

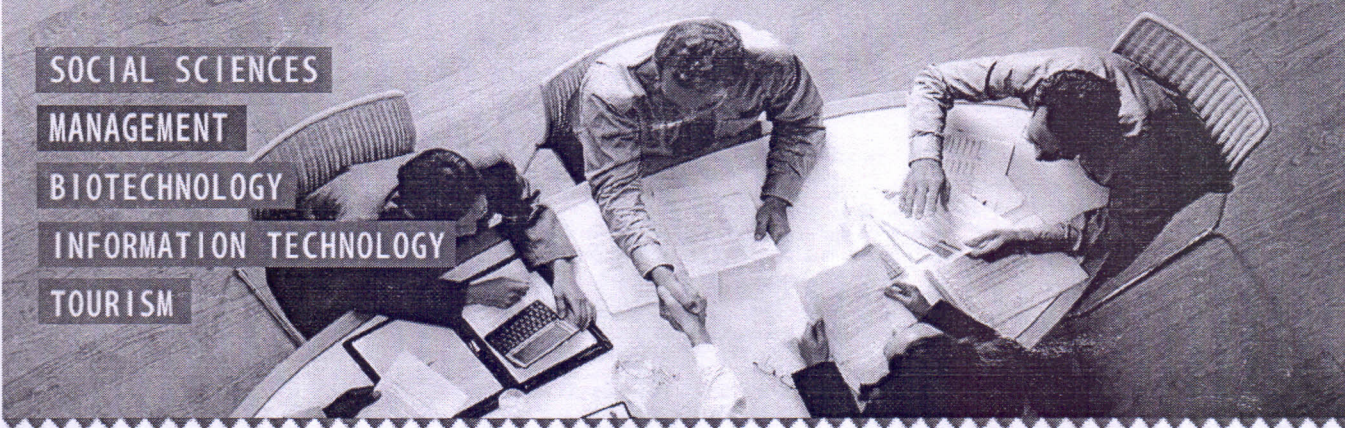
60



An International Journal Since 2000  
South Asian Journal of Socio - Political Studies



- Home
- About Us
- People Behind
- Issues
- Advertise with Us
- Subscribe Now
- Books Reviewed
- Contact Us
- Disclaimer
- Bioline of Editor



- SOCIAL SCIENCES
- MANAGEMENT
- BIOTECHNOLOGY
- INFORMATION TECHNOLOGY
- TOURISM

### WELCOME TO SOUTH ASIAN JOURNAL OF SOCIO-POLITICAL STUDIES!

An International Journal Since 2000

**Sajosps** South Asian Journal of Socio-Political Studies

16

Social Sciences Management Tourism Biotechnology IT

ISSN 0972-4613

RNI No. KERENG/2000/4721

No. of Issues per year -2  
(half yearly in June & December)

Review process: Double Blind

South Asian Journal of Socio-Political Studies(SAJOSPS) is a peer-reviewed international journal devoted to the study of Social Sciences, Management, Tourism, Biotechnology and Information Technology. It is published twice a year in the months of June and December. Our mission is to examine diverse aspects of the rapid changes taking place in the aforesaid areas of our polity and society. It also aims to promote scholarship that perceives multidimensional problems of the society and mankind in totality and to present them with sagacity, truth and vision.

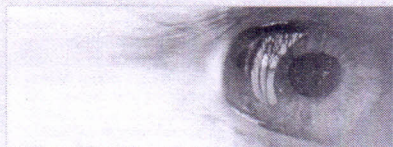
The Journal contains articles/scholarly features covering a wide spectrum and encompassing a broad canvas of socio-political-technological-managerial and hospitality issues. It will lend a new perspective and dimension, which will help to illumine hitherto unexplored areas of the subjects and make it a profound study. Moreover, it will provide a forum for the interdisciplinary study of contemporary issues which will help to encourage a closer interaction between the various branches of knowledge.

2009

#### Indexing and Abstracting

This journal is being catalogued by the US Library, of Congress (H53. S64 S66); Michigan University, USA (Hatcher Graduate -H 62.5. 15.S688); Columbia University, USA (DS.331.S 673); University of West Indies, Cavel Hill Campus Main Library; University of Pardubice, Czech Republic; Wikipaedia Free Encyclopedia and listed in Intute(MIMAS) ; The University of Manchester (M13 9 PL); SOSIG, University of Bristol, UK. Articles appearing in this journal are indexed and abstracted by International Political Sciences Abstract, Paris, GIPL, AILSG and Centre for Media and Rural Documentation (CMRD) of NIRD.

#### Aims & Scope



South Asian Journal of Socio-Political Studies (SAJOSPS) is an international journal devoted to the study of Social Sciences, Management, Tourism, Biotechnology and Information Technology. It is published twice a year in the months of June and December. Our mission is to examine diverse aspects of the rapid changes taking place in the aforesaid areas of our polity and society.

[Read More](#)

#### Guidelines For Contributors



**Mode of Submission:** Contributions should be sent in a hard copy format accompanied by a CD Version. Floppy is not accepted. A soft copy should also be sent by Email. Hard and soft copy versions are inevitable for processing. Authors are requested to prepare their soft copy versions in MS Word format. PDF versions are not accepted.

[Read More](#)

#### Messages from Dignitaries



South Asian Journal of Socio-Political Studies(SAJOSPS) is an international journal devoted to the study of Social Sciences, Management, Tourism, Biotechnology and Information Technology. It is published twice a year in the months of June and December.

[Read More](#)



## EDITOR

### Dr.M.R.BIJU

Director, Asian Institute of Development Research & Reader, P. G. and Research Department of Political Science, Sree Narayana College, Kollam-691001, University of Kerala, India.

## MANAGING EDITOR

### P.SIVADASAN

Formerly Manager, State Bank of India.

## EXECUTIVE EDITOR

### JAYA. S

## MANAGER CIRCULATION

### MADHU GOPAL

## ASSOCIATE EDITORS

### Dr. MEENU ROY

Faculty Member, Department of Political Science, Government College, Ajmer, Rajasthan.

