

# INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER APPLICATION & MANAGEMENT

I  
J  
R  
C  
M



A Monthly Double-Blind Peer Reviewed (Refereed/Juried) Open Access International e-Journal - Included in the International Serial Directories

*Indexed & Listed at:*

Ulrich's Periodicals Directory ©, ProQuest, U.S.A., EBSCO Publishing, U.S.A., Cabell's Directories of Publishing Opportunities, U.S.A.,

Open J-Gate, India [link of the same is duly available at Inlibnet of University Grants Commission (U.G.C.)],

Index Copernicus Publishers Panel, Poland with IC Value of 5.09 & number of libraries all around the world.

Circulated all over the world & Google has verified that scholars of more than 4456 Cities in 177 countries/territories are visiting our journal on regular basis.

Ground Floor, Building No. 1041-C-1, Devi Bhawan Bazar, JAGADHRI – 135 003, Yamunanagar, Haryana, INDIA

<http://ijrcm.org.in/>

# CONTENTS

Sr. No.	TITLE & NAME OF THE AUTHOR (S)	Page No.
1.	<b>ORGANIZATIONAL CITIZENSHIP PERFORMANCE AS AN ANTECEDENTS TO ORGANIZATIONAL PERFORMANCE: AN EMPIRICAL STUDY</b> <i>DR. M. RAMAKRISHNAN</i>	1
2.	<b>AN ANALYSIS OF THE EFFECTS OF MOBILE MONEY TRANSFER (MMT) ON WATER BILL DEFAULT RATIO: A CASE OF NAKURU WATER AND SANITATION SERVICES COMPANY (NAWASSCO)</b> <i>SAMUEL KIMANI KAMAU, MARY BOSIRE &amp; IRENE RIUNGU</i>	7
3.	<b>IMPACT OF CORPORATE GOVERNANCE ON CORPORATE REPUTATION</b> <i>V. KUMARAN &amp; DR. R. THENMOZHI</i>	13
4.	<b>ANALYSING THE GLOBAL IMPACT OF VOLATILITY ON THE INDIAN STOCK MARKET</b> <i>DR. K. K. DAVE &amp; SONAL SINGHVI</i>	19
5.	<b>SECTORAL INDICES: ANALYSIS AND IMPACT ON NATIONAL STOCK INDEX</b> <i>DR. JAGDEEP SINGH, HERPREET KAUR &amp; NITU GUPTA</i>	26
6.	<b>WORK LIFE BALANCE (WLB): A CHALLENGE FOR EMPLOYEES IN INDIA</b> <i>DR. POOJA DASGUPTA &amp; KHUSHBU DUBEY</i>	29
7.	<b>ANDROID HUMANOID ROBOT - (HRP-4C)</b> <i>ANURAG GUPTA</i>	33
8.	<b>STUDY OF IFRS AND HARMONIZATION WITH COUNTRY SPECIFIC ACCOUNTING STANDARD</b> <i>DR. SREEMOYEE GUHA ROY</i>	35
9.	<b>CONSUMER PREFERENCE TOWARDS PACKED WATER IN TUTICORIN</b> <i>S. ATHILINGA SENJITH</i>	42
10.	<b>A STUDY ON THE CUSTOMER PERCEPTION TOWARDS E-BANKING INRAIPUR CITY</b> <i>NAZHAT TAHSEEN</i>	45
11.	<b>MORALE AND MOTIVATION</b> <i>DR. ANJALI SRIVASTAV</i>	51
12.	<b>VIRTUAL CURRENCY – EMERGENCE OF BITCOIN</b> <i>K. SHREE JYOTHI, Y. KALYANI &amp; S. SANGEETA</i>	53
13.	<b>DIGITAL MARKETING MIX OF FLIPKART: AN OVERVIEW</b> <i>SHEENA DAS &amp; SENTHIL KUMAR.R</i>	58
14.	<b>BIG DATA USING HADOOP MAP REDUCE</b> <i>TAYYABA HASHMI &amp; PRAMILA SHINDE</i>	60
15.	<b>INVESTORS PREFERENCE TOWARDS VARIOUS INVESTMENT OPTIONS</b> <i>DR. SHUBHRA GUPTA &amp; PRIYANKA MADAAN</i>	64
16.	<b>A CONCEPTUAL STUDY ON PEOPLE MANAGEMENT: CHALLENGES AND ISSUES FACED BY THE CORPORATE</b> <i>USHA SHREE.V</i>	69
17.	<b>EFFECTS OF ORGANIZATIONAL POLITICS ON EMPLOYEE PERFORMANCE AT CONTAINER FREIGHT STATIONS (CFS) IN MOMBASA COUNTY</b> <i>TERESIAH WAIRIMU KARANJA &amp; DR. JOSEPH OBWOGI</i>	75
18.	<b>NEED OF MICRO INSURANCE IN INDIAN SCENARIO WITH SPECIAL REFERENCE TO UDUPI DISTRICT</b> <i>MALLIKA A SHETTY</i>	79
19.	<b>REACHING TOWARDS ORGANIC FARMING</b> <i>SHALLU</i>	88
20.	<b>PERFORMANCE OF INDIA'S AND CHINA'S MANUFACTURING GOODS EXPORT TO BANGLADESH: CONSTANT MARKET SHARE ANALYSIS</b> <i>MANJEETA SINGH</i>	93
	<b>REQUEST FOR FEEDBACK &amp; DISCLAIMER</b>	98

