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A STUDY ON IMPACT OF CREDIT RATING ON STOCK PRICES WITH REFERENCE TO INDIAN BANKING AND AUTOMOBILE SECTOR

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Abstract

A rating event is defined as a change in credit rating or a change in the imminent rating action or outlook. Stock market prices are very volatile and are often affected by various events that happen around the world. Even if the event is directly impacting the company or not, the degree of change would probably be determined by how closely the event is related to the company. That is why events like a credit agency downgrade affect the share price of a company tremendously. Our study covers a time period from 2004-2013 to present an analysis of the impact that credit rating agencies' decisions have on the stock prices with reference to Indian Automobile and Banking Companies. The sample consists of 107 rating changes covering 17 companies. With an event window of 31 days and an estimation window of 200 days we have computed the abnormal returns for the event window and tested the significance using the z-test. We have assumed that if the value of z-test lies between -1.96 and +1.96 then there is no significant difference otherwise there is a significant difference. The benefit of using the market model depends on cumulative average abnormal returns (CAAR), which increases the power to depict abnormal performance. In our study the value of average cumulative abnormal return of automobile and banking sector is -0.17703 and -1.24106. Z-test has been applied whose value is -2.07213 and -10.383 for automobile and banking sector respectively on the event date and the values do not lie between -1.96 and

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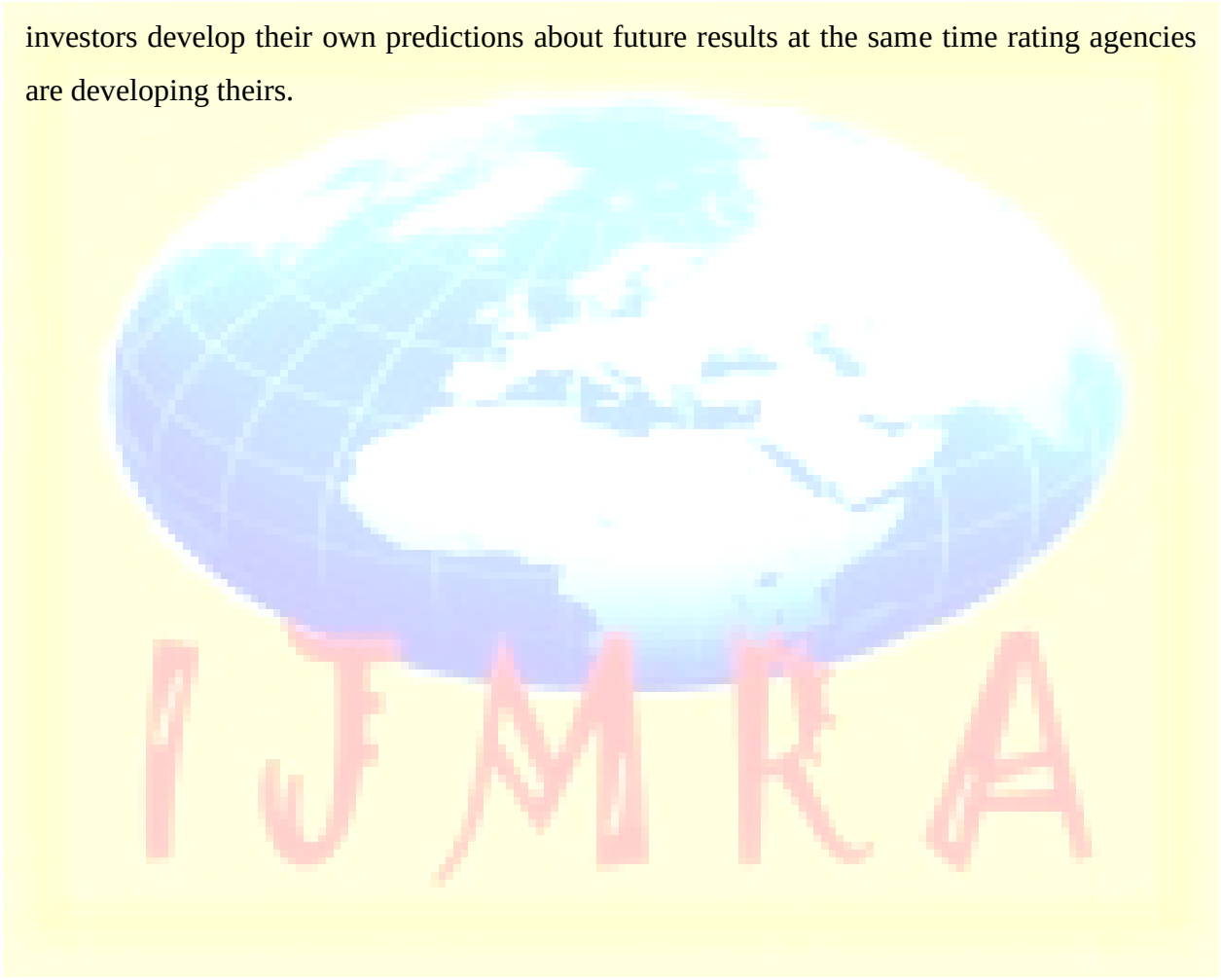
1.96 which means that the alternate hypothesis is accepted and that there is a significant relationship between credit rating changes and stock price. The graphs also depict that before the announcement date abnormal returns were positive and moving smoothly. Here it is interesting to note that 6 days before the announcement date there was a significant downward jump in abnormal returns and after the event date, CAAR decreased continuously leading to negative abnormal returns. This is the evidence of information leakage which occurs earlier in the equity market (5 days before the announcement), hence proving the assumption of event study that markets are efficient. This leakage may arise as astute investors develop their own predictions about future results at the same time rating agencies are developing theirs.



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1. INTRODUCTION

In the light of recent financial crisis and the noticeable economic consequences, investors are increasingly concerned about the future of their investments. Hence, investors are seeking for appropriate informational guides to manage and assess the riskiness of their assets. Rating companies such as CRISIL, CARE, and ICRA traditionally have been playing a critical role to investors in assessing such risk. Specifically, they affect not only the instrument being rated (bonds) but also stocks. Interestingly, bond markets react differently

than stock markets in many respects. For bond market returns, a positive impact is significant when the economic outlook is upgraded and outlook changes appear to be at least as important as rating changes. In addition, downgraded ratings and economic outlooks occur mainly during bond market downturns, raising a possibility that rating agencies may worsen a bond bear market. Only downgrade has a discernible impact on equity and bond returns and the effects of rating announcement are significantly asymmetric. On **equity** returns, the market responses of downgrade are more pronounced in the cases of high inflation, low fiscal balance, and local currency debt; in contrast, On **bond** returns, the market responses of downgrade are more pronounced in the cases of a relatively ailing economy as by emerging market, high inflation, and low current account. From various event studies it is clear that equity prices react more strongly to rating downgrades or negative watches than to up upgrades or positive watches and equity prices anticipate the agencies' decisions, probably because of the abundant information publicly available to the market about issuers. The studies also reveal that the impact of agencies' announcements on equity prices is even greater in the case of small, volatile and poorly rated securities or in a gloomy macroeconomic environment, especially when default rates are high. The main role of these agencies is to convey opinions to financial markets about the creditworthiness of investment instruments and issuers. Although over the past few years, the performance of rating agencies has been widely debated. They have been criticized for inaccurate ratings and slow reactions to new information. The formal evidence on rating agency performance is mixed. On one hand, agencies' ratings appear on average to be accurate measure of relative default risk but on the other hand various studies reveal that security prices react predictably to rating changes, rising after upgrades and falling after downgrades. As the impact of credit rating on stock price has received considerable attention in the academic literature. Therefore, in this study we will analyze the market reaction to change in stock prices when an event is announced over the period from 2004 to 2012. The reason for doing the study is that these ratings actually provide a view on the country's overall ability to provide a secure investment environment, that indicates that the study has important implications for investors and economy as a whole.

