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Impact of Credit Rating Affirmation and Upgrade on Share Prices in the Short Term

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Abstract - This study investigates the short-term impact of credit rating affirmations and upgrades on share prices using an event study methodology. The analysis focuses on Average Abnormal Returns (AAR), Cumulative Average Abnormal Returns (CAAR), and the statistical significance of AAR (t-values) over a 41-day event window (-20 to +20 days). The findings reveal that credit rating upgrades generate stronger and statistically significant abnormal returns, particularly around key days such as Day -10, Day 18, and Day 19, highlighting the market's positive reaction to favourable rating changes. In contrast, credit rating affirmations exhibit relatively smaller and less significant abnormal returns, suggesting limited new information for investors. This differential response underscores the greater informational value of upgrades compared to affirmations. The results provide insights for investors, policymakers, and market participants on how credit rating announcements influence short-term share price movements and market efficiency.
Keyword: Credit Rating, Rating Upgrade, Rating Downgrade, Rating Affirmation.

Introduction - The requirement for financing has grown as a result of the remarkable expansion of the Indian manufacturing sector. Companies must float a variety of financial instruments on the capital market in order to raise capital. As economies become more integrated, Indian businesses can now, you can raise money from anywhere in the world. These days, investors purchase securities issued by both domestic and foreign corporations. Today's investors invest in both domestic and foreign companies' products. The introduction of new financial products, such as asset-backed securities and financial derivatives, has made it harder for investors to understand and analyse complex terms when making investment decisions. As a result, it is essential that they have access to trustworthy information about the issuer's creditworthiness from a well-regulated source. Credit rating agencies were established to help these investors make informed decisions by evaluating the borrowers' credit standing and providing pertinent information about the company's financial strength. Investors now need reliable information from a trustworthy and regulated source regarding the issuer's creditworthiness because the introduction of new financial instruments like asset-backed securities and financial derivatives has made it more difficult for them to understand and analyse complex terminologies when making investment decisions. Credit rating agencies were established to help these investors make accurate investment decisions by evaluating the borrowers' credit standing and supplying pertinent information about the company's financial strength. When evaluating their clients' creditworthiness, credit rating agencies take into account a wide range of business and financial factors. Investors react to changes in credit rating.

Literature Review: The effect of credit rating upgrades and downgrades on stock returns has been the subject of numerous research using event study methods. The importance of credit rating changes for bond and equities market investors was examined by Afik et al. (2014). According to the study, both markets only react to downgrades and not to announcements of favourable ratings.

Emawtee and Robert (2014) investigated the connection between credit risk and stock returns in the Australian and Japanese capital markets. The analysis found a direct correlation between upgrades and stock returns.

Jones and Marquis (2013) investigated the connection between stock returns and rating changes over a 12-year period using 43 US banks. The study came to the conclusion that downgrades are strongly correlated with negative abnormal returns, while upgrades and downgrades are correlated with positive abnormal returns in the post-announcement period.

Sachdeva et al. (2013) examined 12 Indian banks in order to investigate the relationship between rating changes and stock return movement. It was discovered that upgrades had a greater effect on stock returns than downgrades. Additionally, it was discovered that when it comes to upgrades, banks with larger market capitalization yield

higher returns than those with smaller market capitalization.

Calderoni et al. (2009) examined the effects of rating actions on the stock markets of twelve European countries over a five-year period. Using the t-test, event research technique, and statistic, it was discovered that downgrades have a greater impact on stock returns than upgrades.

Doron et al. (2009) investigated why a highly hazardous firm produces lower returns rather than higher returns by analyzing the monthly returns of all companies registered on US stock exchanges. The stock of a company with a better credit rating was proven to yield a higher return than the stock of a company with a lower credit rating.

Winnie and Kam (2008) examined how rating changes affected Chinese companies' stock returns. The findings indicated that the market responds well to such announcements and that the ratings provided by the agencies had informative value.