**CHIEF PATRON****PROF. K. K. AGGARWAL**

Chairman, Malaviya National Institute of Technology, Jaipur  
 (An institute of National Importance & fully funded by Ministry of Human Resource Development, Government of India)  
 Chancellor, K. R. Mangalam University, Gurgaon  
 Chancellor, Lingaya's University, Faridabad  
 Founder Vice-Chancellor (1998-2008), Guru Gobind Singh Indraprastha University, Delhi  
 Ex. Pro Vice-Chancellor, Guru Jambheshwar University, Hisar

**FOUNDER PATRON****LATE SH. RAM BHAJAN AGGARWAL**

Former State Minister for Home & Tourism, Government of Haryana  
 Former Vice-President, Dadri Education Society, Charkhi Dadri  
 Former President, Chinar Syntex Ltd. (Textile Mills), Bhiwani

**FORMER CO-ORDINATOR****DR. S. GARG**

Faculty, Shree Ram Institute of Business & Management, Urjani

**ADVISORS****PROF. M. S. SENAM RAJU**

Director A. C. D., School of Management Studies, I.G.N.O.U., New Delhi

**PROF. S. L. MAHANDRU**

Principal (Retd.), Maharaja Agrasen College, Jagadhri

**EDITOR****PROF. R. K. SHARMA**

Professor, Bharti Vidyapeeth University Institute of Management & Research, New Delhi

**EDITORIAL ADVISORY BOARD****DR. RAJESH MODI**

Faculty, Yanbu Industrial College, Kingdom of Saudi Arabia

**PROF. PARVEEN KUMAR**

Director, M.C.A., Meerut Institute of Engineering & Technology, Meerut, U. P.

**PROF. H. R. SHARMA**

Director, Chhatrapati Shivaji Institute of Technology, Durg, C.G.

**PROF. MANOHAR LAL**

Director & Chairman, School of Information & Computer Sciences, I.G.N.O.U., New Delhi

**PROF. ANIL K. SAINI**

Chairperson (CRC), Guru Gobind Singh I. P. University, Delhi

**PROF. R. K. CHOUDHARY**

Director, Asia Pacific Institute of Information Technology, Panipat

**DR. ASHWANI KUSH**

Head, Computer Science, University College, Kurukshetra University, Kurukshetra

**DR. BHARAT BHUSHAN**

Head, Department of Computer Science & Applications, Guru Nanak Khalsa College, Yamunanagar

**DR. VIJAYPAL SINGH DHAKA**

Dean (Academics), Rajasthan Institute of Engineering & Technology, Jaipur

**DR. SAMBHAVNA**

Faculty, I.I.T.M., Delhi

**DR. MOHINDER CHAND**

Associate Professor, Kurukshetra University, Kurukshetra

**DR. MOHENDER KUMAR GUPTA**

Associate Professor, P. J. L. N. Government College, Faridabad

**DR. SHIVAKUMAR DEENE**

Asst. Professor, Dept. of Commerce, School of Business Studies, Central University of Karnataka, Gulbarga

**DR. BHAVET**

Faculty, Shree Ram Institute of Engineering & Technology, Urjani

***ASSOCIATE EDITORS***

**PROF. ABHAY BANSAL**

Head, Department of Information Technology, Amity School of Engineering & Technology, Amity University, Noida

**PROF. NAWAB ALI KHAN**

Department of Commerce, Aligarh Muslim University, Aligarh, U.P.