1.1 Credit Rating Agencies

Credit rating is the symbolic indicator of the current opinion of rating agencies regarding the relative capability of issuer of debt instrument, to service the debt obligations as per contract. Credit ratings have been used to distinguish among grades of debt creditworthiness since early last century. Credit Rating essentially indicates the credit worthiness of the borrowers and the probability that the borrowers will pay the interest and principal on due dates. The corporations with specialized functions namely, assessment of the likelihood of the timely payments by an issuer on a financial obligation is known as Credit Rating Agencies. Credit rating agencies play a crucial role in the financial system, and played an important one in the events that led to its near-collapse in 2008. The business is dominated by three firms – Moody's, Standard and Poor's and Fitch Ratings -- whose job is to provide an objective analysis of the risk posed to investors by bonds, companies and countries. During the housing boom, the system broke down, as several billion dollars worth assets, later shown to be worthless, received high ratings from one of the agencies. A Congressional panel called them "essential cogs in the wheel of financial destruction."Critics say there is a conflict of interest inherent in the fact that the agencies are paid by the entity whose debt is being rated -- a bit like a restaurant reviewer being hired by the chef -- and investigations turned up evidence that analysts felt pressured to give investments a clean bill of health or risk losing business. Without question, the credit rating system is one of capitalism's strangest hybrids; profit-making companies that perform what are essentially regulatory roles. The companies serve the public, which expects them to stamp their imprimatur on safe securities and safe securities alone. But they also serve their shareholders, who profit whenever that imprimatur shows upon a security, safe or not. The importance of the rating agencies were compounded by their unusual legal status, one that entrenched their influence in millions of transactions. Since the Depression, statutes and rules required that mutual funds and money managers of almost every stripe buy only those bonds that have been given high grades by a Nationally Recognized Statistical Rating Organization, as the agencies are officially known. The effect was to give the three certified rating agencies in effect an oligopoly.

A rated security is placed higher in the estimation of investors than an unrated security irrespective of better financial standing or reputation of the Issuer or Sponsor Company. Credit rating provides indicative guidance to the prospective investors on the degree of risk involved in the timely repayment of principal and interest. Thus 'credit rating' is essentially

the task of determining the strength and prospects of a security/instrument offered in the market by differentiating it from other securities/instruments with the help of predetermined standards called 'grades' (typically these grades are symbolically represented, viz. A,AA, AAA, etc).Credit rating is a source of reliable information for many users as rated instruments speak themselves about the soundness of the company and the strength of the instrument rated by the credit rating agency. Rating helps investors compare the issues by providing them a short and clear guide. Credit Rating gives superior information about the rated product and that too at low cost, which the investor otherwise would not be able to get so easily. Thus the investor can easily recognize the risk involved and the expected advantage in the instrument by looking at the symbols. The rationale of rating service is to restore confidence in the minds of investors. Credit Rating Agencies are thus essentially the corporations with specialized functions namely, assessment of the likelihood of the timely payments by an issuer on a financial obligation. In India the rating activities started with the incorporation of the Credit Rating Information Services of India Ltd. (CRISIL) in 1987 which commenced its operations of rating of companies in 1987-1988 and was promoted by Industrial Credit and Investment Corporation of India Ltd. (ICICI) and Unit Trust of India (UTI). The second rating agency Investment Information and Credit rating Agency of India Ltd. (ICRA) was incorporated in 1991 and was jointly sponsored by Industrial Finance Corporation of India (IFCI) and other financial institutions and banks. The other rating agency, Credit Analysis and Research Ltd. (CARE), incorporated in April 1993, is a credit rating information and advisory services company promoted by Industrial Development Bank of India (IDBI) jointly with Canara Bank, Unit Trust of India (UTI), private sector banks and financial services companies. Another rating agency, ONICRA Credit Rating Agency of India Ltd., which was incorporated in 1993, is recognized as the pioneer of the concept of individual credit rating in India. Further Duff and Phelps Credit Rating (India) Private Ltd. (DCR) was established in 1996, which is presently known as Fitch Ratings India Private Ltd.

One more rating agency SME Rating Agency of India Limited (SMERA), which was a joint venture of SIDBI, Dun & Bradstreet Information Services (D&B), Credit Information Bureau of India Limited (CIBIL), and11 other leading banks in the country, was established in 2005. A new rating agency, Brickwork Ratings (BWR) which is based in Bangalore was incorporated in 2007. Besides CRISIL (Standard & Poor), ICRA (Moody's), CARE and Fitch, Brickwork Ratings is the fifth Credit Rating Agency to be recognized by SEBI.

There are five Credit rating agencies in India, namely,

1. Credit Rating Information Services of India Limited (CRISIL)

2. Investment Information and Credit Rating Agency of India (ICRA)

3. Credit Analysis & Research Limited (CARE)

4. Duff & Phelps Credit Rating India Private Ltd. (DCR India)

5. ONICRA Credit Rating Agency of India Ltd.

1. CRISIL:

The concept of credit rating in India was initiated by the Credit Rating Information Services of India Limited (CRISIL). CRISIL was established in 1987 and started operations in January 1998. Currently, five rating agencies are in operation in India, rating bonds, time deposits, CP (Commercial Paper) and structured obligations. All the four Indian rating agencies have tie ups/alliances with international rating agencies.

CRISIL is India's leading rating agency, and is the fourth largest in the world. Its business model comprises of three divisions - Debt Rating ,Crisil Research and Information Services (CRIS) and Crisil Advisory Services (CAS). Standard and Poor`s (S&P), which holds a 9.6 per cent stake in the company, assists it on developing new rating methodologies for newer securities. With over a 70% share of the Indian Ratings market, CRISIL Ratings is the agency of choice for issuers and investors. It is a full service rating agency that offers a comprehensive range of rating services and it also provides the most reliable opinions on risk by combining its understanding of risk and the science of building risk frameworks, with a contextual understanding of business. CRISIL has rated over 6,797 debt instruments worth Rs.13.53 trillion (over USD343 billion) issued by over 4,600 debt issuers, including manufacturing companies, banks, financial institutions (FIs), state governments and municipal corporations. It is the only rating agency to operate on the basis of a sector specialization, which underpins the sharpness of analysis, responsiveness of the process and large-scale dissemination of opinion pieces. CRISIL Ratings also offers technical know-how overseas. For instance, it has provided assistance and up ratings agencies in Malaysia (RAM) and Israel and in the Caribbean .In March 2004, CRISIL took up an equity stake of about 9%

in the share capital of the Caribbean Information & Credit Rating Services Limited (CariCRIS), with an investment of US $ 300,000.

2. ICRA

ICRA Limited (formerly, Investment Information and Credit Rating Agency of India Limited) was incorporated on January 16, 1991 and launched its services on August 31, 1991, by leading financial/investment institutions, commercial banks and financial services companies as an independent and professional investment information and credit rating agency. ICRA is a public limited company with its shares listed on the Bombay Stock Exchange and National Stock Exchange. It is an independent and professional company providing investment information and credit rating services. ICRA's major shareholders include Moody's Investors Service and leading Indian financial institutions and banks. As the growth and globalisation of Indian Capital markets have led to an exponential surge in demand for professional credit risk analysis, ICRA has actively responded to this need by executing assignments including credit ratings, equity grading, and mandated studies spanning diverse industrial sectors. In addition to being a leading credit rating agency with expertise in virtually every sector of the Indian economy, ICRA has broad-based its services to the corporate and financial sectors, both in India and overseas, and presently offers its services under three banners namely:

1. Rating services

2. Information services

3. Advisory service

3. CARE:

Credit Analysis & Research Ltd. (CARE Ratings) is a full service rating company that offers a wide range of rating and grading services across sectors. It was established in 1993. CARE has an unparallel depth of expertise. CARE Ratings methodologies are in line with the best international practices. It has completed over 3850 rating assignments having aggregate value of about Rs 8071 billion (as at December 2007), since its inception in April 1993. It has been

recognized by statutory authorities and other agencies in India for rating services. The authorities/agencies include: Securities and Exchange Board of India (SEBI), Reserve Bank of India (RBI), Director General, Shipping and Ministry of Petroleum and Natural Gas (MOPNG), Government of India (GOI), National Housing Bank (NHB), National Bank for Agriculture and Rural development (NABARD), National Small Scale Industries Commission (NSIC). CARE Ratings has also been recognized by RBI as an Eligible Credit Rating Agency (ECRA) for Basel II implementation in India. It was promoted by major Banks/FIs (financial institutions) in India. The three largest shareholders of CARE are IDBI Bank, Canara Bank and State Bank of India. CARE Ratings is well equipped to rate all types of debt instruments like Commercial Paper, Fixed Deposit, Bonds, Debentures, Hybrid instruments, Structured Obligations, Preference Shares, Loans, Asset Backed Securities(ABS), Residential Mortgage Backed securities(RMBS) etc. CARE Ratings has significant presence in all sectors including Banks / FIs, Corporate, Public finance. Coverage of CARE Ratings has extended to more than 1075 entities over the past decade and is widely accepted by investors, issuers and other market participants. It has evolved into a valuable tool for credit risk assessment for institutional and other investors, and over the years CARE has increasingly become a preferred rating agency.