### CHANCHAL KUMAR SHARMA

Faculty Member, Department of Political Science, Maharaja Agrasen P.G. College, Jagadhri, Haryana

### Dr. ANAND SINGH

Faculty, Institute of Management Sciences, University of Lucknow

## SECTION EDITOR (IT)

### V. MANOJ

Chairman, Kerala Computer Saksharatha Mission, Kochi

## ASSISTANT EDITORS

### Dr. JOGENDRA KUMAR DAS

Faculty in Political Science, D.K College, MIRZA, Kamrup, Assam

## DISTINGUISHED PANEL OF COLUMNISTS

### Shri.KULDIP NAYAR

Renowned Journalist and Member, Rajya Sabha

### Dr.ASGHAR ALI ENGINEER

Director, Centre for Study of Society and Secularism, Mumbai.

### Col. R. HARIHARAN (Retd.)

Renowned Intelligence and Security Analyst

### Shri.K. T. RAJAGOPALAN

Formerly General Manager, State Bank of Saurashtra

## BUREAUS

### USA

SHERIN ABDUL MAJEED Radiance of the Seas, Royal Caribbean International, Caribbean Way, MIAMI, Florida 33132-2096, email:sherin\_am@rediffmail.com

### UAE

J.B.BHASKAR, P.B.No.30, Sharjah, E-mail:-jbbhaskar@yahoo.com

### KENYA

Dr.EDWARDKITSINGHEI, Box 122, LITENIN, Kenya.

### U.K.

ANWAR SALIM 118 Parsons Mead, West Croydon, Surrey, CRO 3SL, London, U.K, Ph: 0044 208 6861383

### KOCHI

Y.KRISHNA KUMAR Precise Copy Centre, Opp. Vidya Nikethan College, Providence Road, Kutchery pady, Kochi-682018 Ph:0484-390639, Mobile: 98471-19031 email: nipmcochin@hclinfinet.com

### BANGALORE

P.RAVEENDRAN Advocate, Flat No. 108, Saraswathy Nivas, No.5, MainChannel Road, Ulsoor, Bangalore-8 Ph: 91-80-5540717, 5340113(R) Telefax: 91-80-5540717

Cover & Layout: Sudheesh.M.Vijayan

## Editorial Advisory Board

Professor Dr. N. R. MADHAVA MENON

Chairman

### Dr. BHIKHU PAREKH,

Professor of Political Theory, Department of Politics, The University of Hull, U.K.

### Dr. DEAN E.Mc HENRY Jr.

Professor & Associate Provost, Claremont Graduate University, California, USA.

Dr. M.V.NAIDU, Professor of Political Science, Brandon University, Manitoba, Canada.

Dr. JOHN HICKMAN, Associate Professor of Government, Evans School of Humanities and Social Sciences, Department of Government and International Studies, Berry College, Georgia, USA.

Dr. JAMAL KHAN, Professor, Dept. of Management Studies, Faculty of Social Sciences, The University of The West Indies, Barbados.

Dr. MUHAMMAD R.AZMI, Formerly Director, ASC, QAU, Islamabad. [Homebush, NSW 2140, Australia].

Dr. RASUL BAKHSH RAIS, Director, Area Study Centre, Quaid-i-Azam University, Islamabad.

Dr. JAN CAPEK, Professor, Faculty of Economics and Public Admt. University of Pardubice, Czech Republic.

Dr. ILLONA OBRSALOVA, Professor, Faculty of Economics and Management, University of Pardubice, Czech Republic.

### Dr. L.S.RATHORE

Vice-Chancellor, JNV University, Jodhpur.

Dr. B.S.BHARGAVA, Chairman, Asian Institute of Development Research (AIDR)

### Dr. V.T.PATIL

Formerly Vice-Chancellor, Pondicherry University, Pondicherry.

Dr. PRAVIN J. PATEL, Vice-Chancellor, Sardar Patel University, Gujarat.

Dr. K.L. KAMAL, Vice Chancellor, University of Rajasthan, Jaipur.

### Dr. K.K.N. KURUP

Formerly Vice-Chancellor, University of Calicut. Dr. GOPAL P. AGARWAL, Professor and Head, Dept. of Bio-Chemical Engg. and Bio-Technology, IIT, Delhi.

Dr. T.R. SREE KRISHNAN, Professor, Dept. of Bio-Chemical Engg. and Bio-Technology, IIT, Delhi.

Dr. T.M.RADHAKRISHNAN, Professor of Biochemistry, Department of Biotechnology, Andhra University, Visakhapatnam

Dr. AZHAR KAZMI, Professor and Dean, Faculty of Management Studies and Research, Aligarh Muslim University.

Dr. MANSOOR ALI, Professor and Dean, Management & Research, Integral University, Lucknow

Dr. S.K. SINGH, Professor & Head, Centre for Panchayati Raj, National Institute of Rural Development, Hyderabad

Dr. S.R. MAHESWARI, Formerly Professor of Political Science and Public Administration, IIPA, New Delhi.

Dr. L.R. KULKSHRESTHA, Professor and Head, Formerly Dean, Faculty of Management and Economics, Dayal Bagh Educational Institute, Agra

Dr. C.A. PERUMAL, Professor Emeritus, Department of Politics and Public Administration, University of Madras.

Dr. THOMAS PANTHAM, Professor of Political Science, MS University of Baroda.

### Dr. GEORGE MATHEW,

Director, Institute of Social Sciences, New Delhi.

Dr. ASOK KUMAR MUKHOPADHYAY, Professor of Political Science, University of Calcutta.

Dr. SOMESHKUMAR SHUKLA, Professor, Department of Commerce, Lucknow University

Dr. SALEEM KIDWAI, Professor, Center for American Studies, JNU, New Delhi.

Dr. P.D. SHARMA, Professor, Department of Political Science, University of Kurukshetra

Dr. P. PUSHPANGADAN, Formerly Director, National Botanical Research Institute, Lucknow.