**ASHISH CHOPRA**

Sr. Lecturer, Doon Valley Institute of Engineering & Technology, Karnal

***FORMER TECHNICAL ADVISOR***

**AMITA**

Faculty, Government M. S., Mohali

***FINANCIAL ADVISORS***

**DICKIN GOYAL**

Advocate & Tax Adviser, Panchkula

**NEENA**

Investment Consultant, Chambaghat, Solan, Himachal Pradesh

***LEGAL ADVISORS***

**JITENDER S. CHAHAL**

Advocate, Punjab & Haryana High Court, Chandigarh U.T.

**CHANDER BHUSHAN SHARMA**

Advocate & Consultant, District Courts, Yamunanagar at Jagadhri

***SUPERINTENDENT***

**SURENDER KUMAR POONIA**

## **CALL FOR MANUSCRIPTS**

We invite unpublished novel, original, empirical and high quality research work pertaining to recent developments & practices in the areas of Computer Science & Applications; Commerce; Business; Finance; Marketing; Human Resource Management; General Management; Banking; Economics; Tourism Administration & Management; Education; Law; Library & Information Science; Defence & Strategic Studies; Electronic Science; Corporate Governance; Industrial Relations; and emerging paradigms in allied subjects like Accounting; Accounting Information Systems; Accounting Theory & Practice; Auditing; Behavioral Accounting; Behavioral Economics; Corporate Finance; Cost Accounting; Econometrics; Economic Development; Economic History; Financial Institutions & Markets; Financial Services; Fiscal Policy; Government & Non Profit Accounting; Industrial Organization; International Economics & Trade; International Finance; Macro Economics; Micro Economics; Rural Economics; Co-operation; Demography; Development Planning; Development Studies; Applied Economics; Development Economics; Business Economics; Monetary Policy; Public Policy Economics; Real Estate; Regional Economics; Political Science; Continuing Education; Labour Welfare; Philosophy; Psychology; Sociology; Tax Accounting; Advertising & Promotion Management; Management Information Systems (MIS); Business Law; Public Responsibility & Ethics; Communication; Direct Marketing; E-Commerce; Global Business; Health Care Administration; Labour Relations & Human Resource Management; Marketing Research; Marketing Theory & Applications; Non-Profit Organizations; Office Administration/Management; Operations Research/Statistics; Organizational Behavior & Theory; Organizational Development; Production/Operations; International Relations; Human Rights & Duties; Public Administration; Population Studies; Purchasing/Materials Management; Retailing; Sales/Selling; Services; Small Business Entrepreneurship; Strategic Management Policy; Technology/Innovation; Tourism & Hospitality; Transportation Distribution; Algorithms; Artificial Intelligence; Compilers & Translation; Computer Aided Design (CAD); Computer Aided Manufacturing; Computer Graphics; Computer Organization & Architecture; Database Structures & Systems; Discrete Structures; Internet; Management Information Systems; Modeling & Simulation; Neural Systems/Neural Networks; Numerical Analysis/Scientific Computing; Object Oriented Programming; Operating Systems; Programming Languages; Robotics; Symbolic & Formal Logic; Web Design and emerging paradigms in allied subjects.

Anybody can submit the **soft copy** of unpublished novel; original; empirical and high quality **research work/manuscript** **anytime** in **M.S. Word format** after preparing the same as per our **GUIDELINES FOR SUBMISSION**; at our email address i.e. [infoijrcm@gmail.com](mailto:infoijrcm@gmail.com) or online by clicking the link **online submission** as given on our website ([FOR ONLINE SUBMISSION, CLICK HERE](#)).

## **GUIDELINES FOR SUBMISSION OF MANUSCRIPT**

### 1. **COVERING LETTER FOR SUBMISSION:**

DATED: \_\_\_\_\_

**THE EDITOR**

IJRCM

**Subject:** SUBMISSION OF MANUSCRIPT IN THE AREA OF \_\_\_\_\_.

**(e.g. Finance/Mkt./HRM/General Mgt./Engineering/Economics/Computer/IT/ Education/Psychology/Law/Math/other, please specify)**

**DEAR SIR/MADAM**

Please find my submission of manuscript entitled ' \_\_\_\_\_ ' for possible publication in one of your journals.

I hereby affirm that the contents of this manuscript are original. Furthermore, it has neither been published elsewhere in any language fully or partly, nor is it under review for publication elsewhere.

I affirm that all the co-authors of this manuscript have seen the submitted version of the manuscript and have agreed to their inclusion of names as co-authors.

Also, if my/our manuscript is accepted, I agree to comply with the formalities as given on the website of the journal. The Journal has discretion to publish our contribution in any of its journals.

