

IMPACT OF COMPANY ANNOUNCEMENTS AND THE ROLE OF MEDIA ON PRICES OF SECURITIES QUOTED AT NATIONAL STOCK EXCHANGE IN INDIA

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ABSTRACT

Stock prices move up and down every minute due to fluctuations in supply and demand. If more people want to buy a particular stock, its market price will increase. Conversely, if more people want to sell a stock, its price will fall. One has to be smart enough to decode the news and take the position quickly in the stock. People who are adroit in this do make good short term gains even if we leave the insiders or fund houses that generally have. The impact of new information on a stock depends on how unexpected the news is. This is because the market is always building future expectations into prices. Thus, its unexpected news - and not just any news - that helps drive prices. The present study hence attempts to prove the evidence of reaction in stock price due to announcements from the company.

KEYWORDS: leadership behavior, team cohesion, success

INTRODUCTION

The last three decades of finance research have produced a large number of papers examining the effect of news announcements on financial markets. According to efficient market hypotheses, stock prices already incorporate all existing and expected public information and should only respond to new information. When there is positive news about a particular stock or company, people try to invest all their money in that particular stock or market. This leads to increase in the interest of buying the stock and vice versa. Investors consider several things before they invest their funds in any particular securities. Among them, so far the most important subject matter is return from investment in securities that partly depends on company announcements in the stock market. The present study deals with the five major company announcements such as Bonus issue, Rights issue, Splits, Dividend and Financial report

STATEMENT OF THE PROBLEM

The effect of sensitive information on market price of stock is the subject matter of the study. At this juncture, the present study captioned “Effect of Company Announcements and Role of Media on Prices of Stocks Listed at NSE” attempts to answer the following research questions that arise with reference to the selected announcement from the companies listed at National Stock Exchange.

1. Which media is mostly preferred by the investors to receive the company announcement?
2. What type of announcement do the investors prefer to gain their expected return on their investment?

OBJECTIVE

- (i) To analyze the mostly preferred media by the investors to receive the company announcement.
- (ii) To analyze the role of media in impact of company announcements on stock prices.
- (iii) To know the various opinions of investors towards the impact of company announcements on stock price.

HYPOTHESES

H₀₁ : There is no significant difference in investor’s mean ratings of five categories of the company announcements.

H₀₂ : There is no significant effect of the ‘block’ used, that is, type of media on the mean rating given to the company announcements by the investors.

METHODOLOGY

SOURCES OF DATA

The study has depended only on primary sources of data which were collected by administering a well conceived questionnaire to the sample investors.

STATISTICAL TOOLS

Relevant statistical tools such as ANOVA – Randomized Block design, Factor analysis and cluster analysis were used for the analysis and interpretation of survey data.

SAMPLING DESIGN

- | | |
|--------------------|--------------------------|
| (a) Sampling frame | : 1850 Investors |
| (b) Sampling size | : 220 Investors |
| (c) Sample method | : Simple random sampling |

RESEARCH DESIGN

The research design adopted in the present study is a “Descriptive Design” of conclusive one.

LITERATURE REVIEW

Fama, Lawrence and Jensen (1969), examined whether normally some “unusual” behavior in the rates of return on a split security in the months surrounding the split and if splits are associated with “unusual” behavior of security returns, to what extent can this be accounted for by relationships between splits and changes in other more fundamental variables.

Tetlock (2007) quantitatively measured the interactions between the media and the stock market using daily content from a popular Wall Street Journal column. He found that high media Pessimism predicts downward pressure on market prices followed by a reversion to Fundamentals, and unusually high or low pessimism predicts high market trading volume.

RESULTS AND DISCUSSION

ANOVA – RANDOMIZED BLOCK DESIGN

In the present study, the type of media through which company announcements released could influence the rating given to the five categories of company announcements by the investors. This technique helps to remove the effect of the media preferred by investors, by ‘blocking’ its effect, or treating the block separately. If the researcher does not block variable, its effect gets included with the error (residual) term. This may lead to wrong conclusions about the relationship between the independent and dependent variables.

Null Hypotheses:

H_{01} : There is no significant difference in investor’s mean ratings of five categories of the company announcements.