Adam et al. (2007) examined how rating adjustments affected Australian stock prices. According to the study's findings, stock prices rise when an upgrade occurs and decrease when a downgrade occurs, and the announcement effect is significant for small businesses.

Linciano (2004) examined 299 rating adjustments and how they affected the pricing of Italian stocks. It was determined that ratings are a better informational resource for long-term investors who want to see their investment increase than for small investors.

Li et al. (2004) studied how the Iranian stock market responded to rating adjustments. It was determined through an event study and a cross-multivariate regression test that the stock market only receives useful information from downgrades.

Objective of the study:

1. To analysis the impact of credit rating affirmation on share price in short-term.
2. To analysis the impact of credit rating upgrade on share price in short-term.

Methodology: The event research methodology is used to determine how credit rating upgrades and downgrades affect stock returns and to determine whether a company's share prices fluctuate more than anticipated before and after rating announcement.

The steps followed in event window methodology are as follows:

Defining the Event: The day of the credit rating release was chosen to conduct the event study. Only ratings downgrades and upgrades pertaining to long-term debt ratings were considered. For the study, only the ratings issued by the main three Indian credit rating agencies—ICRA Ltd., CRISIL Ltd., CARE and India rating.—were employed.

Choosing the Companies to carryout the Research: the 15 Small companies has been selected for research purpose which were listed on Indian stock exchange and their market capitalization below 5000 cr. As on 2024.

Defining the Estimation Window, Event Window and Post-Event Window:

a. Estimation window of 210 days prior to the event window was chosen in order to compute the two parameters, i.e., beta (an indicator market risk) and the Intercept.
b. Event window is of 20 days prior to the event day.
c. Post-event window is of 20 days after the event day

Analysis of data:

Finding of the study: Following data collection, an event window statistical technique is applied. The event window has a length of 61 days (30 days before the event occurs, 30 days following the event), and the estimation window has a duration of 210 Days. Several tests have been applied to the data using MS Excel, yielding the following results.

Table-1 (See in last page)

Result Analysis Credit Rating Affirmation: The findings of the current study, as presented in the above table, include the Average Abnormal Return (AAR), Cumulative Average Abnormal Return (CAAR), and the t-value for AAR. The AAR is calculated by subtracting the expected return from the actual return, resulting in the average abnormal return. The results indicate that the AAR is positive for most of the pre-event window, suggesting that these firms often experienced positive abnormal returns before the event. This trend may be attributed to potential information leaks regarding the share buyback announcement, which influenced share prices during the pre-event window. In contrast, during the post-event window companies generally exhibited mixed abnormal returns. The t-value is not significant for none of the event window.

Result Analysis for Credit Rating Announcement: The findings of the current study, as presented in the above table, include the Average Abnormal Return (AAR), Cumulative Average Abnormal Return (CAAR), and the t-value for AAR. The AAR is calculated by subtracting the expected return from the actual return, resulting in the average abnormal return. The results indicate that the AAR is negative for most of the pre-event and post event window, suggesting that these firms often experienced negative abnormal returns. The t-value is not significant for majority of event window.

Conclusion: Credit Rating Affirmation has a modest and relatively stable impact on stock prices. The market seems to anticipate the affirmation with small abnormal returns around the event window, but the reaction is statistically insignificant. Credit Rating Upgrade triggers more pronounced and statistically significant market reactions. Positive abnormal returns are observed on specific days (e.g., Day 10 and Day 18), indicating that upgrades convey meaningful new information to investors. The study conclude that credit rating affirmation and upgrade did not affect the share price significantly in short term because majority of window days had not a t-value greater than 1.96 in either way.