4. Duff & Phelps Credit Rating India Private Ltd. (DCR India):

Fitch Ratings India Private Limited, formerly known as Duff & Phelps Credit Rating India Private Ltd. Prior to 2001, is a wholly-owned subsidiary of the Fitch group that started operating in India since 1996.

5. ONRICA:

ONRICA Credit Rating Agency of India Limited was incorporated in 1993. It is an established player in the individual credit assessment and scoring services space in the Indian market. ONRICA is the first in India to launch commercial services and provide individual credit rating and reporting services to the Indian financial market. ONICRA has been acknowledged as pioneers of Individual Credit Rating in the Economic Survey of India 1993-94 issued by Ministry of Finance, Government of India and its services have been hailed by

the financial sector and in the media. It delivers objective and reliable pre and post disbursement credit validation and information on credit takers and have been successfully doing the employee screening for wide gamut of requirements. It provides Dynamic Customer -Focused solutions that bridges the gap between principals and their prospective / existing customers. It provides spectrum of services which include the services like Credit Rating, Associate Rating, Employee Screening, SSI/SME Rating, Customer Verification, Lifestyle Analysis and Royalty Retention. Currently, it caters to clients in major business segments such as Telecom, Banking, Automotive, Consumer Finance, IT and other Service Industries.

The ratings which are given out by these companies fall between a certain band depending on the risk associated with investment.

Ratings	**Status**
AAA	Highest Credit Quality and Lowest Credit Risk
AA / A	High Credit Quality and Low Credit Risk
BBB	Good Credit Quality and Medium Credit Risk
BA / B / CCC / CC / C	Junk Credit Quality and Highest Credit Risk
D	Junk Credit Quality and Default

1.2 Need for credit rating agencies:

The banking sector in India underwent an unprecedented transformation in the 1990s with the emergence of a large number of private as well as foreign multinational banks entering the country increasing rapidly the number of banks in India due to the economic reforms. So the banking activities increased manifold and affected a large number of areas of operation of banks, particularly in the field of bank lending. Banks operate on the pattern of extending credit against security given by its customers associated with the bank. The facility of extending credit is recognition of the changing times in which banks have to operate in a changing and ever evolving economic scenario. Growing needs and realisation of higher rate of investments is giving birth to bank credit in India. The borrowing capacity provided to an individual by the banking system, in the form of credit or a loan. The total bank credit the individual has is the sum of the borrowing capacity each lender bank provides to the individual. This for even needed to increase the investment on the country. So a need was felt to have a credit agencies maintaining database on the existing customers as in the absence of adequate and structured credit information for the banks and other credit providing agencies, there was always danger of a party obtaining financial accommodation from a large number of banks to an extent not warranted by his/her means or paying capacity, in such a case there is a chance having of bad debts (not retuning of credit) creating an added burden on the existing financial resources of banks. The Banking Commission (1972) under the Chairmanship of Shri R.G. Saraiya, recommended setting up of a Credit Intelligence Bureau as a statutory body which would furnish adequate and reliable credit information to banks and other financial institutions. In India in 1962, a Credit Information Division was established in RBI with the view of collection of information from banks and other financial institutions regarding data relating to the prescribed limits sanctioned by RBI even the RBI Act was amended into 1962 given powers to collect information in regard to credit facilities granted by individual banks and notified financial institutions to their constituents and to supply to these banks and institutions on application the relative information in a consolidated form. Apart from all the above steps, banks constantly keep a check on the customers by obtaining information from all the other sources pertaining to their customers in any form. The Saraiya Commission also suggested the formation of credit information bureaus on the lines of those prevalent in the US and the UK. Credit rating agency means any commercial concern engaged in the business of credit rating of any debt obligation or of any project or programme requiring finance, whether in the form of debt or otherwise, and includes credit rating of any

financial, obligation, instrument or security, which has the purpose of providing a potential investor or any other person any information pertaining to the relative safety of timely payment of interest or principal. The credit information bureaus in the US and the UK used to provide information on the history of the business concern, ownership and changes in the business concern, digest of statements of assets and liabilities, results of investigations in the trade, fire records, etc.

1.3 List of credit rating agencies

Agencies that assign credit ratings for corporations include:

- A. M. Best (U.S.)
- Baycorp Advantage (Australia)
- Bulgarian Credit Rating Agency (Bulgaria, European Union)
- Capital Intelligence (Cyprus)
- Capital Standards Rating (Kuwait)
- CARE Ratings (India)
- Credo line (Ukraine)
- Credit Siren (European Union)
- Credit Rating Information and Services Limited(CRISL),(Bangladesh)
- CRISIL (India)
- Dagong Global (People's Republic of China)
- Dominion Bond Rating Service (Canada)
- Duport l (UK)
- Egan-Jones Rating Company (U.S.)
- First Afghan Credit Risk Ratings (Afghanistan)FACRR
- First Report, (UK)
- Fitch Ratings (Dual-headquartered U.S./UK), 80% of which is owned by FIMALAC, a French firm.
- Global Credit Ratings Co. (Africa)
- HR Ratings (Mexico)
- ICRA Limited (India)
- SMERA INDIA
- Japan Credit Rating Agency, Ltd. (Japan)

- Kroll Bond Rating Agency (U.S.)
- Moody's Investors Service (U.S.)
- Muros Ratings (Russia alternative rating agency)
- Rapid Ratings International (U.S.)
- Standard & Poor's (U.S.)
- UK Credit Info (U.K.)
- Weiss Ratings (U.S.)
- Onicra Credit Rating Agency of India Ltd (India)

The Big Three

The Big Three credit rating agencies are Standard & Poor's, Moody's Investor Service, and Fitch Ratings. Moody's and S&P each control about 40 percent of the market. Third-ranked Fitch Ratings, which has about a 14 percent market share, sometimes is used as an alternative to one of the other majors.

Review Of Literature

John Ryan (2012) in the article "the negative impact of credit rating agencies and proposals for better regulation" analyzed the impact of credit rating agencies in ongoing crisis among euro zone nations. According to the study CRAs have been accused of creating more problems in the times of crisis by downgrading the ratings of Greece, Portugal and Ireland within a short span of time but it got hype when S&P downgraded the ratings of Spain, France, Austria as well as EFSF in January this year itself. All EU members proposed to the formation of its own regulatory authority to rate the countries and firms within and to check the methodology of these international credit rating agencies to avoid problems any further. They have also proposed to promote European small credit rating agencies to neutralize the effects of agencies like Moody's and S&P.

Nikola G. Swann (2011) in his study "Special Report on the U.S. Rating Downgrade and Its Global Effects" mentioned that Standard & Poor's Ratings Services lowered its long term sovereign credit rating on the United States of America from 'AAA' to 'AA+'. The study analyzed that the outlook on the long-term rating is negative and at the same time,

Standard & Poor's affirmed its 'A-1+' short-term rating on the U.S. In addition, Standard & Poor's removed both ratings from CreditWatch (the global authority on credit quality), where they were placed on July 14, 2011, with negative implications. The study concluded that heir ratings are determined primarily using a three to five year time horizon. The rating was lowered by their view on the rising public debt burden and their perception of greater policy making uncertainty, featuring less favorable macroeconomic conditions. The sovereign downgrade did not affect the ratings or stable rating outlooks on the six U.S.-domiciled highest rated non-financial corporate issuers: ExxonMobil Corp.,Johnson & Johnson, Microsoft Corp., General Electric Co., Automatic Data Processing Inc., and W.W.Grainger Inc.

Hasniza, et al. (2011) in their article "The stock market impact of corporate bond rating changes: new evidence from the UK and Australian stock markets" examined the impact of CRAs announcements of bond r-rating on UK and Australian firms. In their research they located that in case of downgrading of rates, stock price reactions are significant but in cases of upgrades, it hardly matters to anyone. In particular, authors have considered the announcements of Moody's and S&P during the period 1997 to 2006. They have considered bonds that are having different grades and also considered those bonds whose grades have moved from speculative investment grade or visa versa as an outcome of re-rating announcements and they found that bonds which are downgraded in UK and Australian markets have shown similar results.

Klaus S. Beckmann, Changha Jin (2009) in their paper "The Impact of REIT Ratings on Stock Price and Shareholder Wealth" analyzed the market reaction to REIT preferred stock ratings announced by Moody's Investors Service from 1999 to 2009 related to four types of rating events; first time ratings, outlook changes, reviews and actual rating changes. The results suggested that there was a significant market reaction to rating upgrades of 1.08% abnormal return and to downgrades and negative outlooks of -2.28% and -2.67% abnormal return, respectively. Compared to the negative outlooks, abnormal returns are smaller in magnitude which implies a relatively smaller information asymmetry within the REIT market with diversification opportunities for global investors. This is because credit rating agencies, in their role as information gatherers and processors, can reduce a firm's capital costs by certifying its value in a market, thus solving or reducing the informative asymmetries between purchasers and issuers.