H_{02} : There is no significant effect of the ‘block’ used, that is, type of media on the mean rating given to the company announcements by the investors.

TABLE No. 1

TESTS OF SIGNIFICANCE FOR RATING USING RANDOMIZED BLOCK DESIGN

Dependent Variable: Expectation about the company announcements

Source	Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	37.899 ^a	17	2.229	3.333	.000
Announcement	10.538	4	2.635	3.939	.006
Media	6.209	4	1.552	2.320	.064
annou * media	11.562	9	1.285	1.920	.060
Error	54.851	82	.669		
Total	1499.000	100			
Corrected Total	92.750	99			

a. R Squared = .409 (Adjusted R Squared = .286)

Source: Primary data ;Results computed through SPSS

INFERENCE

The results computed show that the significance level of F for company announcement 0.006 is less than 0.05. Hence, *the null hypothesis (H_{01}) is rejected*. It is 0.064 for the type of media, which is greater than 0.05 and hence, *the null hypothesis (H_{02}) is accepted*.

Thus, it is concluded that there is significant difference between investor’s mean ratings of the five categories of company announcements and type of media has no significant effect on the mean rating given to the company announcements by the investors.

FACTOR ANALYSIS

The present researcher has applied the factor analysis for the type of media that the investors prefer to receive the company announcements.

Type of media that the investors prefer to receive the company announcements

The present study covers two hundred and twenty investors to ascertain the important type of media that influence the investors to receive the company announcement. For this, 14 types of media are considered for factor analysis. Mathematically, factor analysis is somewhat similar to the multiple regression analysis. Each variable is expressed as a linear combination of the underlying factors. Factor analysis calculates pairs of correlation between all variables, and the highly related variables are combined into factors.

Factor analysis involves the following decisions. (1) Is the factor analysis valid? (2) How many factors are to figure in the final solution? (3) What are the constituent variables of each factor? (4) Name the each factor.

DETAILS OF STATISTICAL CALCULATION AND DECISIONS

Testing for sampling adequacy

The appropriateness of the factor model is tested before extracting the factors. Another useful statistics is the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy. Generally, a value greater than 0.5 is desirable.

Hypothesis for testing:

H₀ : The factor analysis is not valid.

H₁ : The factor analysis is valid.

TABLE No. 2
KMO AND BARTLETT'S TEST

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.511
	Approx. Chi-Square	455.801
Bartlett's Test of Sphericity	Df	91
	Sig.	.000

Source: Primary data; Results computed through SPSS.

The significance (0.000) is less than the assumed significance value (0.05). So the null hypothesis H₀ is rejected, the alternate hypothesis H₁ is accepted, and hence the factor analysis is valid. Next, one may look at the KMO coefficient to cross check Bartlett’s test. It can be seen (0.511) is more than 0.5, so one agrees with Bartlett’s test that the factor analysis is valid.

Extraction of Factor: Principal Component Analysis (PCA)

STAGE I:

It is necessary that the scale constructed and the factors / components extracted should be able to explain the variance in the data. To analyze this variance, one has to calculate the Eigen values, which will explain the variance among the factors. A low Eigen value (less than 1) contributes very little to the explanation of variances in the set of variables being analyzed. The sum of Eigen values, as expected, is equal to the number of variables being analyzed. There are 14 variables that can be extracted. But only those factors can be extracted which have eigen value more than 1.

TABLE No. 3
TOTAL VARIANCE EXPLAINED WITH FACTOR LOADING

Variable	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.045	14.606	14.606	2.045	14.606	14.606	1.891	13.504	13.504
2	1.763	12.595	27.201	1.763	12.595	27.201	1.496	10.689	24.193
3	1.462	10.446	37.647	1.462	10.446	37.647	1.452	10.373	34.566
4	1.351	9.651	47.299	1.351	9.651	47.299	1.366	9.754	44.320
5	1.289	9.210	56.509	1.289	9.210	56.509	1.325	9.467	53.787
6	1.125	8.033	64.543	1.125	8.033	64.543	1.317	9.408	63.194
7	1.114	7.956	72.499	1.114	7.956	72.499	1.303	9.304	72.499
8	.836	5.974	78.473						
9	.724	5.170	83.643						
10	.600	4.287	87.930						
11	.520	3.712	91.642						
12	.477	3.404	95.046						
13	.425	3.034	98.080						
14	.269	1.920	100.000						

Extraction method: Principal component analysis.