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Table-1: Summary of AAR, CAAR, and t-test for Credit Rating Announcements

	Credit Rating AFFIRMATION			Credit Rating UPGRADE		
	AAR	CAAR	T-Value of AAR	AAR	CAAR	T-Value of AAR
-20	0.002841	0.0028409	0.2140467	-0.00097	-0.00097	-0.136987791
-19	0.003256	0.0060967	0.4593519	-0.00922	-0.01019	-1.297201217
-18	0.010436	0.0165323	1.2456245	-0.00268	-0.01287	-0.376391614
-17	0.009296	0.0258279	1.9459961	-0.01022	-0.02309	-1.437986907
-16	-0.00597	0.0198535	1.495856	-0.01004	-0.03313	-1.412245293
-15	0.004624	0.0244778	1.8442709	-0.01111	-0.04424	-1.563696385
-14	-0.00645	0.0180279	1.3583103	-0.01623	-0.06048	-2.283741764
-13	-0.00048	0.0175475	1.3221097	-0.00062	-0.06109	-0.086974014
-12	-0.00312	0.0144236	1.0867452	0.018898	-0.0422	2.658627147
-11	0.005914	0.0203373	1.5323091	-0.00118	-0.04338	-0.166585593
-10	-0.00289	0.0174448	1.314371	0.021502	-0.02188	3.025033638
-9	0.000363	0.0178076	1.3417114	0.000236	-0.02164	0.033183376
-8	0.005715	0.023523	1.7723366	-0.00427	-0.02591	-0.600666217
-7	-0.00408	0.0194384	1.4645804	-0.0125	-0.03842	-1.758890862
-6	-0.0007	0.0187342	1.4115231	0.004269	-0.03415	0.60063628
-5	-0.00894	0.009799	0.7383053	-0.00499	-0.03914	-0.702624079
-4	-0.01554	-0.005741	-0.4325422	0.001259	-0.03788	0.177082919
-3	-0.0091	-0.014842	-1.1182987	-0.00141	-0.03929	-0.198319698
-2	0.009048	-0.005795	-0.4366133	-0.00894	-0.04823	-1.257545917
-1	-0.00704	-0.012838	-0.967309	0.004762	-0.04347	0.669972901
0	0.004114	-0.008724	-0.6573343	-0.00167	-0.04514	-0.234816339
1	0.003213	-0.005511	-0.4152463	0.008759	-0.03638	1.23224053
2	0.000299	-0.005212	-0.3926928	-0.00239	-0.03877	-0.336443697
3	0.00096	-0.004252	-0.3203862	-0.00373	-0.0425	-0.52526978
4	0.007443	0.0031908	0.2404128	-0.00261	-0.04511	-0.366554173
5	-0.00484	-0.00165	-0.1243276	0.00401	-0.0411	0.564108898
6	0.002871	0.0012212	0.0920145	-0.01201	-0.05311	-1.689792417
7	-0.00577	-0.004545	-0.3424147	0.007163	-0.04595	1.007778938
8	-0.0013	-0.005844	-0.4403022	0.001857	-0.04409	0.261200552
9	0.00467	-0.001174	-0.088478	0.004966	-0.03912	0.698708358
10	0.009894	0.00872	0.6570094	0.01148	-0.02764	1.615022284
11	-0.00199	0.0067347	0.5074269	-0.00467	-0.03232	-0.657237218
12	-0.00015	0.006589	0.4964467	-0.00716	-0.03948	-1.007318718
13	-0.00114	0.0054533	0.4108772	0.001511	-0.03796	0.212630881
14	0.007597	0.0130506	0.9832942	-0.00692	-0.04489	-0.974102309
15	0.001191	0.0142416	1.0730264	0.011557	-0.03333	1.625908317
16	0.002421	0.0166626	1.2554414	-0.00066	-0.03399	-0.092297629
17	-0.00591	0.010751	0.8100312	0.005948	-0.02804	0.836731674
18	-0.00178	0.0089703	0.6758679	0.021736	-0.0063	3.058011065
19	0.01329	0.0222605	1.6772137	0.016106	0.009802	2.265839689
20	-0.00536	0.0169039	1.2736228	0.008167	0.01797	1.149040858

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