Björn Imbierowicz, Mark Wahrenburg (2009) The first influential study on the impact of rating actions on capital markets topic by Katz (1974) investigates the effect of rating changes on bond yields. the findings suggest an anticipation as well as an announcement effect in response to negative rating events. Negative rating events induce an anticipation and an announcement effect in stock. Positive rating events, on the other hand, only generate an either statistically or economically insignificant outcome. First, the significant anticipation effect for negative rating events over most event windows in both the stock and the CDS market is attributable to rating actions due to firms' operating performance with all other reasons being of rather minor importance. In the subsequent analysis we condition each rating event on the respective reason stated by the rating agency yielding the following key findings. Second, most reason categories show a significant announcement effect what implies that for these rating agencies are able to add valuable information to the market. Third, a surprise rating event does not necessarily have to be bad news for stockholders. And fourth, negative rating events are always bad news for bondholders.

Marwan Elkhoury (2008) in his study titled "Credit rating agencies and their potential impact on developing countries" mentioned that the role of CRAs has been expanded due to globalization and due to Basel-II norms that utilises ratings of these agencies in credit risk. The study concludes that there are a number of variables that affect ratings like increase in international interest rates, Inflation, Ratio of non-gold foreign exchange reserves to imports and various others. But in a financial crisis these ratings might become completely obsolete because it will be completely difficult to establish relationship between ratings and its determinants.

AMF (Autorite Des Financiers) (2006) in their study titled **"Marketing Impact of rating agencies decisions"** analyzed that equity prices anticipate credit rating agencies' decisions, probably because of the abundant information publicly available to the market about issuers. The study shows that the impact of agencies' announcements on equity prices is even greater in the case of small, volatile and poorly rated securities or in a gloomy macroeconomic environment, especially when default rates are high. During the study, a number of well-known European companies were downgraded to the "speculative grade" or "high yield" status for the first time. This greatly diminished their ability to raise financing. The study analyzes that due to this some companies felt that the agencies were too

"aggressive" in changing their credit ratings. On the other hand, some investors regretted that these agencies were too slow in responding to the deteriorating finances of some companies, which led to some spectacular business failures.

Adam, Luke and Anthony (2004) in their article "The impact of rating changes in Australian financial markets" have studied the movements in equity prices and bond yields in Australian market. They also analyzed that credit rating agencies are sometimes not having access to full knowledge regarding business houses. They also suggest that downgrades are typically based on information that is in the public domain. They are not readily available with private information and typically represent the market information.

Reisen, von Maltzan (1999) in their study associated downgrades with wider sovereign yield spreads, especially for emerging markets and the aggregated rating announcements of the three CRAs. Their Granger causality test shows a two-way causality between Moody's ratings and yield spreads but no significant link between S&P's ratings and spreads. Based on the determinants of bond yields and sovereign ratings, they show that rating decisions may be considered as an important signal of credit worthiness; and that this impact investors from holding securities below certain rating categories. In the specific case of equities, shareholders do not always see the announcement of an upgrade as good news. An upgrade could mean that the company's behavior is too virtuous and that it is not using leverage to increase shareholder value. The study concluded that if we take this reasoning to the extreme, a shareholder could see a credit rating downgrade as good news, but the empirical findings do not seem to show that this is the prevailing mechanism. Hence, equity prices react more strongly to rating downgrades or negative watches than to up upgrades or positive watches.

Ilia, Joseph (1998) in their article "the long run stock returns following bond ratings changes" tried to examine the effect of Moody's credit rating changes in longer period of time. It was found that stocks with upgrades perform better than stocks with downgrades for upto 1year but after that no such significant difference in the returns from both types of stocks. The stocks with downgrades earned low returns in comparison to stocks with upgrades upto 1 year of change announcements. This difference in returns is said to occur because of underperformance of downgraded stocks. This also occurs due to availability of partial information with credit rating agencies like Moody's, S&P for this study, authors have studied the impact of changes in ratings in different terms of time period.

Edgar Norton, Glenn N. Pettengill (1998), this study states the effect on equity prices of the announcements by Standard's and Poor's concerning the strength of super poison put provisions Under this provision investment managers will invest in industrial bonds only if bond covenants provide Protection "against the perils of RJR-style buy-outs. The study found that these announcements by S&P have a significant impact on equity prices. We find that the strength of the impact diminishes over time which is consistent with the market becoming more efficient with added experience in interpreting super poison put provisions. Finally, unlike previous studies, our results suggest that equity investors viewed the put provisions as a loss of expected restructuring premiums because of management entrenchment.

Larrain, Reisen and von Matzlan (1997), in the aftermath of the Mexican crisis, assessed whether S&P and Moody's ratings lead or lag market events. Their event study of 78 events during 1987-1996 concludes that a change in the risk assessment by the two leading rating agencies is preceded by a similar change in the market's assessment of sovereign risk, especially when countries were put on review. This makes them caution against overestimating the independent long-run impact that sovereign credit ratings exert on the financial market assessment of sovereign risk.

Cantor, Packer (1996) in their study analyzed the determinants of sovereign ratings and impact of ratings on public information. Their study, based on sovereign bonds done for advanced and emerging economies, finds that a single rating variable explains 92 percent of the variation in spreads. First they found out that a single variable like GDP per Capita explains about 80 percent of the variation in ratings. Further in their study they found out that in actual only a small number of variables such as: GDP per capita, real GDP growth per capita, the Consumer Price Index (CPI), the ratio of government fiscal balance to GDP and government debt to GDP have a large impact on credit ratings as higher GDP per capita leads to higher ratings; higher CPI inflation to lower ratings, the lower the rating, the lower the government balance as a ratio to GDP; and higher fiscal deficits and government debt in relation to GDP to lower ratings. Moreover in the study they found out that there exists a correlation between bond ratings and bond spreads-lower the ratings, higher the spreads. While most of the correlation appears to reflect similar interpretations of publicly available information by the rating agencies and by market participants, their event study finds evidence that the rating agencies' opinions independently affect market spreads, especially in

the case of non-investment grade sovereigns. In addition, the impact of one agency's announcement is greater if the announcement confirms the other agency's rating or a previous rating announcement.

Hui, Nuttawat and Puspakaran in the article "The effects of credit rating announcements on Shares in the Swedish Stock Market" conducted a study on Swedish stock market. This study primarily focused on the importance of credit rating announcements for investors whether they find rating worthy in their investment patterns. They found that positive news was related with positive cumulative average abnormal returns (CAAR), and negative news with negative CAARs. The impacts of credit rating announcements are expected to be less in Swedish share market. There are no significant returns in all credit rating announcements during days surrounding announcement periods. The credit rating announcements may or may not provide some informational content to the stock market, especially the case of credit upgrade and credit downgrade.

Mark K. Pyles, et al. In the study they have examined the impact on firm value of changes in excess cash holdings given the new credit rating status. US financial market document stated the market reaction to upgrade versus downgrades i.e. credit downgrades generate negative stock price reactions, while upgrades are generally associated with smaller, often insignificant, changes. Choy, Gray, and Ragunathan (2006) in his study concluded that only downgrades are price-relevant. As firms get downgraded, their access to capital markets becomes more limited than before. There is a positive relation between downgrades and excess cash holdings, and firms upgraded to the highest rating reduce their cash. There are firms with positive excess cash following downgrades see the marginal value of the excess cash decline. Apparently, such firms are stocking up on excess cash at the expense of shareholder wealth.

Mahmud Agha, in his paper studies the impact of credit re-ratings on corporate cost of capital, capital expenditures and financing decisions. The study analyzed that he firms near to credit rating (e.g. BB+ and BB-) issue less net debt relative to equity. Firms issue less net debt relative to equity after a credit rating downgrade, but do not issue new net debt relative to equity after a credit rating upgrade in order to avoid a reversal of their recent upgrade. The study show that a credit rating upgrade is followed by a decrease in the cost of capital and an increase in capital expenditures and net debt and vice versa. A downgrade by credit rating of

financially flexible firms is followed by an increase in their cost of equity and In contrast, an upgrade to the credit rating of financially inflexible firms is not followed by a significant change in their cost of debt, cost of equity, debt and equity issuances.