Source: Primary data; Results computed through SPSS.

The higher the Eigen value of a factor, the larger is the amount of variance explained by the factor. By retaining only the variables with Eigen value greater than one, one can infer that 13.504 per cent of variance is explained by factor 1, 10.689 per cent of variance is explained by factor 2, 10.373 per cent of variance is explained by factor 3 and so on till factor 7 is explained in the table 3.

STAGE II:

In stage II of factor analysis, 'rotation of principal components is performed by varimax rotation method. After initial extraction, the plot has to be rotated (varimax method) to get a better analysis. The factor matrix gives the loading of each variable in relation to each factor.

TABLE No. 4
ROTATED COMPONENT MATRIX

Variables	Component						
	1	2	3	4	5	6	7
Share brokers	.899	.070	-.010	.000	.127	-.045	-.077
Certified Professionals	.897	-.005	.047	.058	-.047	.021	.043
Magazines	-.040	.854	.169	-.066	.058	-.149	-.072
Newspaper	.175	.759	-.234	-.064	-.066	.260	.136
Company websites	-.065	.089	.758	.040	-.110	.060	.029
Company Broacher	.099	-.089	.790	-.062	.132	-.019	.110
News channels	-.003	.029	-.082	.837	.068	-.001	-.036
financial websites	.051	-.126	.072	.789	-.139	.041	.015
SMS	-.105	-.023	.095	-.034	.876	-.013	.112
Email	.427	.059	-.127	-.048	.670	.064	-.108
Friends	-.010	.121	.210	.046	.117	.683	-.276
Family	-.021	-.076	-.109	.015	-.061	.796	.275
Own knowledge	.022	-.047	.059	-.063	.009	.120	.871
Word of mouth	-.182	.355	.268	.120	.110	-.316	.568

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization.

Source: Primary data; Results computed through SPSS.

Table 4 exhibits the rotated factor loadings for the 14 statements (variables) indicating the factors influencing investors preference for the type of media. It is clear from the table 6.9 that all the 14 statements have been reduced to seven factors, namely, F1, F2, F3, F4, F5, F6 and F7. These seven factors with suitable names are given below.

F1 – Financial Advisers , F2 – Periodicals received, F3 – Company outlets, F4 – Speedy Information, F5 – Personal Service, F6 – Friends, F7 – Knowledge with luck.

The factors and variables within those factors are presented in the following tables (7 – 13).

TABLE No. 5
FACTOR 1: FINANCIAL ADVISERS

S.No.	Variables	Factor loading	Eigen value	Percentage Variance
1	Share Brokers try to promote investor interest.	.899	1.891	13.504
2	Certified Professionals provide detailed report on any announcements.	.897		

Source: Primary data; Results computed through SPSS.

It could be seen from the above table 5 that this factor has got significant loading on two dimensions, which are Share brokers with factor loading of 0.899 and Certified Professionals with factor loading of 0.897. Hence, F1 is ranked as first important factor and is named as

Financial Advisers. The Eigen value for the above Factor 1 was 1.891, and the percentage variance was 13.504. It could be concluded that the investors receive the company announcement at right time for right investment through Share brokers and certified professionals. They are their financial planners for their investment.

TABLE No. 6
FACTOR 2: PERIODICALS AS GUIDES

S.No.	Variables	Factor loading	Eigen value	Percentage Variance
1	Many people have the habit of reading Magazines to any new information.	.854	1.496	10.689
2	News Paper gives information in a brief manner.	.759		

Source: Primary data; Results computed through SPSS.