**NAME OF CORRESPONDING AUTHOR** :

Designation :

Institution/College/University with full address & Pin Code :

Residential address with Pin Code :

Mobile Number (s) with country ISD code :

Is WhatsApp or Viber active on your above noted Mobile Number (Yes/No) :

Landline Number (s) with country ISD code :

E-mail Address :

Alternate E-mail Address :

Nationality :

**NOTES:**

- a) The whole manuscript has to be in **ONE MS WORD FILE** only, which will start from the covering letter, inside the manuscript. **pdf. version is liable to be rejected without any consideration.**
  - b) The sender is required to mention the following in the **SUBJECT COLUMN of the mail:**  
**New Manuscript for Review in the area of** (e.g. Finance/Marketing/HRM/General Mgt./Engineering/Economics/Computer/IT/Education/Psychology/Law/Math/other, please specify)
  - c) There is no need to give any text in the body of mail, except the cases where the author wishes to give any **specific message** w.r.t. to the manuscript.
  - d) The total size of the file containing the manuscript is expected to be below **1000 KB**.
  - e) **Abstract alone will not be considered for review** and the author is required to submit the **complete manuscript** in the first instance.
  - f) **The journal gives acknowledgement w.r.t. the receipt of every email within twenty four hours** and in case of non-receipt of acknowledgment from the journal, w.r.t. the submission of manuscript, within two days of submission, the corresponding author is required to demand for the same by sending a separate mail to the journal.
  - g) The author (s) name or details should not appear anywhere on the body of the manuscript, except the covering letter and the cover page of the manuscript, in the manner as mentioned in the guidelines.
2. **MANUSCRIPT TITLE:** The title of the paper should be **bold typed, centered and fully capitalised**.
  3. **AUTHOR NAME (S) & AFFILIATIONS:** Author (s) **name, designation, affiliation (s), address, mobile/landline number (s), and email/alternate email address** should be given underneath the title.
  4. **ACKNOWLEDGMENTS:** Acknowledgements can be given to reviewers, guides, funding institutions, etc., if any.
  5. **ABSTRACT:** Abstract should be in **fully italicized text**, ranging between **150 to 300 words**. The abstract must be informative and explain the background, aims, methods, results & conclusion in a **SINGLE PARA**. **Abbreviations must be mentioned in full**.
  6. **KEYWORDS:** Abstract must be followed by a list of keywords, subject to the maximum of **five**. These should be arranged in alphabetic order separated by commas and full stop at the end. All words of the keywords, including the first one should be in small letters, except special words e.g. name of the Countries, abbreviations.
  7. **JEL CODE:** Provide the appropriate Journal of Economic Literature Classification System code (s). JEL codes are available at [www.aeaweb.org/econlit/jelCodes.php](http://www.aeaweb.org/econlit/jelCodes.php), however, mentioning JEL Code is not mandatory.
  8. **MANUSCRIPT:** Manuscript must be in **BRITISH ENGLISH** prepared on a standard A4 size **PORTRAIT SETTING PAPER**. **It should be free from any errors i.e. grammatical, spelling or punctuation. It must be thoroughly edited at your end.**
  9. **HEADINGS:** All the headings must be bold-faced, aligned left and fully capitalised. Leave a blank line before each heading.
  10. **SUB-HEADINGS:** All the sub-headings must be bold-faced, aligned left and fully capitalised.
  11. **MAIN TEXT:**

**THE MAIN TEXT SHOULD FOLLOW THE FOLLOWING SEQUENCE:****INTRODUCTION****REVIEW OF LITERATURE****NEED/IMPORTANCE OF THE STUDY****STATEMENT OF THE PROBLEM****OBJECTIVES****HYPOTHESIS (ES)****RESEARCH METHODOLOGY****RESULTS & DISCUSSION****FINDINGS****RECOMMENDATIONS/SUGGESTIONS****CONCLUSIONS****LIMITATIONS****SCOPE FOR FURTHER RESEARCH****REFERENCES****APPENDIX/ANNEXURE****The manuscript should preferably range from 2000 to 5000 WORDS.**



