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INTRODUCTION

REVIEW OF LITERATURE

NEED/IMPORTANCE OF THE STUDY

STATEMENT OF THE PROBLEM

OBJECTIVES

HYPOTHESES

RESEARCH METHODOLOGY

RESULTS & DISCUSSION

FINDINGS

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SCOPE FOR FURTHER RESEARCH

ACKNOWLEDGMENTS

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APPENDIX/ANNEXURE

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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, 19–22 June.

UNPUBLISHED DISSERTATIONS AND THESES

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, KurukshetraUniversity, 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 Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

CALENDAR ANOMALY IN CNX-AUTO, BANK AND FMCG INDEX FOR THE PERIOD OF JANUARY 2004 TO MARCH 2013

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ABSTRACT

Calendar anomalies in CRISIL NSE INDICES i.e. CNX Auto index consist of 15 auto companies, CNX Bank index consist of 12 banks, CNX FMCG index consist of 15 companies including food and food processing, personal care, sugar, diversified, cigarettes, tea and coffee, brew/distilleries. This study tests the presence of the 'quarter of the year effect', 'month of the year effect' on stock market indices volatility by using the CNX Auto index, CNX Bank index, CNX FMCG index during the period of 1st January 2004 to 31st March 2013. Data was analysed using descriptive statistics and inferential statistics. Thus findings revealed that quarter of the year effect, month of the year effect is present in all 3 indices volatility i.e. risk and returns. The maximum returns of Auto index, Bank index and FMCG index are observed in 2nd Quarter and minimum returns are observed in 4th Quarter. All indices are showing maximum volatility in 1st quarter. Auto index and Bank index showing maximum returns in the month of September. Whereas FMCG index shows maximum returns in November month. Auto index shows minimum returns in the month of May, Bank index shows minimum returns in the month of October, FMCG index shows minimum returns in the month of January. All 3 indices are showing the maximum volatility in the month of May.

KEYWORDS

CNX Auto Index, CNX Bank Index, CNX FMCG Index, Month of the year Effect, Quarter of the year Effect, Volatility.

INTRODUCTION

Calendar effects are trends seen in indices returns and risk, where the returns tend to rise or fall in a particular quarter, month as compared to the mean and volatility tend to rise or fall in a particular quarter, month as compared to the standard deviation. They are called anomalies because they cannot be explained by traditional asset pricing models and they violate the 'weak-form' of market efficiency (i.e. asset prices fully reflect all past information). Examples of such patterns include the *Quarter of the year Effect, Month-of-the-year effect, Day-of-the-week effect, Intra-month effect, Turn-of-the-month effect, Holiday effect, Halloween effect, and Daylight savings effect*. This paper focuses on the Quarter of the year Effect, Month of the year Effect of 3indices. As the name suggests, the said effect are seasonal phenomenon where exchange traded equities tend to produce abnormal returns during particular quarter, month. The objectives of this study is to test for the Quarter-of-the-year effect, month-of-the-year effect in 3 indices of CNX NIFTY using quarterly, monthly returns of the CNX NIFTY indices for the period January 2004 - March 2013.