Nadia Linciano, in his paper assesses the impact on stock prices of rating changes for a sample of 299 rating. That weak negative abnormal return are associated with downgrades as far as concerns upgrades, significant positive abnormal returns arise after the rating change, Announcements preceded by contaminating information result in higher abnormal returns. There will be abnormal returns if agencies act on the basis of information which is not already in the public domain. Only downgrades matter and they exhibit a post-announcement effect which lasts at least one year. The index would move sharply only before downgrade announcements, while it would follow a less pronounced pattern before upgrade.

Pilar, Dolores in the article "risk and return around bond rating changes: new evidence from the Spanish stock market" conducted studies to examine the effect of rating change announcements on the prices of shares in Spanish stock market during 1990 to 2003 and changes in beta risk. When there occurs a downgrading there is negative effect on returns. They stated that bond rating agencies only summarize public information whereas these agencies claim that they also use insider information for evaluating any firm or country. A credit rating downgrade reduces bond value, there are a wealth transfer from bondholders to shareholders. The authors' main focus was on to analyze the behavior of stock prices around rating revision announcements in Spanish stock market.

Research Methodology

3.1 Need and scope

The need is to study the impact of credit rating on stock prices i.e. whether the directions of price movements are influenced by the downgrades or upgrades of the stock. The reason for conducting this study is that ratings actually provide a view on the country's overall ability to provide a secure investment environment. It is because in the era of globalization, the downgrade would surely cause ripples across the globe. As the impact of changes in credit rating has received consideration in academic literature therefore in this study we will analyze the market reaction to stock prices when credit rating is announced for the period from 2004 to 2013 on the basis of rating events.

The scope of the study is confined only to ratings of Indian CRAs. The event study starts with hypothesis about how a particular event affects the stock prices. The concept of abnormal return or performance is the central key of event study methods. The events to be analyzed will be from 2004 to 2013. For the study a sample of top 10 companies from banking sector and automobile sector have been taken for which data has been collected. Total number of events in Banking and Automobile sector is 70 and 37 respectively.

3.2 Objectives of the study

1. To determine the impact of credit rating changes on stock prices.
2. To get a better understanding of the relation between rating news and market.

3.3 Research Design

1. **Research type**

Research type of our study is cause-and-effect research in which relationship between credit rating and movement in stock prices has been studied.

2. **Research method**

To examine the impact of credit rating on stock prices, we have employed the event study methodology.

3. **Sampling technique**

Sampling technique used is **"Simple random sampling",** i.e. events found within the selected time period from 2004-2013 have been put under consideration.

4. **Sample size**

The event study would be done on the events done from 2004 till 2013.

The steps for an event study are as follows:

– Event Definition

– Selection Criteria

– Normal and Abnormal Return Measurement

– Estimation Procedure

– Testing Procedure

– Empirical Results

– Interpretation

3.5 Tools of data analysis

We have collected data about stock prices from National Stock Exchange and the data so collected are thus arranged in a tabular form. For data analysis and for interpretation Event Study, T-test, Z- test and Tables are used with the help of Microsoft Office Excel.

3.6 Null hypothesis

H0: There is no significant impact on stock prices due to credit rating changes.

3.7 Alternative hypothesis

H1: There is a significant impact on stock prices.

3.8 Event study methodology

The procedure of an event study comprises of:

Step 1: Event definition:

The initial task of conducting an event study is to define the event of interest and identify the period over which the security prices of the firms involved in this event will be examined- the event window. Our event of interest is to determine the impact credit rating changes on stock prices. It focuses on price variations during the event window, making a statistical measurement i.e. cumulative return, collecting data about other similar events, and then using statistical tests to assess the impact.

For this purpose we have collected data of stock prices from the time period 2003-2013 from National Stock Exchange. Our event window consists of 231 days i.e. 215 days before the date of announcement of the event and 15 days post- announcement.

Date of announcement

I----------I----------I----------I

-200 -15 0 +15

←-estimated period ---→I←----------Event period ----------→

Step2. Selection Criteria.

We have selected two prominent industries i.e. Banking and Automobile sector as these two sectors come under top 10 Indian sectors contributing more towards economy. These two sectors are having impressive growth rate of 40% in banking sector and 20% in automobile which is assumed to remain constant upto 2015.

The facility of extending credit is recognition of the performance of banks. Whenever there is a chance of having bad debts (not retuning of credit) it creates an added burden on the existing financial resources of banks. And now-a-days the chances are increasing. There has been an increase in non-performing assets by 43% implying the credit rating agencies keeping a close surveillance on the performance of banks.

For this purpose we have taken the announcements of Indian Credit Rating Agencies CRISIL, CARE and ICRA and data of stock prices related to the events has been collected from National Stock Exchange.

Step3. Sample Size

For the study a sample of 10 companies from banking sector and 10 companies from automobile sector has been taken for which data has been collected. Total number of events in Banking and Automobile sector is 70 and 37 respectively. Furthermore, events from 2004 - 2013 have been involved in the study. Our event window consists of 231 days i.e. 215 days before the date of announcement of the event and 15 days post announcement.

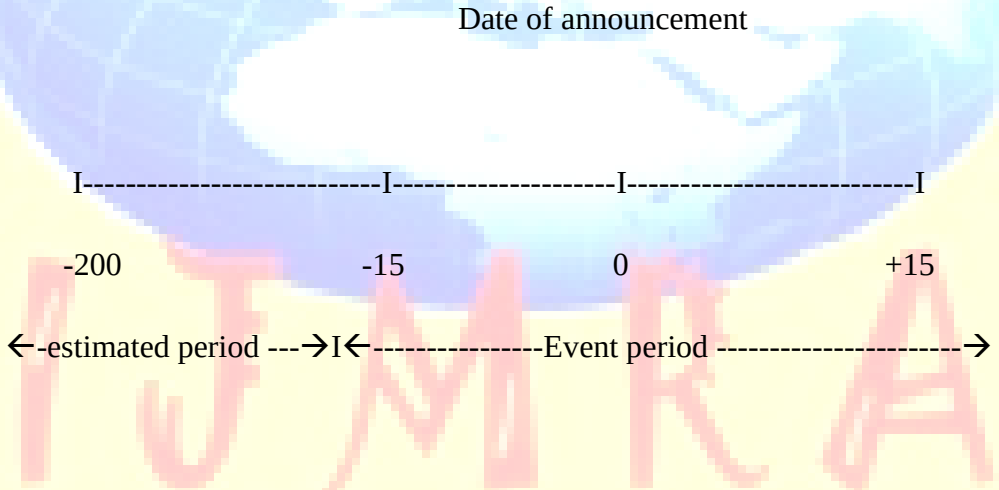
Step4. Normal and Abnormal Returns.

To appraise the event's impact we require a measure of abnormal return. The abnormal return is the expected return of the security over the event window minus the normal return of the firm over the event window. For calculating abnormal returns, we have employed the following steps:

1) First calculate the stock average and Nifty average for each day

2) Then calculate return on stock and nifty

3) Next, estimation of the important parameters that will give us the expected returns during the event period. The CAR model has been used to find the expected returns; alpha (y-intercept) and beta (slope) of the prices over a reasonably long estimation window (e.g. -200 to -31 days) is required.



- Average stock price = (high stock price + low stock price)/2
- Average nifty price = (high nifty price + low nifty price)/2
- Return on stock (day 0) =
  [Average stock price (day 0) - Average stock price (day 1)] / Average stock price (day 1)
- Return on nifty (day 0) =
  [Average nifty price (day 0) - Average nifty price (day 1)] / Average nifty price (day1)
- Expected return (day 0) =[Intercept + Slope * Return on nifty (day 0)]
- t-statistics = Abnormal Return / Standard Deviation

Step 5:

After that, deduction of the expected return from the actual return to get the abnormal return on each day in the event window.

- Abnormal return = Return on stock – Expected return

Step 6:

Then abnormal return values will be divided by standard error of estimation window.

- Abnormal return/std. error = Abnormal return / Standard error

Step 7:

Then t-test and z-test had applied on it and whatever its result it is compared with the level of significance i.e.5%. If the value lies outside -1.96 and +1.96 it means null hypothesis is rejected and alternative is accepted indicating that there is an impact of credit rating on stock prices.

ANALYSIS AND INTERPRETATION

To capture the reaction to the announcement of credit ratings on stock prices, we have calculated abnormal returns of stocks announcement dates using the simple market model.

The purpose of this study is to view the impact of the agencies' decisions, meaning rating changes on stock prices. Our study covers a time period from 2004-2013 to present an analysis of the impact that credit rating agencies' decisions have on the stock prices with respect to Indian Automobile and Banking Companies.