12. **FIGURES & TABLES**: These should be simple, crystal **CLEAR, centered, separately numbered** & self explained, and **titles must be above the table/figure. Sources of data should be mentioned below the table/figure.** *It should be ensured that the tables/figures are referred to from the main text.*
13. **EQUATIONS/FORMULAE**: These should be consecutively numbered in parenthesis, horizontally centered with equation/formulae number placed at the right. The equation editor provided with standard versions of Microsoft Word should be utilised. If any other equation editor is utilised, author must confirm that these equations may be viewed and edited in versions of Microsoft Office that does not have the editor.
14. **ACRONYMS**: These should not be used in the abstract. The use of acronyms is elsewhere is acceptable. Acronyms should be defined on its first use in each section: Reserve Bank of India (RBI). Acronyms should be redefined on first use in subsequent sections.
15. **REFERENCES**: The list of all references should be alphabetically arranged. **The author (s) should mention only the actually utilised references in the preparation of manuscript** and they are supposed to follow Harvard Style of Referencing. **Also check to make sure that everything that you are including in the reference section is duly cited in the paper.** The author (s) are supposed to follow the references as per the following:
- All works cited in the text (including sources for tables and figures) should be listed alphabetically.
  - Use (ed.) for one editor, and (ed.s) for multiple editors.
  - When listing two or more works by one author, use --- (20xx), such as after Kohl (1997), use --- (2001), etc, in chronologically ascending order.
  - Indicate (opening and closing) page numbers for articles in journals and for chapters in books.
  - The title of books and journals should be in italics. Double quotation marks are used for titles of journal articles, book chapters, dissertations, reports, working papers, unpublished material, etc.
  - For titles in a language other than English, provide an English translation in parenthesis.
  - **Headers, footers, endnotes and footnotes should not be used in the document.** However, **you can mention short notes to elucidate some specific point**, which may be placed in number orders after the references.

**PLEASE USE THE FOLLOWING FOR STYLE AND PUNCTUATION IN REFERENCES:**

**BOOKS**

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

**CONTRIBUTIONS TO BOOKS**

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

**JOURNAL AND OTHER ARTICLES**

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

**CONFERENCE PAPERS**

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19-23

**UNPUBLISHED DISSERTATIONS**

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

**ONLINE RESOURCES**

- Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

**WEBSITES**

- Garg, Bhavet (2011): Towards a New Gas Policy, Political Weekly, Viewed on January 01, 2012 <http://epw.in/user/viewabstract.jsp>

**SECTORAL INDICES: ANALYSIS AND IMPACT ON NATIONAL STOCK INDEX****DR. JAGDEEP SINGH****PROFESSOR****INSTITUTE OF MANAGEMENT STUDIES****BHADDAL TECHNICAL CAMPUS****ROPAR****HERPREET KAUR****RESEARCH SCHOLAR****PUNJAB TECHNICAL UNIVERSITY****KAPURTHALA****NITU GUPTA****ASST. PROFESSOR & RESEARCH SCHOLAR****SDJ INTERNATIONAL COLLEGE****VESU****ABSTRACT**

*Sentiments are most powerful tool and top pick in Indian Stock Market. Sentiments of the investors believe that few sectors are always better to invest than other sectors. This study aims to explore the empirical sectoral impact on the CNX Nifty index. All the sectoral indices are studied, correlation-regression-ANOVA-t statistics are conducted to test which sectors have major impact and less impact on the Nifty. Auto sector has highest correlation with Nifty, while PSU Bank least. Almost 99% variation in Nifty can be explained by sectoral indices variation. Metal and Energy are negatively correlated with Nifty. This study thus attempts to guide investors to invest empirically as well.*

**KEYWORDS**

CNX Nifty, sectoral indices, correlation, regression, t-test.

**INTRODUCTION**

National stock exchange (NSE) is leading indicator of financial health of the country. Stock market is considered to be the best and most convenient investment option these days. But where to invest is always a question with ambiguous answer for investors and traders as well. Some sectors overpower the other for some investors, but traders might under power the same sector. Thus sectoral indices play a unique and important role in stock market. This study has analyzed all the sectoral indices of the CNX Nifty and its relation with the same. The indices taken into consideration are FMCG, Auto, Bank, Energy, IT, Media, Metal, Pharma, PSUBank and CNX Nifty. The data of all indices is taken from NSE website.

**NEED OF THE STUDY**

It does not need to mention that stock market in India plays on the psychology of the people. Many a times its observed that stock market move in particular direction whereas few sectors move in opposite direction. This is where sectoral indices come to play its role. The Sectoral indices are designed to provide a single value for the aggregate performance of a number of companies representing a sector of the economy. It is most important investment decision to study sectoral indices before investing. Thus need arises to study sectoral indices and its impact on CNX Nifty. This paper is one such attempt.

**STATEMENT OF THE PROBLEM**

Sectoral Indices: Analysis and impact on National Stock Index.

**OBJECTIVES**

1. To analyse the impact of sectoral indices on CNX Nifty
2. To study correlation between all indices.
3. To study which sectors have major contributions in Nifty and how much contribution.