REVIEW OF LITERATURE

Author and Year	Key Findings
Week-end Effect: New Evidence from the Indian Stock Market S Amanulla, M Thiripalraju(2001) Vikalpa,Vol. 26, Issue: 2, pp33-50	☞ This paper tests whether the carry-forward transactions in different periods have any impact on week-end effect in the Indian stock market during the period January 1990-December 1999. ☞ It is possible to have periodic rebalancing of beta sorted portfolios for each sub-sample period; then the test of week-end effect may be pursued based on rebalanced beta-portfolios in each sub-period. Leaving further details to future research, this study, however, restricts its focus only on constructing beta portfolios based on the time period 1994-1999.
The Day of the Week Effect on Stock Market Volatility: Evidence from Emerging Markets Yeliz Yalcin Eray M. Yucel (2003) Czech Journal of Economics and Finance (Finance a uver) pp258-277	☞ This paper presents statistically significant evidence that the day of the week effects exist for 20 emerging stock markets in our sample for either market return or market volatility. ☞ The day of the week effects are present in market returns for 11 countries and in market volatility for 15 countries. They are present in both return and variance specifications for 6 countries in our sample. For 20 countries the day of the week effects exist for at least one of the return or variance specifications.
Day-of-the-week and other market anomalies in the Indian stock market Mahendra Raj, Damini Kumari (2006) International Journal of Emerging Markets Vol. 1, Issue 3, pp.235 – 246	☞ The seasonal effects in the Indian market have been examined by two major indices, viz the Bombay Stock Exchange Index and the NSE Index. ☞ "The negative Monday effect and the positive January effects are not found in India. Instead the Monday returns are positive while Tuesday returns are negative". ☞ "This study indicates that the Indian stock market does not exhibit the usual seasonal anomalies such as Monday and January effects. The absence of Monday effect could be due to the settlement period in Indian market. That the tax year ends in March and December has no special significance may explain the non-existence of January"
The day of the week effect on stock market volatility Hakan Berument, Halil Kiymaz *(2001)* JOURNAL OF ECONOMICS AND FINANCE Vol.25, Issue, pp.181-193	☞ This study tests the presence of the day of the week effect on stock market volatility by using the S&P 500 market index during the period of January 1973 and October 1997. ☞ The findings show that the day of the week effect is present in both volatility and return equations. While the highest and lowest returns are observed on Wednesday and Monday, the highest and the lowest volatility are observed on Friday and Wednesday, respectively.
Seasonality and Market Crashes in Indian Stock Markets, Mihir Dash, Anirban Dutta, Mohit Sabharwal Asian Journal of Finance & Accounting Vol. 3, pp174-184	☞ "The results of the study provide evidence for a month-of-the-year effect in Indian stock markets. In particular, there is clear indication of positive November, August and December effects and a negative March effect". ☞ "The end-of-the-year effect (i.e. positive November and December effects) could be a Diwali effect, with a huge surge in the purchase of household goods, electronic equipments, and gold in India, usually in November".
Seasonal Anomalies between S&P CNX Nifty Shariah Index and S&P CNX Nifty Index in India M. Dharani, P. Natarajan *(2011)* Journal of Social and Development Sciences Vol. 1, Issue: 3, pp.101-108	☞ This study reveals that there is a significant difference between average return of the Nifty Shariah and Nifty indices in the month of July and September. ☞ It is derived from the study that the Muslim Investors are evincing more interest to sell the shares in the market from July to September. The reason being, expenses in connection with Ramalan Festival during that period. Therefore, the study confirms that Ramalan effect has been prevailing in the Indian Stock Market. Thus, this study reveals that the seasonal variation exits very much in Shariah Index
Stock market efficiency in India: Evidence from NSE, Amalendu Bhunia (2012) Universal Journal of Marketing and Business Research (UJMBR) Vol. 1, Issue 2, pp.072-078	☞ Market Capitalization and turnover have increased dramatically with the liberalization initiatives taken by Government of India for the past two decades. ☞ "By empirical evidence on Indian stock market, there is positive relationship between the expected return and beta of the security. According to this study Indian market is not strongly efficient".
Monday Effect and Stock Return Seasonality: Further Empirical Evidence Dr. Rengasamy Elango, Nabila Al Macki *(2008)* The Business Review, Cambridge, Vol. 10, No. 2, pp. 282-288,	☞ This study investigates whether the anomalous 'weekend effect' found in many developed and developing markets around the world is also present in the rapidly emerging Indian equity market. ☞ "Results indicate lower returns on Mondays and Fridays. Wednesdays have yielded the maximum returns across indices." ☞ "Suggestions to investors, buying the scrip's on Mondays (buy low) and selling them on Wednesdays (sell high)."

STATEMENT OF PROBLEM

The efficient-market hypothesis was developed by Professor Eugene Fama. There are three major versions of the hypothesis: "weak", "semi-strong", and "strong". According to weak-form Efficient Market Hypotheses (EMH), the security prices reflect all past publicly available information in the market. EMH ensures that the stock returns across all Days of the Weeks and Months are equal. Hence the market participant, the rational financial decision maker, cannot earn any extra-normal profits. It is to be noted that the returns constitute only one part of the decision making process. Another part of decision making is the calculation of risk or volatility of returns. It is important that there are variations in volatility of stock returns by the month of the year, quarter of the year. Besides, a high (low) return is associated with a correspondingly high (low) volatility for a given day. If the investors can identify a certain pattern in volatility, then it would be easier to make investment decisions based on both returns and risk. This study examines whether the calendar anomaly exists in CNX Auto index, CNX Bank index and CNX FMCG index.

OBJECTIVES OF THE STUDY

- To Measure the relationship between risk and return of CNX Auto index, CNX Bank index, CNX FMCG index for the period of 1st January 2004 to 31st March 2013.
- To study and identify the reasons of Quarter of the year Effect, Month of the year Effect.

HYPOTHESES

H_1 - There is no significant difference in the returns among the different quarters of the year for CNX Auto index.
H_2 - There is no significant difference in the returns among the different months of the year for CNX Auto index.
H_3 - There is no significant difference in the returns among the different quarters of the year for CNX Bank index.
H_4 - There is no significant difference in the returns among the different months of the year for CNX Bank index.
H_5 - There is no significant difference in the returns among the different quarters of the year for CNX FMCG index.
H_6 - There is no significant difference in the returns among the different months of the year for CNX FMCG index.

DATA COLLECTION

CNX NIFTY has 11 sectoral indices out of which for this study data was collected for 3 indices i.e. CNX Auto index, CNX Bank index, CNX FMCG index daily closing prices from 1st January 2004 to 31st March 2013 and total 6915 trading days. For quarter of the year effect, First day and Last day Closing prices of respective quarters during the year were taken. For month of the year effect first day and last day closing prices of respective month during the year has been taken.

STATISTICAL TOOLS

Statistical tool used for this study include descriptive statistics and inferential statistics. Standard deviation tool was used to measure risk and mean as a tool was used to measure return. In inferential statistics Karl Pearson's coefficient of correlation is used.

HYPOTHESIS

H_1 - There is no significant difference in the returns among the different quarters of the year for CNX Auto index.