It could be seen from the above table 6 that this factor has got significant loading on two dimensions, which are Magazines with factor loading of 0.854 and Newspaper with factor loading of 0.759. Investors have a habit of reading newspapers and magazines on a regular basis to update their current knowledge. Hence, F2 is named as **Periodicals as guides**. The Eigen value for the above Factor 2 was 1.496, and the percentage variance was 10.689. It could be concluded that the investors receive the details regarding the company announcement briefly through magazines and newspapers.

TABLE No. 7
FACTOR 3: COMPANY'S INFORMATION OUTLETS

S.No.	Variables	Factor loading	Eigen value	Percentage Variance
1	Reliable information is provided only through Company Websites.	0.758	1.452	10.373
2	Company Brouchers contain valid information.	0.790		

Source: Primary data; Results computed through SPSS.

The above table no.7 shows that this factor has got significant loading on two dimensions, which are Company websites with factor loading of 0.758 and Company Brouchers with factor loading of 0.790. To know the correct information about company announcement investors depend only on company websites and company broachers. Hence, F3 is named as **Company's information Outlets**. The Eigen value for the above Factor 3 was 1.452, and the percentage variance was 10.373.

TABLE No. 8
FACTOR 4: SPEEDY INFORMATION

S.No.	Variables	Factor loading	Eigen value	Percentage Variance
1	Announcements through News Channels are very faster comparatively	.837	1.366	9.754
2	Other financial websites also provide the related news	.789		

Source: Primary data; Results computed through SPSS.

The above table no. 8 shows that this factor has got significant loading on two dimensions, which are News channels with factor loading of 0.837 and Financial websites with factor loading of 0.789. Investors receive company announcement quickly only through News channel and financial websites. Hence, F4 is named as **Speedy Information**. The Eigen value for the above Factor 4 was 1.366, and the percentage variance was 9.754. It could be concluded that the investors could receive the company announcements very fast not only for their investment but also returns from the investment within the short duration.

TABLE No. 9
FACTOR 5: PERSONALISED SERVICE

S.No.	Variables	Factor loading	Eigen value	Percentage Variance
1	Recommendations through SMS alert are easier source of getting information.	0.876	1.325	9.467
2	Financial recommendations through Email provide more personalized service.	0.670		

Source: Primary data; Results computed through SPSS.

The above table No.9 shows that this factor has got significant loading on two dimensions, which are Short message service with factor loading of 0.876 and Electronic mail with factor loading of 0.670. Investors usually prefer personalized and speedy services like SMS and Email. Hence, F5 is named as **Personalized Service**. The Eigen value for the above Factor 5 was 1.325, and the percentage variance was 9.467. It could be concluded that the investors are more interested in personalized service to receive the company announcement because it would help them for their investment decision.

TABLE No. 10
FACTOR 6: FRIENDS AND FAMILY MEMBERS

S.No.	Variables	Factor loading	Eigen value	Percentage Variance
1	Friends inform any announcement immediately ones he gets it.	0.683	1.317	9.408
2	Information through Family members is given with true care.	0.796		

Source: Primary data; Results computed through SPSS.

It could be seen from the above table 10 that this factor has got significant loading on two dimensions, which are Friends with factor loading of 0.683 and Family with factor loading of 0.796. Hence, F6 is named as **Well Wishers**. The Eigen value for the above Factor 6 was 1.317, and the percentage variance was 9.408. It could be concluded that the investors sometimes consider the ideas or advices given by family members and friends on the company announcements before to make investment in securities.

TABLE No. 11
FACTOR 7: USE OF OWN KNOWLEDGE

S.No.	Variables	Factor loading	Eigen value	Percentage Variance
1	Investment decision by Own knowledge is best.	0.871	1.303	9.304
2	Word of mouth leads to bad investment many a time.	0.568		

Source: Primary data; Results computed through SPSS.

It could be seen from the above table 11 that this factor has got significant loading on two dimensions, which are Own knowledge of investors with factor loading of 0.871 and Word of mouth with factor loading of 0.568. Some blindly believe the luck or word of mouth of others. Hence, F7 is named as **Use of own Knowledge**. The Eigen value for the above Factor 7 was 1.303, and the percentage variance was 9.304. It could be concluded that the investors must possess their own knowledge regarding company announcements even they consider a word of mouth.