**LITERATURE REVIEW**

A study by **Madhavi. M. & Radhika Ravi (2010)** to understand the performance of sectoral indices with performance of Sensex, and it was found that there is a high range of positive correlation between the Sensex and the six selected sectoral indices of BSE. An attempt was made by **Piyush Kumar Singh & Venkata Vijay Kumar (2011)** to understand the movement of sectoral returns and their contributions towards the Sensex returns. The study could find that the Sensex returns could be explained with the help of selected sectoral index returns only and there is significant relationship between the different sectors' contribution to the final Sensex returns.

**Kallberg & Pasquariello (2008)** have done analysis on the 81 sectoral indices of the US market and had found that there has been large correlation between the excess movement in the sectoral indices and there is significance between each other in the movement in a single direction.

**Philipp Fasnacht & Henri Loeberge (2007)** Studied International stock market correlations: A sectorial approach and they found that sectorial correlations between markets are more stable over time than correlation at the market level as well as sectorial correlations within countries. Sectors such as Industry, Financials and Consumer services present however a rather high proportion of inconsistent correlation coefficients.

A study for testing the market efficiency of the sample companies listed on the BSE PSU Index of Bombay Stock Exchange found that the PSU Index performed well during the study period and the investors of PSU companies earned maximum return through stock market operations (**Selvam and Ramkumar,2010**).

**Meric et al. (2008)** studied the portfolio diversification implications of the co-movements of sector indexes in the US, UK, German, French, and Japanese stock markets in bull and bear markets, and found the difference between investing in the same industry in different countries and investing in different industries within the same country.

An Efficient Stock Market provides the vehicle for mobilizing savings and investment resources for developmental purposes (**Fama, 1991**). Moreover, the analysis of different sectoral indices facilitates the investors to use it as innovative investment opportunity in their portfolio management.



In a study titled "Long run and Short run relationship between the main stock indexes: Evidence from Athens Stock Exchange" by Patra&Poshakwale(2008), it was found that there has been lower relation in the sectoral returns in the long run. However there was significant impact of the banking sector on the other sector indices return and variance. This research paper suggested that the changes and information of the banking sector could be used in order to predict the returns of the other sectoral indices in short term.

**METHODOLOGY**

This paper reviews annual data of 244 days from 1-july-2014 to 30-jun-2015. Closing price of all the sectoral indices and closing price of nifty is taken into consideration. All the indices namely FMCG, Auto, Metal, IT, Pharma, Energy, Media, PSU bank and their concentration in Nifty is studied.

Model Formulated is:

$$\text{Nifty} = \alpha_0 + \beta_1\text{FMCG} + \beta_2\text{Auto} + \beta_3\text{Bank} + \beta_4\text{Energy} + \beta_5\text{IT} + \beta_6\text{Media} + \beta_7\text{Metal} + \beta_8\text{Pharma} + \beta_9\text{PSUBank} + \mu$$

Where Nifty,FMCG,Auto,Bank,Energy,IT,Media,Metal,Pharma,PSUBank are sectoral indices closing price,

$\alpha_0$  = constant of the model

$\beta_1 \dots \beta_9$  = coefficients of the model

$\mu$  = error terms

The data is analyzed(Regression and correlation) using SPSS, students' t test was used to test significance at 5% significance level.

**DISCUSSIONS AND FINDINGS**

FIG. 1

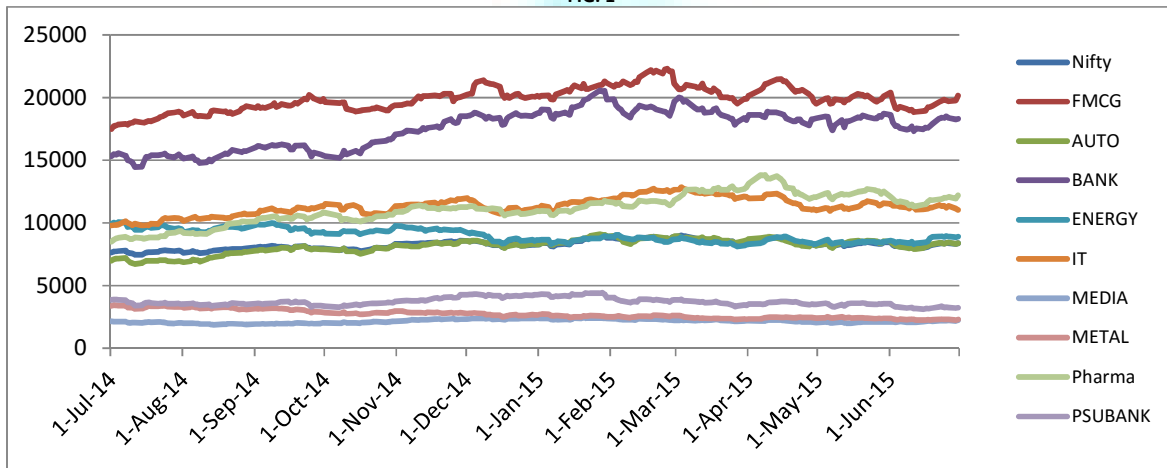


Figure 1 shows the volatility of CNX Nifty and sectoral indices. It can be noted that Energy and Metal does not follow the trend with Nifty and other sectoral indices.