QUARTER OF THE YEAR EFFECT

TABLE 1: DESCRIPTIVE STATISTICS FOR QUARTER 1, 2, 3 AND 4 OF CNX AUTO INDEX

Quarter 1 (April to June)		Quarter 2 (July to September)		Quarter 3 (October to December)		Quarter 4 (January to March)	
Mean	0.962	Mean	14.218	Mean	3.758	Mean	0.921
Standard Error	6.323	Standard Error	4.563	Standard Error	5.169	Standard Error	6.187
Median	-5.417	Median	11.897	Median	8.256	Median	-8.331
Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	18.969	Standard Deviation	13.690	Standard Deviation	15.508	Standard Deviation	18.561
Sample Variance	359.806	Sample Variance	187.407	Sample Variance	240.499	Sample Variance	344.512
Kurtosis	3.350	Kurtosis	2.836	Kurtosis	3.913	Kurtosis	-1.725
Skewness	1.635	Skewness	1.396	Skewness	-1.702	Skewness	0.518
Range	63.251	Range	47.806	Range	54.565	Range	46.111
Minimum	-18.760	Minimum	-3.180	Minimum	-32.335	Minimum	-20.757
Maximum	44.490	Maximum	44.626	Maximum	22.229	Maximum	25.354
Sum	8.656	Sum	127.961	Sum	33.820	Sum	8.293
Count	9	Count	9	Count	9	Count	9
Confidence Level (95.0%)	14.581	Confidence Level (95.0%)	10.523	Confidence Level (95.0%)	11.921	Confidence Level (95.0%)	14.267

TABLE 2: RETURN AND RISK FOR QUARTER 1, 2, 3, 4 OF CNX AUTO INDEX

Quarter	Return_Quarterly	Risk_Quarterly
Quarter 1	0.962	18.969
Quarter 2	14.218	13.69
Quarter 3	3.758	15.508
Quarter 4	0.921	18.561

TABLE 3: CORRELATION BETWEEN QUARTERLY RETURN AND RISK OF CNX AUTO INDEX

		Quarterly_Return	Quarterly_Risk
Quarterly_Return	Pearson Correlation	1	-.901
	Sig. (2-tailed)		.099
	N	4	4
Quarterly_Risk	Pearson Correlation	-.901	1
	Sig. (2-tailed)	.099	
	N	4	4

OBSERVATION

- There is negative strong Karl Pearson's coefficient of correlation between return and risk (Volatility) for quarter of the year effect on CNX Auto index.

- The maximum and minimum returns are observed in quarter 2 and quarter 4 respectively.
- The maximum risk (volatility) is observed in quarter 1.

INTERPRETATION

Auto industry is cyclical in nature; it follows business cycles peak and troughs. In case of recession this industry is not able to give good returns because automobile industry and its products perceived as a luxury, hence during recession demand for this product is quite low and due to low demand profitability of these industry is low and ultimately it hampers the psyche of investors and they prefer not invest into auto industry during recession period. As per the Society of Indian Manufacturers (SIAM) Indian automobile industry is growing at good pace. As per SIAM gross turnover of automobile industry, production of automobile industry, domestic sales of the automobile industry, exports of automobile industry are showing upward trend year on year basis. As per the analysis of CNX Auto index since past 3 years automobile companies are giving good returns to investors. In India monsoon has an impact on inflation, interest rates, currency value, Gross Domestic Product, power generation, fiscal deficit, auto industry, cement industry, FMCG industry, Banking industry etc. Karl Pearson's coefficient of correlation value between Risk and Return is indicates strong negative correlation (strong negative correlation -0.80 onwards) and p=.099 is greater than 0.01 hence the test is not significant. It can be concluded that Quarter 2 is giving maximum returns with minimized risk. Here it is a healthy sign of the market for the investors to invest in Quarter 2. Quarter 2 is giving maximum returns as compared with other quarters. Quarter 4 is highly volatile than other quarters. Quarter 4 is giving minimum returns compared with other quarters. Union Budget is announced exactly in the middle of this quarter i.e. 28th or 29th February. In India lot of pre-budget discussions take place every year. Due to pre-budget discussions January month is giving negative returns. Due to fractured politics and vote bank politics union budget becomes political event rather than finance or economic event. In the month of March lot of post budget analysis and discussions take place. Due to that pessimism among investors is high during that period. Quarter 1 is highly volatile quarter compared with other quarters because in this quarter Government is implementing the Fiscal Policy decisions. Quarter 2 gives maximum returns with minimum risk. Quarter 2 is the best quarter to reap the benefits of investment. There is significant difference in the returns among the different quarters of the year for CNX Auto index; hence the hypothesis gets rejected for CNX Auto Index because it shows maximum returns in the Quarter 2 as compare to other quarters.

HYPOTHESIS

H_2 - There is no significant difference in the returns among the different months of the year for CNX Auto index.

