the general fit between your individual opinion and the final rating?

10. Quality of Accounting Information over the years: Excellent / Very Good / Good / Fair / Poor

11. In the light of the current economic turmoil, what additional factors would you like to consider when rating instruments in future?

12. What support would you require from policy makers or regulators? Please Suggest.

13. Illustrate a case of rating transitions over a period of time, for each type of instrument, for the following industries:

    (a) Realty

    (b) Construction

    (c) Retail

    (d) Cement

    (e) Steel