TABLE 1: REGRESSION ANALYSIS

Variables	Coefficients
R	0.997
Adjusted R2	0.994
Durbin-Watson	0.358
N	244
Constant	-523.539

As per Table 1: Value of R is 0.997, which states that 99.7% variation in CNX Nifty index is caused by changes in the value of sectoral indices. The value of Durbin-Watson is 0.358, thus autocorrelation exists in the study and variables are correlated(as d is less than 2).

TABLE 2: COEFFICIENTS OF REGRESSION ANALYSIS

Variable	B value	t-statistics	Sig
FMCG	.046	10.377	.000
AUTO	.066	4.021	.000
BANK	.181	35.401	.000
ENERGY	.113	10.840	.000
IT	.163	23.743	.000
MEDIA	.128	3.580	.000
METAL	.393	15.166	.000
Pharma	.057	12.313	.000
PSUBANK	-.186	-10.465	.000

Except PSUBank index, all other sectoral indices have positive  $\beta$  coefficients, which shows that it follows reverse pattern with Nifty trend. Bank, IT and Metal Indices provide major contribution to the Nifty. Also Sig. value of all the indices are 0.000, which shows that all sectoral indices are significant with CNX Nifty index.

The deduced regression equation is,

$$\text{Nifty} = -523.539 + (0.046)\text{FMCG} + (0.066)\text{Auto} + (0.181)\text{Bank} + (0.113)\text{Energy} + (0.163)\text{IT} + (0.128)\text{Media} + (0.393)\text{Metal} + (0.057)\text{Pharma} - (0.186)\text{PSUBank}$$

**CORRELATION ANALYSIS**

Karl Pearson Coefficient of Correlation was applied to study the relationship between CNX Nifty and the Sectoral Indices of Nifty.

TABLE 3: CORRELATION ANALYSIS

	Nifty	FMCG	AUTO	BANK	ENERGY	IT	MEDIA	Pharma	PSUBANK	METAL
Nifty	1	.891	.946	.916	-.519	.923	.704	.799	.416	-.650
FMCG	.891	1	.868	.820	-.541	.845	.668	.687	.456	-.591
AUTO	.946	.868	1	.924	-.638	.892	.665	.862	.359	-.777
BANK	.916	.820	.924	1	-.713	.795	.795	.784	.482	-.783
ENERGY	-.519	-.541	-.638	-.713	1	-.559	-.404	-.740	-.019	.896
IT	.923	.845	.892	.795	-.559	1	.562	.801	.216	-.683
MEDIA	.704	.668	.665	.795	-.404	.562	1	.399	.749	-.460
Pharma	.799	.687	.862	.784	-.740	.801	.399	1	-.025	-.870
PSUBANK	.416	.456	.359	.482	-.019	.216	.749	-.025	1	.053
METAL	-.650	-.591	-.777	-.783	.896	-.683	-.460	-.870	.053	1

As per the table, it can be conferred that, all sectoral indices are highly positively correlated with Nifty index excluding Energy and Metal Index. Energy and Metal Index are negatively correlated with Nifty index. It can be noted that Energy and PSUBank index have least correlation and Nifty with Auto Index have highest correlation. Also Bank and Metal index are strongly negatively correlated.

## CONCLUSION

Regression analysis is used to formulate the model to measure sectoral indices' impact on CNX Nifty. It is seen that 99.7% of the variation in Nifty can be explained by changes in sectoral indices. Also all sectoral indices, except Energy and Metal index are positively correlated with Nifty. Energy and Metal are negatively correlated with CNX Nifty in the considered time period. Using Durbin-Watson it is found that autocorrelation exist among indices. Bank, Metal, IT and Media are major contributors of CNX Nifty index. Thus investors can study the pattern of sectoral indices before investing to gain maximum profits and minimize risk.

## LIMITATIONS

- The research is conducted for particular time period, which may not be applied for other time period.
- Less number of research paper were available on sectoral indices and thus review is based on them only.
- The study is based on the analysis of the secondary data therefore error and inconsistencies of such data will be applicable to the study.