MONTH OF THE YEAR EFFECT

TABLE 4: DESCRIPTIVE STATISTICS FOR ALL 12 MONTHS (JANUARY TO DECEMBER) OF CNX AUTO INDEX

JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
Mean	-2.638	Mean	2.423	Mean	0.856	Mean	3.879	Mean	-3.088	Mean	-0.240
Standard Error	3.127	Standard Error	2.163	Standard Error	2.295	Standard Error	1.629	Standard Error	4.437	Standard Error	2.719
Median	-3.141	Median	1.451	Median	1.982	Median	2.576	Median	-4.917	Median	0.469
Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	9.381	Standard Deviation	6.489	Standard Deviation	6.886	Standard Deviation	4.888	Standard Deviation	13.312	Standard Deviation	8.156
Sample Variance	88.007	Sample Variance	42.108	Sample Variance	47.423	Sample Variance	23.891	Sample Variance	177.200	Sample Variance	66.527
Kurtosis	0.110	Kurtosis	-0.665	Kurtosis	0.669	Kurtosis	0.092	Kurtosis	1.553	Kurtosis	1.308
Skewness	0.368	Skewness	-0.355	Skewness	0.959	Skewness	0.287	Skewness	1.256	Skewness	-0.956
Range	30.431	Range	19.817	Range	21.537	Range	16.309	Range	40.946	Range	26.810
Minimum	-16.117	Minimum	-8.777	Minimum	-6.860	Minimum	-3.992	Minimum	-15.772	Minimum	-17.083
Maximum	14.314	Maximum	11.040	Maximum	14.677	Maximum	12.317	Maximum	25.174	Maximum	9.727
Sum	-23.739	Sum	21.804	Sum	7.706	Sum	34.912	Sum	-27.792	Sum	-2.156
Count	9	Count	9	Count	9	Count	9	Count	9	Count	9
Confidence Level (95.0%)	7.211	Confidence Level (95.0%)	4.988	Confidence Level (95.0%)	5.293	Confidence Level (95.0%)	3.757	Confidence Level (95.0%)	10.232	Confidence Level (95.0%)	6.270
JULY		**AUGUST**		**SEPTEMBER**		**OCTOBER**		**NOVEMBER**		**DECEMBER**	
Mean	4.129	Mean	2.125	Mean	5.777	Mean	-2.936	Mean	2.125	Mean	3.512
Standard Error	2.934	Standard Error	1.745	Standard Error	2.131	Standard Error	3.416	Standard Error	3.284	Standard Error	1.723
Median	2.062	Median	1.720	Median	7.083	Median	-1.591	Median	1.696	Median	3.615
Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	8.801	Standard Deviation	5.234	Standard Deviation	6.393	Standard Deviation	10.249	Standard Deviation	9.851	Standard Deviation	5.17
Sample Variance	77.459	Sample Variance	27.394	Sample Variance	40.876	Sample Variance	105.044	Sample Variance	97.037	Sample Variance	26.729
Kurtosis	3.053	Kurtosis	-0.223	Kurtosis	0.708	Kurtosis	3.378	Kurtosis	-0.484	Kurtosis	0.136
Skewness	1.563	Skewness	0.661	Skewness	-1.151	Skewness	-1.327	Skewness	-0.41	Skewness	-0.373
Range	29.772	Range	16.302	Range	19.022	Range	37.529	Range	29.651	Range	16.332
Minimum	-5.720	Minimum	-5.000	Minimum	-7.134	Minimum	-25.945	Minimum	-14.969	Minimum	-5.946
Maximum	24.052	Maximum	11.301	Maximum	11.888	Maximum	11.584	Maximum	14.682	Maximum	10.386
Sum	37.159	Sum	19.126	Sum	51.994	Sum	-26.428	Sum	19.123	Sum	31.608
Count	9	Count	9	Count	9	Count	9	Count	9	Count	9
Confidence Level (95.0%)	6.765	Confidence Level (95.0%)	4.023	Confidence Level (95.0%)	4.914	Confidence Level (95.0%)	7.878145	Confidence Level (95.0%)	7.571978	Confidence Level (95.0%)	3.974

TABLE 5: RETURN AND RISK FOR JANUARY TO DECEMBER OF CNX AUTO INDEX

MONTH	Return_Monthly	Risk_Monthly
JAN	-2.638	9.381
FEB	2.423	6.489
MARCH	0.856	6.886
APRIL	3.879	4.888
MAY	-3.088	13.312
JUNE	-0.240	8.156
JULY	4.129	8.801
AUGUST	2.125	5.234
SEPTEMBER	5.777	6.393
OCTOBER	-2.936	10.249
NOVEMBER	2.125	9.851
DECEMBER	3.512	5.170

TABLE 6: CORRELATION BETWEEN MONTHLY RETURN AND RISK OF CNX AUTO INDEX

		Monthly_Return	Monthly_Risk
Monthly_Return	Pearson Correlation	1	-.719**
	Sig. (2-tailed)		.008
	N	12	12
Monthly_Risk	Pearson Correlation	-.719**	1
	Sig. (2-tailed)	.008	
	N	12	12
****. Correlation is significant at the 0.01 level (2-tailed).**			

OBSERVATION

- There is negative moderate Karl Pearson's coefficient of correlation between Return and Risk (Volatility) for Month of the year Effect on CNX Auto index.
- The maximum and minimum returns are observed in September month and May month respectively.
- The maximum risk (volatility) is observed in May month.