Dr. RAMESH K. ARORA, Formerly Professor and Dean of Public Administration, University of Rajasthan.

Dr. UMESH C.VASHISHTHA, Professor and Head, Department of Education, University of Lucknow

Dr. I.A. KHAN, Formerly Chairman, Department of Computer Science, AMU, Aligarh.

R.P. LALAJI, Chairman, Softex Group of Companies, Technopark, Trivandrum.

Dr. M. SARGADHARAN, Professor and Head, Dept. of Commerce, University of Kerala.

Dr. S. BABU SUNDAR, Professor, School of Computer Studies, Cochin University of Science and Technology.

Dr. BALARAM BHATTACHARYYA, Department of Computer & System Sciences, Visva-Bharati University Santi Niketan, West Bengal

Dr. DILIP MOHITE, Professor and Head, Dept. of Political Science, MS University of Baroda, Vadodara.

Dr. PREDEEP. P, Professor of Physics & Head Department of Science and Humanities, NIT, Calicut

Dr. G. PALANITHURALI, Professor and Head, Dept. of Political Science & Development Administration, The Gandhigram Rural Institute, Dindugal, Tamil Nadu.

Dr. N. K. BHASKARAN, Formerly Professor and Head of Political Science, University of Kerala.

Dr. B. REHMATHULLA, Professor of Political Science, Aligarh Muslim University.

Dr. G. GOPAKUMAR, Professor & Head, Dept. of Political Science, University of Kerala.

Dr. JAGDEEP KAUR, Chairperson, Dept. of Biotechnology, Panjab University, Chandigarh.

Dr. KUNTHALA JAYARAMAN, Professor and Head, Dept. of Bio-Technology, Anna University, Chennai.

Dr. A. THULASEDHARAN, Deputy Director (Bio-Technology), Rubber Research Institute, Govt. of India, Kottayam.

Dr. M. UMAPATHY, Professor of Political Science, University of Mysore.

Dr. NINAN KOSHY, Formerly Visiting Fellow, Human Rights Programme, Harvard Law School, USA.

Dr. JACOB JOHN KATTAKAYAM, Professor of Sociology & Director ASC, University of Kerala.

Dr. MANU BHASKAR, Professor of Sociology, University of Kerala.

Dr. E. A. NARAYANA, Professor & Head, Department of Politics & Public Admn., Andhra University.

Dr. ANUPAMA SAXENA Head, Department of Political Science, Guru Ghasidas University, Bilaspur, Chhattisgarh

Dr. N.S. GEHLOT, Professor, Department of Political Science, MDS University, Ajmer.

Dr. N.K. JHA, Dean, Faculty of Social Sciences Pondicherry University.

Dr. HERBANS PATEL, Formerly Professor & Head, Dept. of Political Science, Sardar Patel University, Gujarat.

Dr. P.C.MATHUR, President, Indian Network for Rajasthan Studies, Jaipur.

## MAILING ADDRESS

All Correspondence should be addressed to:

SAJOSPS, JAYA'S NEST, M.G. ROAD, ADOOR, KERALA, INDIA, PIN-691 523

E-mail: [mrbijueditor@yahoo.com](mailto:mrbijueditor@yahoo.com)

Phone: Editor : + 91 474-2765171 (R), +91 9847432062, + 91 9495934569 (Cell)  
+ 91 4734-229269 (Editorial Office), Helpline: + 91 9447534569 (24 Hrs.)

Website: [www.sajospsindia.com](http://www.sajospsindia.com)

# Testing the Efficiency of Indian Stock Market with Respect to Right Issue Announcement – A Study with Special Reference to Information Technology Companies.

M.RAJA, FACULTY, FINANCE AREA, KARUNYA DEEMED UNIVERSITY, COIMBATORE, TAMIL NADU

Dr.J.CLEMENT SUDHAHAR, ASSISTANT PROFESSOR, SCHOOL OF MANAGEMENT STUDIES, KARUNYA DEEMED UNIVERSITY, COIMBATORE, TAMIL NADU

Dr.M.SELVAM, READER & HEAD, DEPARTMENT OF COMMERCE & FINANCIAL SERVICES, BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI, TAMIL NADU

It is universally accepted fact that the financial system and the capital market in particular, act as the barometer of the health of the economy. The changes in the economy are directly reflected in the capital market. The need for a strong financial system, Capital market would act as a conduit for channeling the savings of the surplus economic units in the most productive areas of funds contemplated by the savings deficit economic units. It would not be an exaggeration to say that of all the segments of the financial system, the capital markets have the most crucial role to play in the process of capital formation. The efficiency with which the process of capital formation is carried out depends on the efficiency of the capital markets and the financial institutions. All the developed economies of the world achieved a high level of growth in capital formation mainly on account of the efficient function of their capital market.

**Efficient Market Hypothesis (EMH):** In 1970, Fama developed his ideas of efficient markets and divided the market into three different levels of efficiency based on the information set (Fama, 1970). They are a) Weak Form Market Efficiency, b) Semi-Strong Form Market Efficiency and c) Strong Form Market Efficiency

**Weak Form Market Efficiency:** In the weak form, stock prices reflect all the information in the past series of stock prices. In this level, prices follow a random walk and it is impossible to gain superior returns by looking for patterns in historical stock prices (Brealey & Myers, 2000).

**Semi – Strong – Form Market Efficiency:** The semi-strong form of efficiency demonstrate that stock prices reflect and adjust to all published information and that it is unfeasible to receive higher returns by studying published data such as newspapers and annual accounts (Claesson, 1987).