The sample consists of 107 rating changes covering 17 companies. With an event window of 31 days and an estimation window of 200 days we have computed the abnormal returns for the event window and tested the significance using the z-test. We have assumed that if the value of z-test lies between -1.96 and +1.96 then there is no significant difference otherwise there is a significant difference. The benefit of using the market model will depend on

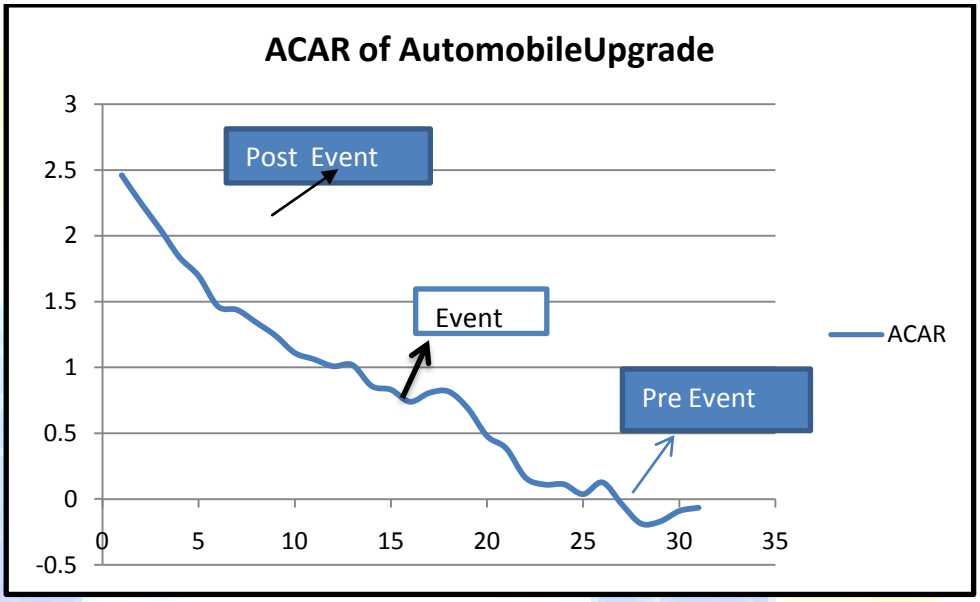
cumulative average abnormal returns (CAAR), which increases the power to detect abnormal performance.

Average Cumulative Abnormal Return of Upgrading And Downgrading Events :

Table. 4.1 (ACAR of Automobile sector-Upgrade)

ACAR of auto sector-upgrade	Z-TEST
2.459591	9.525955
2.247935	8.706214
2.04963	7.938183
1.837231	7.115566
1.694406	6.562406
1.463961	5.669898
1.437242	5.566415
1.341163	5.194303
1.241364	4.807782
1.110415	4.300621
1.062248	4.11407
1.009281	3.908927
1.018477	3.944545
0.858332	3.324305
0.831197	3.219211
0.739579	2.864378
0.807115	3.125944
0.817253	3.165207
0.689836	2.671724
0.479043	1.855327
0.384996	1.491082
0.162875	0.630814
0.11052	0.42804
0.112674	0.436383
0.037825	0.146495
0.127423	0.493506
-0.03718	-0.14399
-0.18501	-0.71652
-0.16993	-0.65815
-0.08995	-0.34837
0.06479	-0.25093

Chart 4.1(ACAR and z-values)



From the above fig. it can be seen that the value of average cumulative abnormal return of automobile sector is **0.739579** and started to increase thereafter to **2.459591**. In order to judge the level of significance, Z-test has been applied whose value is **2.864378** on the event date and which has been computed using the formula

Z-test = ACAR*SQRT(N)

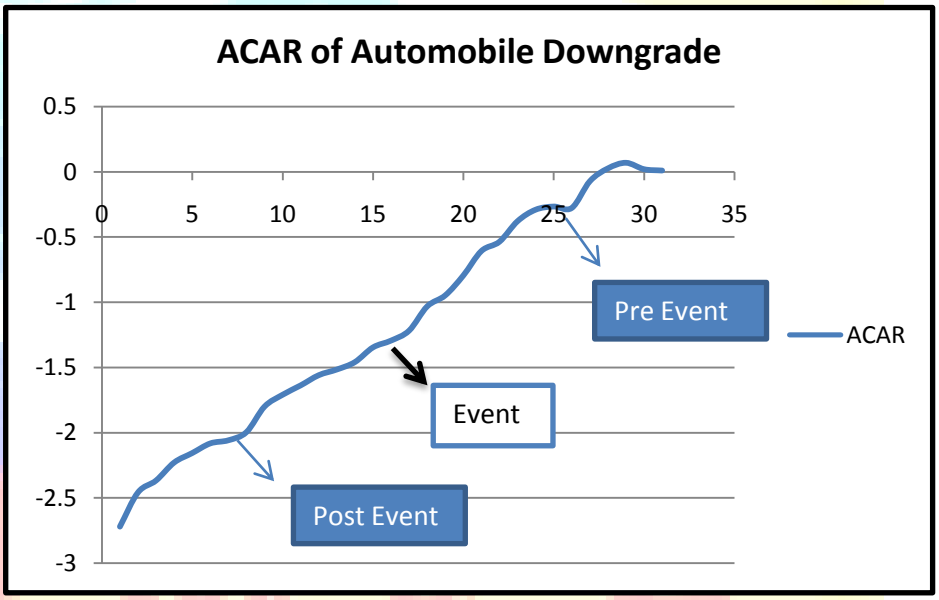
i.e. it lies outside -1.96 and 1.96 which means that there is a

significant relationship between credit rating changes and stock price.

Table 4.2

ACAR of auto downgrade	Z-TEST
-2.72206	-11.5487
-2.45961	-10.4353
-2.36823	-10.0475
-2.23015	-9.46172
-2.15757	-9.15379
-2.0834	-8.83914
-2.05941	-8.73734
-1.997	-8.47253
-1.80094	-7.64073
-1.71018	-7.2557
-1.63821	-6.95034
-1.56005	-6.61874
-1.51646	-6.43377
-1.45956	-6.1924
-1.34689	-5.71435
-1.29454	-5.49225
-1.21807	-5.16782
-1.03215	-4.37906
-0.94735	-4.01925
-0.79511	-3.37338
-0.60707	-2.57557
-0.53571	-2.27284
-0.37834	-1.60515
-0.28994	-1.23011
-0.26595	-1.12832
-0.27665	-1.17372
-0.07171	-0.30425
0.026926	0.114239
0.069757	0.295954
0.020417	0.086623
0.010316	0.043769

Fig. 4.2 (ACAR of Automobile sector-Downgrade)



From the above fig. it can be seen that the value of average cumulative abnormal return of automobile sector is -1.29454 and goes on decreasing post event.

In order to judge the level of significance, Z-test has been applied whose value is -5.49225 on the event date and indicates that our study is significant.

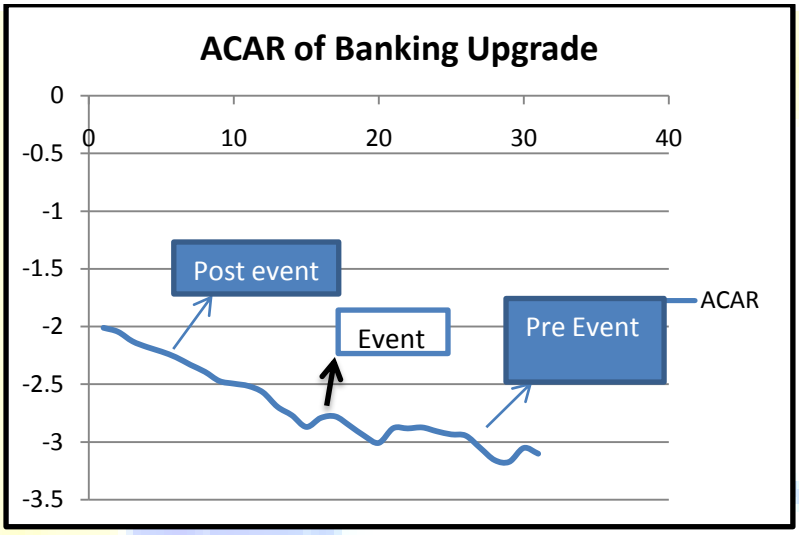
From the above charts it can be seen that due to the upgrading announcements by CRAs, stock prices have shown an upward trend thereby increasing ACAR. While due to downgrade announcements, it is vice-versa. Here it is evident from the graph that stock prices start fluctuating few days before the announcements implying the public information available.