INTERPRETATION

Karl Pearson's coefficient of correlation value between Risk and Return is -0.719 indicates moderate negative correlation (range of moderate negative correlation -0.50 to -0.80) and *p*=.008 is less than 0.01 than the test is significant. It can be concluded that September month is giving maximum returns with comparatively minimum risk. May month is giving minimum returns with maximum risk. For the investors to invest in the month of September get good return. Negative correlation depicts that it disproves the theory i.e. high risk high returns. Seasonality plays a vital role in automobile industry. Monsoons boost tractors and motorcycles demand. Due to festive season Indians are fascinated to buy automobiles during this period with reasonable prices of automobiles. There is significant difference in the returns among the different months of the year for CNX Auto index; hence the hypothesis gets rejected for CNX Auto Index because it shows maximum returns in the month of September as compare to other months.

HYPOTHESIS

H_3 - There is no significant difference in the returns among the different quarters of the year for CNX Bank index.

QUARTER OF THE YEAR EFFECT

TABLE 7: DESCRIPTIVE STATISTICS FOR QUARTER 1, 2, 3 AND 4 OF CNX BANK INDEX

Quarter 1 (April to June)		Quarter 2 (July to September)		Quarter 3 (October to December)		Quarter 4 (January to March)	
Mean	4.560	Mean	18.126	Mean	5.392	Mean	-4.624
Standard Error	10.619	Standard Error	5.470	Standard Error	5.851	Standard Error	5.646
Median	-0.454	Median	19.711	Median	1.901	Median	-1.268
Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	31.857	Standard Deviation	16.411	Standard Deviation	17.552	Standard Deviation	16.939
Sample Variance	1014.859	Sample Variance	269.307	Sample Variance	308.074	Sample Variance	286.924
Kurtosis	2.228	Kurtosis	1.744	Kurtosis	-0.244	Kurtosis	1.239
Skewness	1.543	Skewness	-0.872	Skewness	0.617	Skewness	0.293
Range	98.185	Range	57.738	Range	53.826	Range	60.552
Minimum	-23.926	Minimum	-15.875	Minimum	-16.396	Minimum	-32.813
Maximum	74.259	Maximum	41.863	Maximum	37.431	Maximum	27.738
Sum	41.039	Sum	163.134	Sum	48.524	Sum	-41.614
Count	9	Count	9	Count	9	Count	9
Confidence Level (95.0%)	24.487	Confidence Level (95.0%)	12.614	Confidence Level (95.0%)	13.492	Confidence Level (95.0%)	13.020

TABLE 8: RETURN AND RISK FOR QUARTER 1, 2, 3, 4 OF CNX BANK INDEX

Quarter	Return_Quarterly	Risk_Quarterly
Quarter 1	4.560	31.857
Quarter 2	18.126	16.411
Quarter 3	5.392	17.552
Quarter 4	-4.624	16.939

TABLE 9: CORRELATION BETWEEN QUARTERLY RETURN AND RISK OF CNX BANK INDEX

		Return_Quarterly	Risk_Quarterly
Return_ Quarterly	Karl Pearson's coefficient of correlation	1	-.125
	Sig. (2-tailed)		.875
	N	4	4
Risk_ Quarterly	Karl Pearson's coefficient of correlation	-.125	1
	Sig. (2-tailed)	.875	
	N	4	4

OBSERVATION

- There is negative weak Karl Pearson's coefficient of correlation between return and risk (Volatility) for quarter of the year effect on CNX Bank index.
- The maximum and minimum returns are observed in quarter 2 and quarter 4 respectively.
- The maximum risk (volatility) is observed in quarter 1.

INTERPRETATION

Karl Pearson's coefficient of correlation value between Risk and Return is -.125 indicates negative weak correlation (negative weak correlation less than -.50) and *p*=0.875 is greater than 0.01 hence the test is not significant. It can be concluded that Quarter 2 is giving maximum returns with minimized risk. Here it is a healthy sign from the market for the investors to invest in Quarter 2. Quarter 2 is giving the maximum returns as compared with other quarters. In CNX Bank index Quarter 4 is the only quarter which shows negative returns. Quarter 4 is highly risky and with high risk it gives minimum returns. Short term investors should avoid investing as well as liquidating their position during this quarter. Whereas those investor can wait for 9 months for them investing into Quarter 4 gives maximum returns. Pre-budget discussions in India hampers the returns of Indian banking industry during January and February months, both months are giving negative returns during this period. Due to lot of post budget discussions March month is also giving comparatively lower returns. Quarter 1 is highly volatile quarter compared with other quarters because in this quarter Government is implementing the Fiscal Policy decisions. Quarter 2 gives maximum returns with minimum risk. Quarter 2 is the best quarter to reap the benefits of investment. There is significant difference in the returns among the different quarters of the year for CNX Bank index; hence the hypothesis gets rejected for CNX Bank Index because it shows maximum returns in the Quarter 2 as compare to other quarters.

HYPOTHESIS

H_4 - There is no significant difference in the returns among the different months of the year for CNX Bank index.