## FUTURE SCOPE

The research is done on CNX Nifty index, further studies can be carried out on BSE Index, cross countries index. Also different time zone can be considered for further studies. Econometric modeling can be applied to study cointegration between sectoral indices.

## REFERENCES

1. Fama, E. (1991). Efficient Capital Markets: II. *Journal of Finance*, 46, 1575-1617.
2. Kallberg, J., & Pasquariello, P. (2008), "Time series and cross sectional excess co-movement in stock indexes". *Journal of Empirical Finance*, vol. 15 (3), p.p. 481-502.
3. Madhavi, M., & Radhika Ravi (2010), "BSE and Sectoral Indices: A Comparative study". *International Journal of Research in Commerce and Management*, vol. 1 (6), p.p. 71-75.
4. Meric, I., Ratner, M., & Meric, G., 2008. "The co-movements of sector index returns in the world's major stock markets during bull and bear markets: Portfolio diversification implications," *International Review of Financial Analysis*, 17(1), p. 156-177.
5. Patra, T. & Poshakwale, S.S. (2008), "Long run and short run relationship between the main stock indexes: Evidence from Athens stock exchange". *Applied Financial Economics*, vol 18 (17), p.p. 1401-1410.
6. Philipp Fasnacht & Henri Loeberge (2007), *International Stock Market correlations: A Sectorial Approach*, Finance International Meeting AFFI-EUROFIDAI, Paris, December' 2007 Paper.
7. Piyush Kumar Singh & Venkata Vijaya Kumar (2011), "A Study of Return, Liquidity of Sectoral Indices, Market Index Return of Indian Financial Market (BSE)". *International Journal of Research in Commerce and Management*, vol. 2 (6), p.p. 01-08.
8. Selvam M.; Indhumathi G. and; Rajesh Ramkumar, R (2010). Analysis of Market Efficiency of BSE- PSU Index. *SNS Journal of Finance*, 1(3), 1-10

## WEBSITE

9. [http://www.nseindia.com/products/content/equities/indices/historical\\_index\\_data.htm](http://www.nseindia.com/products/content/equities/indices/historical_index_data.htm) (Assessed on 13/8/2015)

## **REQUEST FOR FEEDBACK**

**Dear Readers**

At the very outset, International Journal of Research in Computer Application & Management (IJRCM) acknowledges & appreciates your efforts in showing interest in our present issue under your kind perusal.

I would like to request you to supply your critical comments and suggestions about the material published in this issue as well as on the journal as a whole, on our E-mail [infoijrcm@gmail.com](mailto:infoijrcm@gmail.com) for further improvements in the interest of research.

If you have any queries please feel free to contact us on our E-mail [infoijrcm@gmail.com](mailto:infoijrcm@gmail.com).

I am sure that your feedback and deliberations would make future issues better – a result of our joint effort.

Looking forward an appropriate consideration.

With sincere regards

Thanking you profoundly

**Academically yours**

Sd/-

**Co-ordinator**

## **DISCLAIMER**

The information and opinions presented in the Journal reflect the views of the authors and not of the Journal or its Editorial Board or the Publishers/Editors. Publication does not constitute endorsement by the journal. Neither the Journal nor its publishers/Editors/Editorial Board nor anyone else involved in creating, producing or delivering the journal or the materials contained therein, assumes any liability or responsibility for the accuracy, completeness, or usefulness of any information provided in the journal, nor shall they be liable for any direct, indirect, incidental, special, consequential or punitive damages arising out of the use of information/material contained in the journal. The journal, neither its publishers/Editors/Editorial Board, nor any other party involved in the preparation of material contained in the journal represents or warrants that the information contained herein is in every respect accurate or complete, and they are not responsible for any errors or omissions or for the results obtained from the use of such material. Readers are encouraged to confirm the information contained herein with other sources. The responsibility of the contents and the opinions expressed in this journal are exclusively of the author (s) concerned.

## ABOUT THE JOURNAL

In this age of Commerce, Economics, Computer, I.T. & Management and cut throat competition, a group of intellectuals felt the need to have some platform, where young and budding managers and academicians could express their views and discuss the problems among their peers. This journal was conceived with this noble intention in view. This journal has been introduced to give an opportunity for expressing refined and innovative ideas in this field. It is our humble endeavour to provide a springboard to the upcoming specialists and give a chance to know about the latest in the sphere of research and knowledge. We have taken a small step and we hope that with the active co-operation of like-minded scholars, we shall be able to serve the society with our humble efforts.

### *Our Other Journals*