**STRONG – Form Market Efficiency:** In the strong level stock prices reflect all available information and in this case it is impossible to find superior information, which is why investors

cannot beat the market (Brealey & Myers, 2000). An efficient market as a market in which price fully reflect all information. This means that no possibility exists of making sustainable excess returns and the prices follow a random walk. The capital market acts as an intermediary of capital distribution from savers to investors through the mechanism price. A capital market is said to be efficient with respect to corporate event announcement (stock split, buyback, right issue, bonus announcement, mergers & acquisitions and dividend announcement etc) contained information's and its disseminations. How quickly and correctly the security prices reflect these event contained information's show the efficiency of stock market. Present is an attempt to test the efficiency of Indian stock market with respect to right issue announcement by IT companies. Right issues seem to be a purely cosmetic event. In India right issue are associated with abnormal returns on both the announcement day and post right issue announcement days. The present study found the evidence that the Indian stock market is not perfectly in the semi-strong form EMH, which can be exploited by the investors to make abnormal returns.

**Key words:** Market Reaction/Stock Price Reaction, Abnormal Returns, Announcement Period, Efficient Market, Right Issue announcement.

tors cannot beat the market (Brealey & Myers, 2000).

**Review of literature:** In the developed markets, many studies have been conducted to test the efficiency of capital markets with respect to corporate event announcements, especially in the United States. In India only very few studies have been conducted. Some of the select studies relevant for the present study are reviewed. **Beaver (1968)** examined the reaction of the Trading Volume Activity (TVA) and Security Return Variability (SRV) to annual earnings announcement with

a sample of 143 New York Stock Exchange (NYSE) firms, The study entitled "Random Walks in Stock Market Prices" by **Eugene F.Fama (1995)**, According to the study "The pricing of underwriting risk in relation to Australian rights issues" by **John C.Handley (1995)**, A study entitled "Equity rights issues; signaling vs issue price irrelevance hypothesis" by **Nickolaos V. Tsangarakis (1996)**, **Srinivasan.R (1997)** in his study entitled "Security prices Behaviour Associated with Right issue – Related Events", **Elroy Dimson and Massoud Mussavian(1998)** in his study entitled "A brief history of market efficiency", **Seth Armitage (1998)** in his study entitled "Seasoned equity offers and rights issues: a review of the evidence", An attempt was made by **Kun shin Im, Kevin E.Dow and Varun Grover (2001)** in his study entitled " Research Report: A Reexamination of IT Investment and the Market Value of the Firm – An event study methodology", A study on "Efficiency of the Indian Capital market" by **Vaidyanathan.R and Kanitikumar Gali (2004)** tested the Weak form of efficiency of the Indian capital market, According to a study "Stock price reaction to quarterly earnings: A study of the Indian Market" by **Mallikarjunappa. T**, In a study entitled "The benefits and costs of deeply – discounted rights issues – practitioners' viewpoint" by **Bruce Burton, Christine Hellar and David Power (2004)**, **Mahdi M.Hadi (2006)** in his study entitled "Review of capital market efficiency - some evidence from Jordanian market" discussed the purpose of accounting research. All the above studies are attempted to test the capital market efficiency with various corporate event announcements. In India studies on testing the semi-strong efficiency of capital market are few. These studies use CAR (Cumulative Abnormal Return) Model. Only very few studies have used the SRV (Security Return Variability) model. Most of the studies observed that the reaction in security prices took place prior to announcement of events. In some cases, reaction took place after announcement of events. An

attempt is made in this study to test information content of right issue announcement taking the models already used in the above studies.

**Statement of the problem:** Capital market, being a vital institution that facilitates economic development, so many parties are interested in knowing the efficiency of the capital market. The information content of events and its dissemination determine the efficiency of the capital market. That is how quickly and correctly the security prices reflect these information show the efficiency of the capital market. In the developed countries lot of studies have been conducted to test the efficiency of the capital market with respect to information content of right issue announcements. Whereas in India very few studies have been conducted to test the efficiency of the capital market with respect to right issue announcements even after these studies have been conducted with different industries with different periods. Hence the present study is an attempt to test the efficiency of the Indian capital market with respect to information content of right issue announcements on IT (Information Technology) companies.

**Objectives of the study:** The objectives of the present study are as follows:

- 1) To examine the information content of the right issue announcements made by the Information Technology companies
- 2) To test the speed with which the right issue announcement information's are impounded in the share prices of IT (Information Technology) companies
- 3) To suggest investment strategies for the investors, fund managers, and analysts.

**Hypotheses of the study:** The following hypotheses are to be tested in this study.

1. The right issue announcement contained information's are not relevant for valuating the security prices of IT companies.
2. Announcement of right issue has not significantly influence the share prices of IT companies.
3. The Indian capital market is informationally not efficient where the right issue announcement contained information's are not impounded instantaneously and rightly in the stock prices of IT (Information Technology) companies.

**Period of the study:** The present study tests the informational efficiency of the Indian Capital Market in the Semi- Strong Form of Efficient Market Hypothesis (EMH). The study covers seven financial years ranging from 2000 to 2006. The study is restricted to only right issue announcement.

**Sample selection:** The study intends to

cover all the IT companies listed in Bombay Stock Exchange (BSE). Out of all the companies brought under Information Technology Sector listed in the BSE as on 30 December 2006 (as per the Prowess database), only 43 companies which satisfy the following criteria were selected.

- i. The companies, which find a place in the **List A and B1** of the Bombay Stock Exchange (BSE), are selected.
- ii. Availability of daily share price quotations; and
- iii. Availability of the dates of announcement of right issue.

**Sources of data:** The information regarding adjusted share price, right issue information, dates of right issue announcements, and values of BSE 500 were obtained from "PROWESS" corporate database published by CMIE. Other relevant information is also obtained from the NSE website (<http://www.nseindia.com/>), books, and journals. The study used daily price quotations adjusted for right issue announcement.

**Tools used for analysis:** The information content of right issue announcement was tested with the help of following tools.