MONTH OF THE YEAR EFFECT

TABLE 10: DESCRIPTIVE STATISTICS FOR 12 MONTHS (JANUARY TO DECEMBER) OF CNX BANK INDEX

JANUARY		**FEBRUARY**		**MARCH**		**APRIL**		**MAY**		**JUNE**	
Mean	-1.654	Mean	-1.199	Mean	1.083	Mean	4.962	Mean	-1.519	Mean	-0.383
Standard Error	3.558	Standard Error	2.373	Standard Error	2.752	Standard Error	3.528	Standard Error	5.930	Standard Error	3.163
Median	-2.887	Median	0.850	Median	1.942	Median	3.814	Median	-4.213	Median	1.915
Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	10.675	Standard Deviation	7.120	Standard Deviation	8.256	Standard Deviation	10.585	Standard Deviation	17.790	Standard Deviation	9.490
Sample Variance	113.948	Sample Variance	50.691	Sample Variance	68.168	Sample Variance	112.048	Sample Variance	316.475	Sample Variance	90.066
Kurtosis	4.923	Kurtosis	-0.273	Kurtosis	2.772	Kurtosis	-0.400	Kurtosis	1.120	Kurtosis	2.099
Skewness	1.957	Skewness	-0.752	Skewness	-1.373	Skewness	0.056	Skewness	0.946	Skewness	-1.315
Range	36.969	Range	22.099	Range	28.460	Range	34.216	Range	59.566	Range	32.377
Minimum	-12.899	Minimum	-14.307	Minimum	-17.303	Minimum	-12.383	Minimum	-24.829	Minimum	-20.798
Maximum	24.070	Maximum	7.792	Maximum	11.157	Maximum	21.833	Maximum	34.737	Maximum	11.579
Sum	-14.886	Sum	-10.795	Sum	9.749	Sum	44.658	Sum	-13.669	Sum	-3.447
Count	9	Count	9	Count	9	Count	9	Count	9	Count	9
Confidence Level (95.0%)	8.205	Confidence Level (95.0%)	5.473	Confidence Level (95.0%)	6.346	Confidence Level (95.0%)	8.137	Confidence Level (95.0%)	13.674	Confidence Level (95.0%)	7.295
JULY		**AUGUST**		**SEPTEMBER**		**OCTOBER**		**NOVEMBER**		**DECEMBER**	
Mean	6.662	Mean	-0.743	Mean	10.301	Mean	-2.335	Mean	2.736	Mean	2.925
Standard Error	2.839	Standard Error	2.420	Standard Error	2.913	Standard Error	3.805	Standard Error	3.659	Standard Error	3.335
Median	3.133	Median	-0.134	Median	13.664	Median	-1.800	Median	6.781	Median	3.060
Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	8.516	Standard Deviation	7.260	Standard Deviation	8.739	Standard Deviation	11.416	Standard Deviation	10.976	Standard Deviation	10.006
Sample Variance	72.522	Sample Variance	52.710	Sample Variance	76.375	Sample Variance	130.318	Sample Variance	120.479	Sample Variance	100.123
Kurtosis	-0.654	Kurtosis	1.532	Kurtosis	-0.425	Kurtosis	0.570	Kurtosis	-0.908	Kurtosis	-0.002
Skewness	0.789	Skewness	0.398	Skewness	-0.932	Skewness	-0.720	Skewness	-0.236	Skewness	0.701
Range	24.280	Range	26.282	Range	24.762	Range	37.257	Range	32.406	Range	31.688
Minimum	-3.211	Minimum	-12.849	Minimum	-5.308	Minimum	-24.417	Minimum	-12.809	Minimum	-10.417
Maximum	21.070	Maximum	13.432	Maximum	19.454	Maximum	12.841	Maximum	19.596	Maximum	21.270
Sum	59.957	Sum	-6.686	Sum	92.707	Sum	-21.012	Sum	24.626	Sum	26.324
Count	9	Count	9	Count	9	Count	9	Count	9	Count	9
Confidence Level (95.0%)	6.546	Confidence Level (95.0%)	5.581	Confidence Level (95.0%)	6.718	Confidence Level (95.0%)	8.775	Confidence Level (95.0%)	8.437	Confidence Level (95.0%)	7.6914

TABLE 11: RETURN AND RISK FOR JANUARY TO DECEMBER OF CNX BANK INDEX

MONTH	Return_Monthly	Risk_Monthly
JAN	-1.654	10.675
FEB	-1.199	7.120
MARCH	1.083	8.256
APRIL	4.962	10.585
MAY	-1.519	17.790
JUNE	-0.383	9.490
JULY	6.662	8.516
AUGUST	-0.743	7.260
SEPTEMBER	10.301	8.739
OCTOBER	-2.335	11.416
NOVEMBER	2.736	10.976
DECEMBER	2.925	10.006

TABLE 12: CORRELATION BETWEEN MONTHLY RETURN AND RISK OF CNX BANK INDEX

Correlations			
		Return_Monthly	**Risk_Monthly**
Return_Monthly	Karl Pearson's coefficient of correlation	1	-.257
	Sig. (2-tailed)		.420
	N	12	12
Risk_Monthly	Karl Pearson's coefficient of correlation	-.257	1
	Sig. (2-tailed)	.420	
	N	12	12

OBSERVATION

- There is negative weak Karl Pearson's coefficient of correlation between Return and Risk (Volatility) for Month of the year Effect on CNX Bank index.
- The maximum and minimum returns are observed in September and October month respectively.
- The maximum risk (volatility) is observed in May month.