CLUSTER ANALYSIS – ANALYTICAL TOOL FOR GROUPING INVESTOR OF SHARE MARKET

The present study aims at knowing the various opinions of investors towards the impact of company announcements on stock price. Ten statements were made in order to measure the opinions of investors. The respondents have to agree or disagree on a numerical scale of 1 to 7.

The 10 statements formulated to measure the investor's opinion are given below:

- I. The Announcement from the company promotes Investor interest in investing.
- II. The News reaches the investors at the time.
- III. Only short term investors yield more return by these announcements.
- IV. The company announcements make the market more volatile.
- V. Other macroeconomic news like US bank crisis etc. affects the impact of company news.
- VI. The five categories company news adds goodwill to the company and leads growth in market
- VII. Do you agree that considering these factors in your investment decision is helpful?
- VIII. Technical/Technological knowledge up gradation like internet usage is important to receive the announcements at time.
- IX. Long term investors do not benefit from these announcements
- X. Intraday traders alone gain more return on a highly volatile market.

XI. Stage I

The coefficient column in the agglomeration schedule helps us to identify the large differences in the coefficients. The agglomeration schedule from top to bottom (stage 1 – 219) indicates the sequence in which cases get combined with others (or other clusters combine with another), until all 220 cases are combined together in one cluster at the last stage (stage 219). Therefore, stage 219 represents a 1 – cluster solution, stage 218 represents a 2 – cluster solution, and stage 217 represents a 3 – cluster solution and so on, going up from the last row to the first row. The difference between rows in a measure called coefficient (known as fusion coefficient). From the agglomeration schedule, we obtain the following table 12.

**TABLE No. 12
 AGGLOMERATION SCHEDULE**

1 - Cluster	71.054 – 59.704	= 11.35
2 - Cluster	59.704 – 52.560	= 7.144
3 - Cluster	52.560 – 50.601	= 1.959
4 - Cluster	50.601 – 50.278	= 0.323
5 - Cluster	50.278 – 50.037	= 0.247

Source: Primary data; Results computed.

The difference of (71.054 – 59.704) in the coefficient between the 1 – cluster solution (stage 219) and the 2 – cluster solution (stage 218). This is a difference of 11.35. The next difference is of (59.704 – 52.560) which is equal to 7.144 between the stage 218, the 2 – cluster solution and stage 217, the 3 – cluster solution). The next one after that is (52.560 – 50.601), only 1.959, between stage 217 and stage 216. Thereafter, the difference are smaller between subsequent rows of coefficients. A large difference in the coefficient values between any two rows indicates a solution pertaining to the number of cluster which the lower row represents. We ignore the first difference of 11.35 as it would indicate only one cluster in the data. The next largest difference is 7.144, which indicated a 2 – cluster solution. Therefore, in this case, one would choose a 2 – cluster solution.

Stage II

Once the number of clusters has been identified using hierarchical clustering, a K – means clustering is run on the data. The number of clusters identified, in the above case is 2 – clusters. The K – means (also called quick cluster) is run, because it gives us more stable clusters. The basic output of this technique is a case listing of cluster memberships (i.e., which case belongs to which of the clusters), the final cluster centers, and an ANOVA table. Of these three, the present researcher has considered the final cluster centers only because they are considered to be the solution.

TABLE No. 13

Final Cluster Centers		
Statements	Cluster	
	1	2
The Announcement from the company promotes Investor interest in investing.	5.37	5.08
The News reaches the investors at the time.	4.50	4.33
Only short term investors yield more return by these announcements.	4.27	3.75
The company announcements make the market more volatile.	3.33	6.41
Other macroeconomic news like US bank crisis etc. affects the impact of company news.	4.51	3.94
This type of company news adds goodwill to the company and leads growth in market.	4.92	4.64
Do you agree that considering these factors in your investment decision is helpful?	4.86	4.81
Technical/Technological knowledge up gradation like internet usage is important to receive the announcements at time.	5.28	6.43
Long term investors do not benefit from these announcements.	4.19	4.03
Intraday traders alone gain more return on a highly volatile market.	4.54	4.16

Source: Primary data ;Results computed through SPSS

The final cluster centers describe the mean values of variable for each of the 2 – clusters. For example, cluster 1 is described by the mean values of Investor interest = 5.37, time = 4.50, short term investors = 4.27, volatility = 3.33, macroeconomic news = 4.51, goodwill = 4.92, investment decision = 4.86, Technical up gradation = 5.28, Long term investors = 4.19 and Intraday traders = 4.54. Cluster 2 is described by mean values of Investor interest = 5.08, time = 4.33 and so on.