**A. Daily returns:** The daily returns were calculated for both individual securities as well as Market Index using the following equation

$$R_{i,t} = \frac{P_t - P_{t-1}}{P_{t-1}} \times 100 \quad (1.0)$$

Where,  $R_{i,t}$  = Returns on Security  $i$  on time  $t$   
 $P_t$  = Price of the security at time  $t$   
 $P_{t-1}$  = Price of the security at time  $t-1$

**B. Security returns variability:** Relevance of corporate event information for valuing the securities are tested using the Security Returns Variability (SRV) model symbolically, the model is

$$SRV_{i,t} = \frac{AR_{i,t}^2}{V(AR)} \quad (1.1)$$

Where,  $SRV_{i,t}$  = Security Returns Variability of security  $i$  in time  $t$   
 $AR_{i,t}$  = Abnormal returns on security  $i$  on day  $t$   
 $V(AR)$  = Variance of Abnormal Returns during the announcement period

Abnormal Returns (AR) under market-adjusted abnormal returns is calculated using the equation as below;

$$AR_{i,t} = R_{i,t} - R_{m,t} \quad (1.2)$$

Where,  
 $AR_{i,t}$  = Abnormal returns on security  $i$  at time  $t$   
 $R_{i,t}$  = Actual returns on security  $i$  at time  $t$   
 $R_{m,t}$  = Actual returns on market index, which is proxied by BSE, at time  $t$

Thus daily actual returns over the announcement period (31 days) were adjusted against their corresponding market returns. **Average security returns variability (ASRV):** The  $SRV_{i,t}$  so calculated for all the right issue announcement are averaged to find the Average Security Returns Variability (ASRV) by using the following equation.

$$ASRV_i = SRV_{i,t} \times (1/n) \quad (1.3)$$

Where,  $ASRV_i$  = Average Security Returns Variability at time  
 $SRV_{i,t}$  = Security Returns Variability of security at time  $t$   
 $n$  = Number of right issue in the sample

**C. Average abnormal returns:** The significance of reaction of security price to corporate event announcement are tested through Average Abnormal Returns (AAR). It is calculated by the equation given below:

$$AAR_t = \frac{1}{n} \sum_{i=1}^n AR_{i,t} \quad (1.5)$$

Where,  $AAR_t$  = Average Abnormal Returns on day  $t$   
 $AR_{i,t}$  = Abnormal Returns on security  $i$  at time  $t$  which is calculated by using the equation (1.2)

**Cumulative average abnormal returns (CAAR):** The behaviour of security prices to right issue announcement is tested using Cumulative Average Abnormal Returns (CAAR). The CAR is calculated as:

$$CAAR_k = \sum_{t=1}^k AAR_t \quad (1.7)$$

Where,  $CAAR_k$  = Cumulative Average Abnormal Returns for the  $k$ th period.

Hereafter, it is referred to as CAR,  $AAR_t$  = Average Abnormal Returns of sample right issue at time  $t$  which is calculated by using the equation (1.5)

#### E. T-Test

i). The significance of reaction in security prices ( $ASRV_i$ ) is tested by using the T-statistics as follows:

$$t_{stat} = (ASRV - 1) \times \sqrt{n} / s \quad (1.4)$$

Where,  $n$  is the number of right issue in the sample and  $s$  is the Standard Deviation of abnormal returns.

ii). The significance of the  $AAR_t$  is tested using the t-test as follows:

$$t_{stat} = AAR_t \times \sqrt{n} / s \quad (1.6)$$

Where,  $AAR_t$  is the Average Abnormal Returns on time  $t$ ,  $n$  is the number of right issue in sample and  $s$  is the Standard

Deviation Limitati this study The follow the study a) The s nolog nounc ment 2006. b) The panie c) As t ary d tions, ing e Results A. Analy ity for ri The ing to th the Table the ASRV

Table-1: A variabilitt announce

z
-15
-14
-13
-12
-11
-10
-9
-8
-7
-6
-5
-4
-3
-2
-1
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

Source: Co porate Dat \*1% \*\*

Deviation of Average Abnormal Returns.

**Limitation of the study:** While carrying out this study, the researchers have learnt a lot. The following are some of the limitations of the study.

- The study is limited to Information Technology (IT) companies which have announced the sample event announcements during the study period 2000 - 2006.
- The study is confined to only listed companies on BSE
- As the study is based mainly on secondary data, it is beset with certain limitations, which are bound to arise while dealing exclusively with secondary data.

### Results and discussions

#### A. Analysis of security returns variability for right issue announcements

The result of ASRV and t-state pertaining to the right announcement is shown in the **Table-1**. It is clear from the analysis that the ASRV on day-1 was 1.95; this was the

highest value of ASRV during the 31 days of right issue announcement. The value of ASRV exceeded one in many of the days during the right issue announcement period. In the announcement period, the ASRV are significant at 10 percent level on day -8, -4, -2, 0, 1, 7, 8, 9 and day 14. Further, it was significant at 5 percent and 1 percent level on day -1, -9, -5, 11, 12 and day 13 respectively. During the post announcement period the ASRV significant at 10 percent level on day 9, 14, where as it was significant at 5 percent on day 11 and day 12. It is interesting to note that ASRV is significant at 1 percent level on day 13 only during the post announcement period. When compared to reaction during (day -1 to day -15) pre announcement (right issues) period, the post announcement period has wider reaction in the prices of IT companies. The day 1, 2, 5, 6, 7, 8 and 15 the security prices gained the value above one. The values of ASRV for these days were 1.21, 1.13, 1.01, 1.12, 1.40 and 1.16 respectively. But sharp reactions took

place on day 1, 2 and 8 with ASRV value of 1.21, 1.13 and 1.40 respectively. Further the reaction took place around the announcement of right issue. Hence, it is infer that the right announcement contained information's were relevant for valuation the security prices of IT companies. According to this study, it is suggested to the investor that when the company come up with right issue announcement, the investor may wait for some times to gain from the right issue announcement.

This is clearly understood from the **Figure 1** that there has been reaction during pre announcement period but sharp reaction was noticed on days 1, 2, 8. From this, it is clear that the security price reaction was took place around the announcement of right issue. However, the sharp reaction on days immediately following the announcement day (day 0) showed that the market has well received the right issue announcement information. Therefore, right issue is relevant for valuing the securities.