INTERPRETATION

Karl Pearson's coefficient of correlation value between Risk and Return is -.257 indicates negative weak correlation (negative weak correlation less than -.50) and *p*=0.420 is greater than 0.01 hence the test is not significant. It can be concluded that September month is giving maximum returns with comparatively minimized risk. Here it is a healthy sign of the market for the investors to invest in the month of September. January, February, May, June, August and October months are giving negative returns. May month is highly risky because May month is showing Maximum Volatility and returns are also low. January and February both months are giving negative returns during this period. There is significant difference in the returns among the different months of the year for CNX Bank index; hence the hypothesis gets rejected for CNX Bank Index because it shows maximum returns in the month of September as compare to other months.

HYPOTHESIS

H_5 - There is no significant difference in the returns among the different quarters of the year for CNX FMCG index.

QUARTER OF THE YEAR EFFECT

TABLE 13: DESCRIPTIVE STATISTICS FOR QUARTER 1, 2, 3 AND 4 OF CNX FMCG INDEX

Quarter 1 (April to June)		**Quarter 2 (July to September)**		**Quarter 3 (October to December)**		**Quarter 4 (January to March)**	
Mean	4.715	Mean	10.844	Mean	4.138	Mean	2.838
Standard Error	4.829	Standard Error	2.272	Standard Error	2.624	Standard Error	4.513
Median	11.281	Median	12.584	Median	6.197	Median	-0.278
Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	14.488	Standard Deviation	6.816	Standard Deviation	7.873	Standard Deviation	13.539
Sample Variance	209.898	Sample Variance	46.462	Sample Variance	61.978	Sample Variance	183.301
Kurtosis	-1.582	Kurtosis	1.673	Kurtosis	-0.618	Kurtosis	3.696
Skewness	-0.605	Skewness	-1.170	Skewness	-0.179	Skewness	1.812
Range	37.094	Range	22.888	Range	24.475	Range	44.456
Minimum	-14.968	Minimum	-3.543	Minimum	-7.753	Minimum	-10.187
Maximum	22.126	Maximum	19.345	Maximum	16.722	Maximum	34.270
Sum	42.433	Sum	97.594	Sum	37.244	Sum	25.546
Count	9	Count	9	Count	9	Count	9
Confidence Level (95.0%)	11.136	Confidence Level (95.0%)	5.239	Confidence Level (95.0%)	6.051	Confidence Level (95.0%)	10.407

TABLE 14: RETURN AND RISK FOR QUARTER 1, 2, 3, 4 OF CNX FMCG INDEX

Quarter	Return_Quarterly	Risk_Quarterly
Quarter 1	4.715	14.488
Quarter 2	10.844	6.816
Quarter 3	4.138	7.873
Quarter 4	2.838	13.539

TABLE 15: CORRELATION BETWEEN QUARTERLY RETURN AND RISK OF CNX FMCG INDEX

Correlations			
		Return_Quarterly	Risk_Quarterly
Return_ Quarterly	Karl Pearson's coefficient of correlation	1	-.659
	Sig. (2-tailed)		.341
	N	4	4
Risk_ Quarterly	Karl Pearson's coefficient of correlation	-.659	1
	Sig. (2-tailed)	.341	
	N	4	4

OBSERVATION

- There is negative moderate Karl Pearson's coefficient of correlation between return and risk (Volatility) for quarter of the year effect on CNX FMCG index.
- The maximum and minimum returns are observed in quarter 2 and quarter 4 respectively.
- The maximum risk (volatility) is observed in quarter 1.

INTERPRETATION

Karl Pearson's coefficient of correlation value between Risk and Return is -.659 indicates negative moderate correlation (range of negative moderate correlation -.50 to -.80) and *p*=0.341 is greater than 0.01 hence the test is not significant. It can be concluded that Quarter 2 is giving maximum returns with minimum risk. Quarter 2 is giving the maximum returns as compared with other quarters. In CNX FMCG index Quarter 4 is giving minimum returns. Quarter 1 is highly risky but in terms of returns it secured second rank. After Quarter 1 Quarter 4 is risky but with high risk it gives minimum returns. Short term investors should avoid investing as well as liquidating their position during Quarter 4. Fast Moving Consumer Goods (FMCG) goods are all consumable items (other than groceries/pulses) that one needs to buy at regular intervals. FMCG Sector gets established in the year 1950. The FMCG sector is the fourth largest sector with a total market size in excess of USD 13.1 billion as of 2012. FMCG sector is growing in India. This sector survives in market in spite of any phase of business cycle. FMCG product has inelastic demand in the market though the market is moving at any direction FMCG stocks are not get impacted much. Though the market is bearish consumers will not stop buying toothpaste, groceries, soap etc. Hence FMCG sector called as "Defensive Sector" and it is advantageous from investor's point of view to invest in FMCG sector. There is significant difference in the returns among the different quarters of the year for CNX FMCG index; hence the hypothesis gets rejected for CNX FMCG Index because it shows maximum returns in the Quarter 2 as compare to other quarters.