ACAR of Banking sector

ACAR	Z-TEST
-2.010595797	-8.042383189
-2.04518711	-8.180748439
-2.127846538	-8.511386151
-2.177340883	-8.709363532
-2.21688248	-8.867529921
-2.265698324	-9.062793297
-2.331540602	-9.326162408
-2.391816072	-9.567264287
-2.472160792	-9.888643168
-2.494761111	-9.979044443
-2.51500435	-10.0600174
-2.569946783	-10.27978713
-2.695014871	-10.78005949
-2.768843354	-11.07537342
-2.869682995	-11.47873198
-2.791383186	-11.16553274
-2.778867654	-11.11547062
-2.859851875	-11.4394075
-2.947200499	-11.788802
-3.008055812	-12.03222325
-2.880316912	-11.52126765
-2.882743164	-11.53097266
-2.874421471	-11.49768588
-2.907683567	-11.63073427
-2.934332229	-11.73732892
-2.945441746	-11.78176698
-3.05183306	-12.20733224
-3.157743605	-12.63097442

-3.172060035	-12.68824014
-3.052137897	-12.20855159
-3.101766738	-12.40706695

Fig. 4.3 (ACAR of Banking sector-Upgrade)

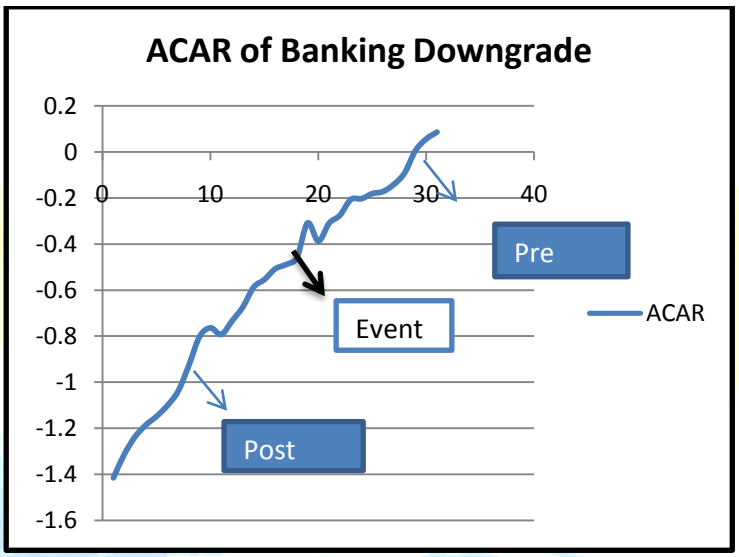


From the above fig. it can be seen that the value of average cumulative abnormal return of automobile sector is -2.79138 and goes on increasing post event. In order to judge the level of significance, Z-test has been applied whose value is -11.1655 on the event date and indicates that our study is significant

ACAR of banking downgrade	Z-TEST
-1.41468	-9.59483
-1.31343	-8.90812

-1.23689	-8.38901
-1.18583	-8.04268
-1.14781	-7.78479
-1.10112	-7.46815
-1.03853	-7.04364
-0.92566	-6.27816
-0.80058	-5.42979
-0.76374	-5.17992
-0.79246	-5.3747
-0.73383	-4.97708
-0.67318	-4.5657
-0.58746	-3.98437
-0.55399	-3.75737
-0.50772	-3.44351
-0.48903	-3.31679
-0.46027	-3.12171
-0.30885	-2.09473
-0.38751	-2.62824
-0.30932	-2.09793
-0.27525	-1.86681
-0.20699	-1.40389
-0.20318	-1.378
-0.18102	-1.22772
-0.17209	-1.16719
-0.14123	-0.95784
-0.09109	-0.61779
0.005568	0.037762
0.055995	0.379779
0.085832	0.582144

Fig. 4.4 (ACAR of Banking sector-downgrade)



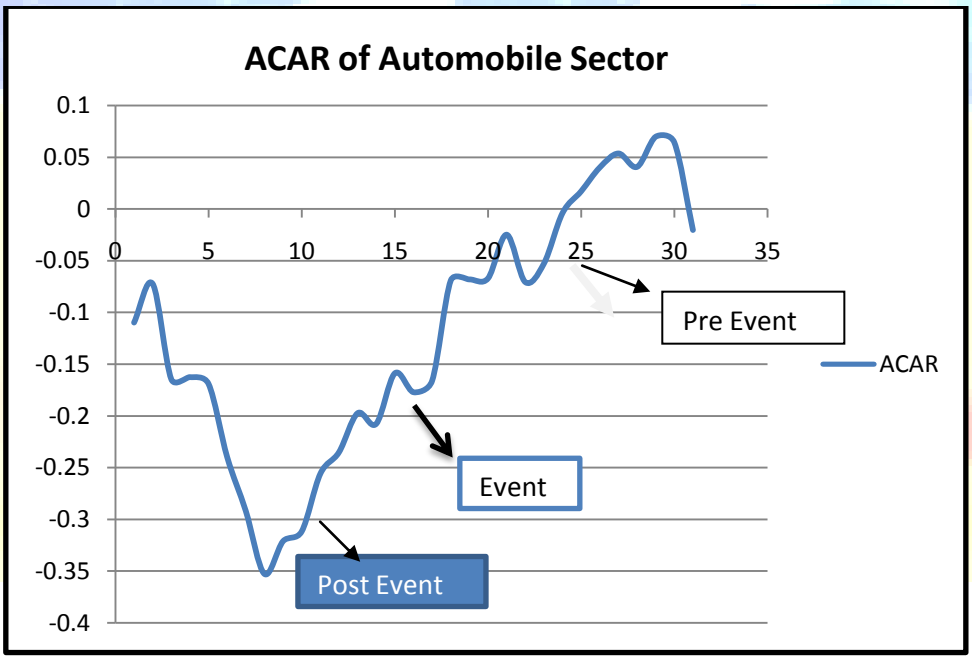
From the above fig. it can be seen that the value of average cumulative abnormal return of automobile sector is -0.50772 and goes on decreasing post event. In order to judge the level

of significance, Z-test has been applied whose value is -3.44351 on the event date and indicates that our study is significant.

From the above graphs it can be seen that due to the upgrading announcements by CRAs, stock prices have shown an upward trend. While due to downgrade announcements, it is vice-versa. Here it is evident from the charts that stock prices start fluctuating few days before the announcements implying the public information available. The results suggest that there is a significant market reaction to rating downgrades than to upgrades i.e. rating downgrades lead to downward trend in CAAR. Investors feel that the future prospects for the security have weakened usually due to a fundamental change in the company's operations, future outlook or industry.

Average Cumulative Abnormal Return of Automobile and Banking Sector:

Fig. 4.5 (ACAR of Automobile Sector)

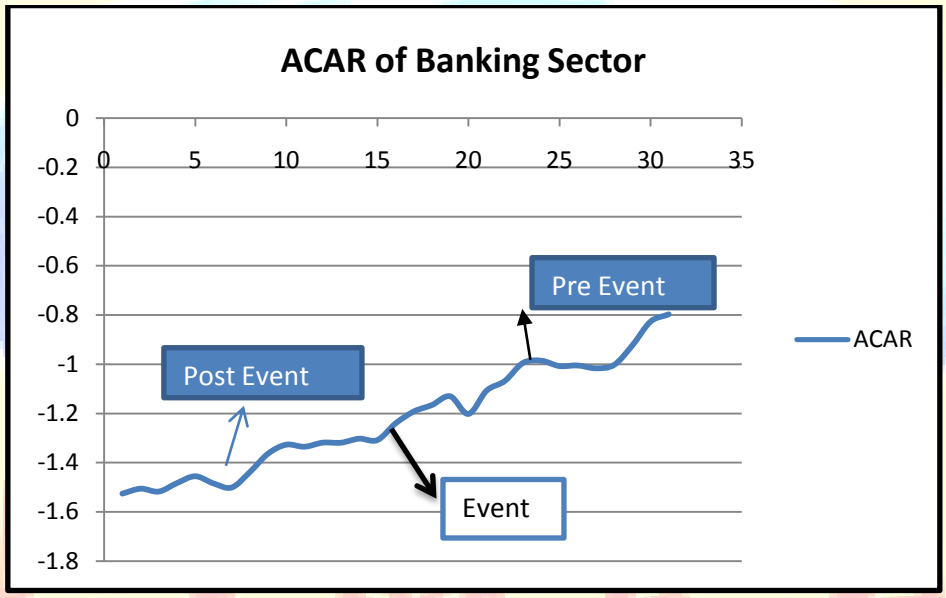


From the above chart it can be seen that the value of average cumulative abnormal return of automobile sector is -0.17703. In order to judge the level of significance, Z-test has been applied whose value is -2.07213 on the event date and which has been computed using the formula

Z-test = ACAR*SQRT(N)

i.e. it lies outside -1.96 and 1.96 which means that there is a significant relationship between credit rating changes and stock price. The graph above depicts that before the announcement date abnormal returns were positive and moving smoothly. Here it is interesting to note that 6 days before the announcement date there was a significant downward jump in abnormal returns and after the event date, CAAR decreased continuously leading to negative abnormal returns. This is the evidence of information leakage which occurs earlier in the equity market (5 days before the announcement), hence proving the assumption of event study that markets are efficient. This leakage may arise as astute investors develop their own predictions about future results at the same time rating agencies are developing theirs.