The average values of ASRV are given in **Table-1.1**. It is clearly understood from the above table that the average value of ARSV during the period of 31 days was 1.02. During the period of 15 days prior to the announcement (from day-15 to day -1), the average ASRV was 1.07. Further, the average ASRV during post announcement period (day +1 to day+15) was 0.98 while the value of ASRV for 7 days of period (day -3 to day +3), was 1.19. This is the highest average value during the 31 days surrounding the announcement of right issue. At the same time, the average value of ASRV for 15 days (day-7 to day +7) was 1.08 comparatively which is lower than of 7 days average. From the above discussion, one could easily conclude that there was reaction for a few days surrounding the day of announcement of right issue (day 0). Hence the hypothesis one entitled "**The right issue announcement contained information are not relevant for valuating the security prices of IT companies**" is rejected

The following are the outcome of foregoing discussion.

- The right issue announcement contained information's are useful for valuing the securities of IT companies.
- IT companies stocks are reacted heavily only during post right issue announcement (day 1 to day 15). It indicates the fact that Indian stock market has well received the right issue announcement information after its announcement.

#### B. Analysis of abnormal return for right issue announcements

In the last section, Security Return Variability (SRV) model is used to find out whether

Table-1: Average security returns variability (ASRV) for right issue announcement

Z	ASRV	t - value
-15	1.26	0.81
-14	1.17	0.38
-13	1.22	0.46
-12	1.26	0.93
-11	0.79	-0.68
-10	0.77	-1.04
-9	0.54	-4.63*
-8	1.58	1.36 <sup>o</sup>
-7	1.04	0.17
-6	0.91	-0.33
-5	0.41	-4.74*
-4	1.48	1.42 <sup>o</sup>
-3	0.85	-0.72
-2	0.76	-1.45 <sup>o</sup>
-1	1.95	1.95**
0	1.50	1.44 <sup>o</sup>
1	1.21	1.39 <sup>o</sup>
2	1.13	0.48
3	0.93	0.38
4	0.79	0.72
5	1.10	0.34
6	1.01	0.06
7	1.12	1.28 <sup>o</sup>
8	1.40	1.38 <sup>o</sup>
9	0.74	-1.52 <sup>o</sup>
10	1.03	0.11
11	0.68	-2.01*
12	0.54	-2.26*
13	0.56	-2.68*
14	0.70	-1.62 <sup>o</sup>
15	1.16	0.40

Source: Computed from Prowess Corporate Database  
\* -1% \*\* -5% @ -10%

Table-2: Average abnormal return and t-value of stock prices for right issue announcement of IT companies

Day	AAR	T - value
-15	1.56	1.23
-14	0.34	0.25
-13	0.46	0.37
-12	1.17	1.89**
-11	0.49	0.73
-10	0.70	0.86
-9	0.90	1.46 <sup>o</sup>
-8	0.53	0.40
-7	0.87	0.55
-6	1.30	1.85**
-5	2.05	2.39*
-4	1.07	1.99**
-3	1.09	1.62 <sup>o</sup>
-2	1.14	1.62 <sup>o</sup>
-1	1.25	1.67**
0	0.35	0.20
1	1.35	1.19
2	2.12	1.91**
3	1.19	1.62 <sup>o</sup>
4	1.62	0.89
5	0.98	1.10
6	0.51	0.33
7	0.44	0.30
8	0.13	0.74
9	0.10	0.17
10	0.35	0.74
11	0.44	0.95
12	0.09	0.79
13	0.05	0.08
14	0.13	0.74
15	0.02	0.05

Source: Computed from "PROWESS" a corporate database  
\* -1% \*\* -5% @ -10%

Table-3: Result of cumulative average abnormal returns for right issue announcement

Day	CAAR
-15	1.56
-14	1.9
-13	2.36
-12	3.53
-11	4.02
-10	4.72
-9	5.62
-8	6.15
-7	7.02
-6	8.32
-5	10.37
-4	11.44
-3	12.53
-2	13.67
-1	14.92
0	15.27
1	16.62
2	18.74
3	19.93
4	21.55
5	22.53
6	23.04
7	23.48
8	23.61
9	23.71
10	24.06
11	24.5
12	24.59
13	24.64
14	24.77
15	24.79

Source: Computed from PROWESS" a corporate database

the right issue announcement information is useful or not for valuing security prices of sample IT companies. The analysis in the last section shows that the right issue announcement informations are relevant for valuing the securities of IT companies. Further, it is an important to analyze whether the right issue announcement information has made any significant reactions in the security prices or not. In order to study the significant reaction of security price to right issue announcement, the Average Abnormal Returns (AAR) and Cumulative Average Abnormal Returns (CAAR) were calculated for right issue announcement.

The result of average abnormal return for right issue exhibits in **Table-2**. It is clear that there has been the positive abnormal return in many days during the right issue announcement. The value of AAR were significant at 5 percent level on days -12, -6, -4, -1 and +2, whereas it was significant at 10 percent level on days -9, -3, -2 and 3. Further it was significant at 1 percent level only

Table-1.1: Average value of ASRV for right issue announcement

PERIOD	ASRV
FROM DAY -15 TO DAY +15	1.02
FROM DAY -15 TO DAY -1	1.07
FROM DAY 0 TO DAY +15	0.98
FORM DAY -3 TO DAY +3	1.19
FROM DAY -7 TO DAY +7	1.08

Source: Computed from Table-1

Table: 2.1: Average value of abnormal return of stock prices for Right Issue announcement

PERIOD	AAR
FROM DAY -15 TO DAY +15	0.80
FROM DAY -15 TO DAY -1	0.99
FROM DAY 0 TO DAY +15	0.62
FORM DAY -3 TO DAY +3	1.21
FROM DAY -7 TO DAY +7	1.16

Source: Computed from Table-2

Table: 3.1: Average value of cumulative average abnormal returns for right issue announcement

Period	ARR
From Day -15 To Day +15	14.97
From Day -15 To Day -1	7.21
From Day 0 To Day +15	22.24
From Day -3 To Day +3	15.95
From Day -7 To Day +7	15.96