Cluster I:

People belonging to this cluster are, investors in share market who are neutral to the statement that only short term investors yield more return by these announcements and long term investors do not benefit from these announcements. They do not feel that these announcements make the market more volatile. They agree that the announcement from the company promotes Investor interest in investing and the News reaches the investors at the time. They agree that the other macroeconomic news like US bank crisis etc affects the impact of company news. They feel that type of company news adds goodwill to the company and leads growth in market. The investors in this cluster think that considering these factors in their investment decision is helpful in their investment planning. They just agree that intraday traders alone gain more return on a highly volatile market. Hence, this cluster of investors is named as “**Informative Investors**”.

Cluster II:

People belonging to this cluster are investors in share market who strongly believe that the company announcements make the market more volatile. They strongly insist that technical/technological knowledge up gradation like internet usage is important to receive the announcements at time. They do not agree that only short term investors yield more return by these announcements. Here in this cluster investors are neutral to point that long term investors do not benefit from these announcements and they are also neutral to the point that intraday traders alone gain more return on a highly volatile market. They agree upon the point that announcement from the company promotes Investor interest in investing and this type of company news adds goodwill to the company and leads growth in market. These investors do believe that considering these factors in their investment decision is helpful in their investment planning. Investors in this cluster find that intraday traders alone gain more return on a highly volatile market. They seem to be neutral on statement that the long term investors do not benefit from these announcements. Hence, this cluster of investors is named as “**Technical Investors**”.

SUGGESTIONS

- Factor analysis reveals that Share brokers try to promote investor interest with factor loading of 0.899, Many people have the habit of reading Magazines to any new information with factor loading of 0.854, Reliable information is provided only through Company Websites with factor loading of 0.790, Announcements through News Channels are very faster comparatively with factor loading of 0.837, Recommendations through SMS alert are easier sources of getting information with factor loading of 0.876, Information through Family members is given with true care with factor loading of 0.796 and Investment decision by Own knowledge is best for better return with factor loading of 0.871, are the statements with the higher loading factors of F1, F2, F3, F4, F5, F6 and F7 respectively.
- Short term and intraday investors can benefit on a highly volatile market.
- Age of investor and their preference for type of media are associated significantly with each other.
- Long term investor should aim at investing in companies having good earnings report.
- Media which are specific to information release are to be given more priority. Like, Share brokers, certified professionals, News papers, Company websites and brochures, News channels must be given preference in receiving company announcements.
- Overall, earnings announcement shows a good positive signal for all investors, followed by dividend and bonus announcements. Informational efficiency is a measure of the swiftness or the market's reaction to any new information. Thus, researchers or investors who have access to information more quickly can only able to use it to earn more profit.
- Informative investors feel that type of company news adds goodwill to the company and leads growth in market. The investors in this cluster think that considering these factors in their investment decision is helpful in their investment planning. They just agree that intraday traders alone gain more return on a highly volatile market.
- Technical investors agree upon the point that announcement from the company promotes Investor interest in investing and this type of company news adds goodwill to

the company and leads growth in market. They strongly insist that technical/technological knowledge up gradation like internet usage is important to receive the announcements at time.

CONCLUSION

News is an important factor that affects the share price. The company announcements considered in the present study has a serious effect on the prices of securities. The present study has brought to sharp focus that the choice of media to receive the announcements is the vital energy for the success of any investor. The suggestions offered in the study would help investors enhance their investment techniques resulting in higher return on investment. The study also offers suggestions correlating type of investor, their investment goal and preference for the company announcements. Thus, the most robust finding in the present study is that conclusive relationship exists between company announcements and prices of stocks.

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