. **Fig. 4.6 (ACAR of Banking sector)**



From the table it can be seen that the value of average cumulative abnormal return of banking sector on the event date is -1.2411 and the value of z-test comes out to be -10.383 i.e. it lies outside -1.96 and 1.96 which means that there is a significant relationship between credit rating changes and stock price. From the chart it can be seen that ACAR have shown a downward trend implying that there is a substantial effect on share prices because of the rating agencies decisions.

FINDINGS:

Our study concludes following findings:

1. Our findings reveal that the upgrading announcements in automobile sector have positive impact on stock prices. The value of ACAR on the announcement date was **0.7395** and it began to increase to **2.459591** after the announcement date.
2. In case of downgrading announcements in automobile sector, ACAR is **-1.2945** and after the event it started to decrease abruptly to **-2.72206**.
3. In case of upgrading announcements in banking sector, ACAR is **-2.7913** and after the event it started to increase but the increase is negligible as compared to the increase in automobile sector.
4. In case of downgrading announcements in banking sector, ACAR is **-0.5077** and after the event it started to decrease abruptly.
5. In case of overall impact of credit rating announcements in automobile sector, stock prices have shown a downward trend post event and upward trend later.
6. While in case of overall impact of credit rating announcements in banking sector ACAR is consistently declining.
7. Hence, the results imply that there is an impact of credit rating on stock prices i.e. share prices react to the credit rating. In other words we can also say that there is a substantial effect on share prices because of the rating agencies decisions.
8. In all the above cases it was found that the stock prices start fluctuating few days before the announcements implying the abundant public information available i.e. investors anticipate the change in stock prices prior to the credit rating announcements. The findings are consistent with the assumption of event study that markets are efficient and investors have already access to public information.
9. While doing the study we also analyzed that the effects of downgraded credit rating are more pronounced as compared to upgrading and rating downgrades lead to abrupt downward trend in CAAR. This may be due to lack of confidence in investors, as investors feel that the future prospects for the security have weakened usually due to a fundamental change in the company's operations, future outlook or industry.

Recommendations:

1. Our study depicts that investors can anticipate the change in stock prices few days prior to announcements. It would be helpful for investors and bankers for the purpose of evaluating their decision to invest in a company or not. As the stock prices start fluctuating few days before the announcements implying the abundant public information available i.e. investors can anticipate the change in stock prices prior to the credit rating announcements.
2. Brokers can also consider potential ratings changes when developing recommendations for their clients, because how much the rating changes have affected the stock prices largely determines associated change in the affected company's asset value.
3. Moreover stock prices are also correlated to shareholder's wealth. As shareholders' wealth, is also measured by the market price of the firm's stock. A firm's stock price reflects the timing, size and risk of the cash flow that investors expect a firm to generate over time. Our study depicts that effects of downgrading are more pronounced as compared to upgrades. That means when there is an announcement regarding upgrading, shareholders can expect increase in share prices that bring about capital gain or increase in dividend payments, hence increasing shareholder's wealth and vice-versa. They can easily forecast the future prospect of their returns.This arises from the fact that when business tries to maximize the wealth of the firm, they actually try to increase their stock price. So, as the stock price increases, the individual who holds a stock, his wealth increases. As stock price goes up, the value
4. Moreover, long term investors can buy shares of a company when downgrade is expected as information is already available and stock prices decrease abruptly when there is a downgrading announcement. Few days after the announcement stock prices start to increase, increasing the return of investors.

Limitations of our study:

- The choice of sample size will result in difference in results as
  - Our study is limited to the ratings of Indian Credit Rating Agencies only like ICRA, CRISIL and CARE ignoring the big three CRAs like S&P, Moody's and Fitch and other CRAs ratings.
  - Data about Stock Prices has been taken from National stock exchange only because data about some of the companies was not available on BSE .
  - We have selected top 10 companies from two prominent Indian sectors i.e. Automobile and Banking sector as they contribute more towards economy. These two sectors are having impressive growth rate of 40% in banking sector and 20% in automobile which is assumed to remain constant upto 2015.
  - Out of the top 10 automobile companies data regarding announcements of Force and Atul Motors were not available.
  - Our study is confined to the events from 2004-2013.

- Secondly, the event study methodology depends on the assumption of an efficient market. This assumption is not valid in many situations. The length of time required for individual investors to respond to event signals is random and therefore, the implication is that markets could exhibit market inefficiencies because prices do not instantly or fully reflect all available information. Sometimes the abnormal returns might be spread out over such a long period of time that we are unable to see any significant 'spike' in the CAAR graph.

5. The results are sensitive to changes in research design and will result in vastly different results for abnormal returns. Similarly a change in estimation window will obviously give different alphas and betas, which can also affect the results and repeated study of differing periods could result in different conclusions. So, the sensitivity of event studies will result in different conclusions being drawn by researcher studying the same event, thereby making it hard for us to choose which result to believe in.

CONCLUSION:

Our study concludes that that there is an impact of credit rating on stock prices i.e. share prices react to the credit rating. And that there is significant market reaction to rating downgrades than to upgrades i.e. rating downgrades lead to abrupt downward trend in CAAR indicating that downgrade has a discernible impact on share prices and the effects of rating announcement are significant. This may be due to lack of confidence in investors, as investors feel that the future prospects for the security have weakened usually due to a fundamental change in the company's operations, future outlook or industry.

In other words, we can also say that there is a substantial effect on share prices because of the rating agencies decisions. Furthermore, when there is a change in credit rating- either upgrade or downgrade that implies a change in the solvency and the profitability of the company, or it is merely likely to change the terms under which the Company can obtain financing, then it may lead to a significant change in the stock price. While doing the study we also analysed that a positive rating event refers to an upgraded credit rating or positive outlook and a negative rating event refers to a downgraded credit rating or negative outlook. Stock market prices are very volatile and are often affected by various events that happen around the world. Even if the event is directly impacting the company or not, the degree of change would probably be determined by how closely the event is related to the company. That is why, events like a credit agency downgrade affect the share price of a company tremendously. Ratings from credit rating agencies carry a lot of weight because they are usually the benchmark used by various parties like economic analysts, investors and bankers; all of whom use ratings for the purpose of evaluating their decision to invest in the company or not. Therefore, a credit rating downgrade will definitely have a negative impact on the share price of the company involved because it means that the company is not as financially sound as it was previously. Change in credit rating causes a significant impact on the stock prices which in turn leads to other potential changes as it is correlated with other factors also. Analysts also often consider potential ratings changes when developing recommendations for their clients, because how much the rating changes have affected the stock prices largely determines associated change in the affected company's asset value. Moreover stock prices are also correlated to shareholder's wealth. As shareholders' wealth, is also measured by the market price of the firm's stock. A firm's stock price reflects the timing, size and risk of the cash flow that investors expect a firm to generate over time. Shareholder's wealth increases by increase in share prices that bring about capital gain or increase in dividend payments.

This arises from the fact that when business tries to maximize the wealth of the firm, they actually try to increase their stock price. So, as the stock price increases, the individual who holds a stock, his wealth increases. As stock price goes up the value of the firm and the net worth of the individual who owns the stock increases. The main reason why credit ratings affect stock prices is because credit rating downgrades make it more difficult and costly for the company to borrow from external sources. When a company has a good credit rating, the cost of borrowing is low because the credit worthiness of the company is high. When the cost of doing business is higher, the profit of the company will be affected; hence the lack of confidence shown in the share price. So, the decision of the credit rating agencies often has a major impact on share prices and the market as a whole.

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