Source: Computed from Table-3

on day -5. The value of abnormal return in the pre announcement period ranged from 0.34 to 2.05. The highest positive abnormal return was recorded on day -5 followed by day -15, -1, -12, -2, -3 and day -4. The values of AAR on these days are 2.05, 1.56, 1.25, 1.17, 1.14, 1.09 and 1.07 respectively. The lowest abnormal was recorded on day -14, -

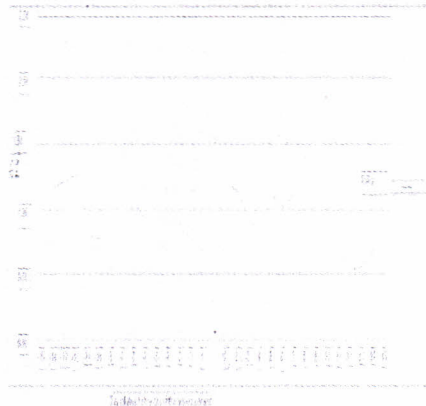


Figure-1- Average security returns variability (ASRV) for right issue announcement

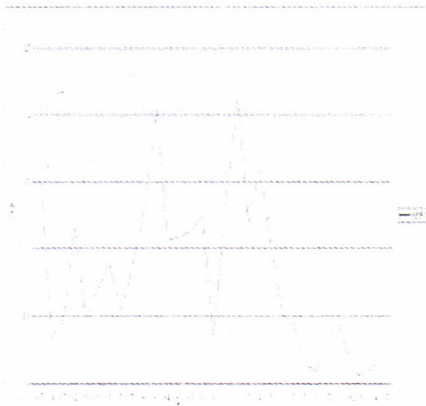


Figure: 2 – Average abnormal return right issue announcement

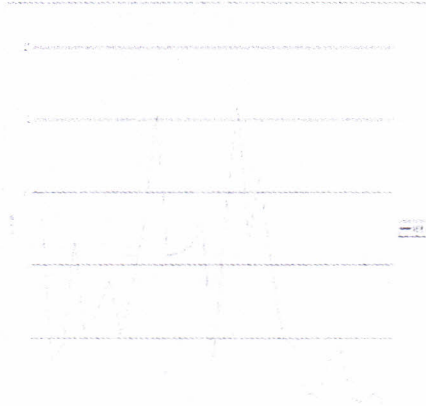


Figure: 3: Cumulative average abnormal return of right issue announcement

13, -11, -8 and -10 with AAR value of 0.34, 0.46, 0.49, 0.53 and 0.70 respectively. During post announcement period, the value of abnormal return ranged from 0.02 to 2.12. The highest significant abnormal return was recorded on day 2 followed by day 4, 1 and day 3 with AAR value of 2.12, 1.62, 1.35 and

1.19. While the lowest abnormal return was recorded on day 15, 13, 12, 9 and day 8 with AAR value of 0.02, 0.05, 0.09, 0.10 and 0.13. It is clearly inferred from the above analysis that the right issue announcement has yielded the significant abnormal return in the security prices of sample IT companies. Hence the hypothesis second entitled "Right Issue Announcement has not significantly influence the security prices of IT companies" is rejected.

The result of AAR for right issue announcement was graphically presented in **Figure -2** this is understood from the above result that there has been reaction in the security prices during pre announcement period, but the sharp reaction was took place on day 1 and 2. Though there was a sharp reaction in the day 1 and 2, right issue announcement has significantly influenced the security prices of IT companies in many days during the pre announcement period also. It shows the fact that the market is well received the right issue announcement information before it is announced.

The analysis of average of abnormal return for right issue announcement is given in **Table-2.1** It is clearly understood from the above analysis that the highest average of abnormal return of 1.21 during right issue announcement was recorded on 7 day period (from day -3 to day +3). While the lowest average of AAR (0.62) during the announcement period was recorded on 16 days period (from day 0 to day +15). The average value of AAR during the 31 days around the announcement period (from day -15 to day +15) was 0.80. During the pre-announcement period (from day -15 to day -1) the average of AAR was 0.99. It is understood from the above analysis that right issue announcement information was well received by the IT companies in many days during the announcement period. Further, it is clear that the right issue announcement has significantly influenced the security prices of sample IT companies.

#### (C) ANALYSIS of cumulative average abnormal return for right issue announcement

Cumulative Average Abnormal Return for right issue Announcement is given in **Table 3**. It is observed that the value of CAAR of IT stocks has steadily increased with minor fluctuation during the pre announcement period. On the day of announcement (day 0), the CAAR was 15.27. It is noted that the value of CAAR ranged from 1.56 to 14.92 during the pre announcement period. The highest value of CAAR during this period was recorded on day -1 followed by day -2, -3, -4, and -5 with value of 14.92, 13.67, 12.53, 11.44 and 10.37. But at the same time the lowest value of CAAR during this period was recorded on day -15

with CAR value of 1.56. It is significant that the value of CAAR during the post announcement period ranged from 16.62 to 24.79. The CAAR (cumulative average abnormal return) on the last day (day 15) in the announcement period was at 24.79. The possibility of earning excess return during the post announcement period did not occur because the market was not able to capture, fully, the information contained in the right issue announcement before its announcement.

The curve of cumulative average abnormal return for right issue announcement is given in **Figure-3**. It is clear from the above figure that right issue announcement information are well absorbed by the market. The level of absorption was less in post announcement period than the pre announcement period. It reveals the fact that the market has failed to receive the right issue announcement information before its announcement.

The average of cumulative average abnormal return (CAAR) for right issue announcement is shown in **Table-3.1**. The average value of CAAR during 31 days (from day -15 to day +15) surrounding the announcement of right issue was 14.97, while the average of CAAR during pre announcement period (from day -1 to day -15) was 7.21 which is the lowest average of CAAR during the study period. The highest average of CAAR during the announcement period was 22.24 at 16 days period (from day 0 to day +15). When compare the value of pre and post announcement, post announcement average (22.24) was higher than the pre announcement (7.21). During the 7 days period (from day -3 to day +3) the average value of CAAR was 15.95. It is clear from the above analysis that, compare with pre announcement period, market was well received the buyback announcement information for revising the security prices of sample IT companies during post announcement period. It is concluded from the above analysis that the results of cumulative average abnormal returns show that the Indian stock market uses the right issue announcements contained information for valuation of securities and the market was efficient in impounding the right issue announcements information. Hence the hypothesis three, **"The Indian stock market is informationally not efficient where the right issue announcement contained information's are not impounded instantaneously and rightly in the stock prices of IT companies"** is rejected.

**Suggestions of the study:** On the basis of the findings of the study, the important suggestions have been below to investors, companies and regulators of the security market.

**Suggestion to the investors, companies**

#### and regulators

- 1 It is suggested to the investor that when the company comes up with rights issue announcement, the share holders may wait for sometime to gain from the rights issue announcement.
- 2 Whenever companies come up with right issue announcement, it must release the true and reliable information.
- 3 At the time of announcement of right issue, companies should adhere to the rules and regulations of SEBI strictly.
- 4 The companies should file the relevant documents properly to the monitoring authorities (SEBI, RBI, and Ministry of Finance) at the time of announcement of corporate events.
- 5 The companies should closely observe the investor response while it comes up with right issue announcement.
- 6 The regulatory authorities should monitor the reliability or the truth in the information released by the companies.

**Scope for further research:** The following are suggested for further research.

- 1 The factors influencing the reaction of security prices of IT companies to the right issue announcement will be of use to investors and companies.
- 2 Research studies may be conducted to examine the information content of other related information such as economy related information, political-legal information; industry related information as well as company related information.
- 3 Research studies may be conducted on less frequency traded stocks and the thinly traded stocks.
- 7 An attempt may be made to investigate the Indian stock market efficiency with respect to corporate events announcements made by other industries like FMGC, Pharmaceutical, Bank, Cement and Steel industry etc.,
- 8 An investigation on stock market efficiency could be made by applying the principles of behavioral finance.

**Conclusion:** The present study is significant in several respects. First and foremost thing is that it is one of the few studies testing the efficiency of Indian stock market with respect to information content of right issue announcement in India with respect to Information Technology (IT) companies. Further, this study used a large sample containing actively traded IT companies from Bombay Stock Exchange (List A and B1). The present study used the well established event study methodologies for analyzing the efficiency of the information content of right issue announcements in the Indian context. The results of the study are encouraging. The results of the present study show that the Indian capital market is effi-

cient in the sense that it uses the information relevant for security valuation and for investment decision making. The right issue announcements informations are captured in stock prices within a short period of few days. The results will be encouraging to finance professionals, analysts, investors, and regulatory agencies because usefulness of accounting information for investment decision making has been indicated by the results.

#### Reference

- Beaver, W.H. (1968), "The Information Content of Annual Earnings Announcements," Journal of Accounting Research, Supplement, Vol.6, pp.67-92.
- Brealy, R. A & Myers. S.C (2000) "Principle of Corporate Finance", Sixth Edition. McGraw-Hill, New York.
- Bruce Burton, Christine Hellar and David Power (2004) "The benefits and costs of deeply-discounted rights issue practitioners' viewpoint", Applied Economics Letters, Vol.11, pp.369-372
- Claesson. K (1987), "Effectiveness of Stockholm" EFI, Stockholm. (11.20.02).
- Elroy Dimson and Massoud Mussavian (1998) "A brief history of market efficiency", European Financial Management, Volume 4, March, 91-103.
- Eugene F.Fama (1995) "Random Walks in Stock Market Prices" Financial Analysts journal/, January - February, 75-80.
- Eugene Pilotte (1997), "Earnings and Stock Splits in the Eighties," Journal of Finance and Strategic Decisions" Vol.10, No.2, pp.37-55.
- Eugene F.Fama (1998), "Market efficiency, long-term returns, and behavioral finance" Journal of Financial Economics, 49, pp 283-306.
- Fama.E (1970), "Efficient Capital Markets: A Review of Theory and Empirical Work", Journal of Finance, pp.383-417.
- Fama. E.F. (1991) "Efficient Capital Markets:II" Journal of Finance, Vol.46, No.5, December, 1575-1617.
- John C.Handley (1995), "The Pricing of Underwriting Risk in Relation to Australian Rights Issues," Australian Journal of Management, No.1, June, pp. 43-75.
- Kun Shin Im, Kevin E.Dow, Varun Grover (2001), "Research Report: A Reexamination of IT Investment and the Market Value of the Firm - An Event Study Methodology," Information Systems Research, Vol.12, No.1, March, pp.103-117.
- Larry J.Prather (1998), "Testing of the positive multinational network hypothesis: Wealth effects of International Joint Venture in Emerging Markets", Multinational Finance Journal, 1998, Vol.2, pp.151-165.
- Levy, R (1967), "Random Walks: Reality or Myth", Financial Analysts Journal, Vol.13, No.1, pp. 69-76.
- Mahdi M. Hadi (2006) "Review of Capital Market Efficiency: Some Evidence from Jordanian Market" International Research Journal of Finance and Economics, Issue 3, 13-27.
- Mallikarjunappa .T (2004b), "Stock Price Reaction to Quarterly Earnings: A Study of the Indian Market", Proceedings of the International Conference, 2004 on Business and Finance, 2004b, 55-73.
- Nickolaos V.Tsangarakis (1996), "Equity rights issues: Signalling vs. issue price irrelevance hypothesis", European Financial Management. Vol.2, No.3, 299-310.
- Seth Armitage (1998), "Seasoned equity offers and rights issues: a review of the evidence," The European Journal of Finance, No.4, pp. 29-59.
- Srinivasan. R (1997), "Security Prices Behaviour Associated with Right Issue - Related Events," The ICAFI journal of Applied Finance, 3, pp.50-62.
- Vaidyanathan and Kanti Kumar Gali (1994), "Weak Form of Efficiency of the Indian Capital Market", Indian Journal of Financial Research, Vol.V, No.2, pp.27-40.