HYPOTHESIS

H_6 - There is no significant difference in the returns among the different months of the year for CNX FMCG index.

MONTH OF THE YEAR EFFECT

TABLE 16: DESCRIPTIVE STATISTICS FOR 12 MONTHS (JANUARY TO DECEMBER) OF CNX FMCG INDEX

JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
Mean	-1.964	Mean	0.416	Mean	1.728	Mean	3.353	Mean	-1.750	Mean	2.367
Standard Error	2.138	Standard Error	2.020	Standard Error	2.039	Standard Error	0.968	Standard Error	2.965	Standard Error	2.548
Median	-0.984	Median	0.278	Median	2.379	Median	4.083	Median	-2.670	Median	5.248
Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	6.414	Standard Deviation	6.061	Standard Deviation	6.117	Standard Deviation	2.904	Standard Deviation	8.894	Standard Deviation	7.643
Sample Variance	41.140	Sample Variance	36.732	Sample Variance	37.415	Sample Variance	8.435	Sample Variance	79.103	Sample Variance	58.414
Kurtosis	-1.024	Kurtosis	2.174	Kurtosis	0.488	Kurtosis	4.801	Kurtosis	0.574	Kurtosis	1.583
Skewness	-0.306	Skewness	1.053	Skewness	-0.324	Skewness	-2.009	Skewness	-0.703	Skewness	-1.333
Range	18.725	Range	20.772	Range	20.499	Range	9.774	Range	29.522	Range	24.306
Minimum	-12.406	Minimum	-7.370	Minimum	-9.524	Minimum	-3.644	Minimum	-18.957	Minimum	-13.922
Maximum	6.319	Maximum	13.402	Maximum	10.975	Maximum	6.130	Maximum	10.565	Maximum	10.385
Sum	-17.678	Sum	3.746	Sum	15.548	Sum	30.178	Sum	-15.749	Sum	21.301
Count	9	Count	9	Count	9	Count	9	Count	9	Count	9
Confidence Level (95.0%)	4.930	Confidence Level (95.0%)	4.659	Confidence Level (95.0%)	4.702	Confidence Level (95.0%)	2.232	Confidence Level (95.0%)	6.837	Confidence Level (95.0%)	5.875
JULY		**AUGUST**		**SEPTEMBER**		**OCTOBER**		**NOVEMBER**		**DECEMBER**	
Mean	4.282	Mean	1.472	Mean	4.364	Mean	-1.802	Mean	4.869	Mean	1.551
Standard Error	2.152	Standard Error	1.483	Standard Error	1.560	Standard Error	2.730	Standard Error	2.056	Standard Error	1.586
Median	3.386	Median	2.681	Median	3.406	Median	-1.775	Median	5.979	Median	2.268
Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	6.455	Standard Deviation	4.448	Standard Deviation	4.680	Standard Deviation	8.191	Standard Deviation	6.171	Standard Deviation	4.757
Sample Variance	41.661	Sample Variance	19.785	Sample Variance	21.906	Sample Variance	67.099	Sample Variance	38.078	Sample Variance	22.629
Kurtosis	1.802	Kurtosis	-0.264	Kurtosis	-1.254	Kurtosis	0.022	Kurtosis	-0.907	Kurtosis	-1.396
Skewness	0.937	Skewness	-0.524	Skewness	-0.150	Skewness	-0.508	Skewness	0.251	Skewness	-0.124
Range	22.813	Range	14.124	Range	13.113	Range	25.688	Range	18.213	Range	13.669
Minimum	-5.092	Minimum	-6.241	Minimum	-2.112	Minimum	-16.524	Minimum	-2.893	Minimum	-5.783
Maximum	17.721	Maximum	7.883	Maximum	11.001	Maximum	9.163	Maximum	15.320	Maximum	7.885
Sum	38.542	Sum	13.245	Sum	39.275	Sum	-16.222	Sum	43.824	Sum	13.958
Count	9	Count	9	Count	9	Count	9	Count	9	Count	9
Confidence Level (95.0%)	4.961	Confidence Level (95.0%)	3.419	Confidence Level (95.0%)	3.597	Confidence Level (95.0%)	6.296	Confidence Level (95.0%)	4.743	Confidence Level (95.0%)	3.657

TABLE 17: RETURN AND RISK FOR JANUARY TO DECEMBER OF CNX FMCG INDEX

MONTH	MEAN	S.D.
JAN	-1.964	6.414
FEB	0.416	6.061
MARCH	1.728	6.117
APRIL	3.353	2.904
MAY	-1.750	8.894
JUNE	2.367	7.643
JULY	4.282	6.455
AUGUST	1.472	4.448
SEPTEMBER	4.364	4.680
OCTOBER	-1.802	8.191
NOVEMBER	4.869	6.171
DECEMBER	1.551	4.757

TABLE 18: CORRELATION BETWEEN MONTHLY RETURN AND RISK OF CNX FMCG INDEX

Correlations			
		Return_Monthly	Risk_Monthly
Return_Monthly	Karl Pearson's coefficient of correlation	1	-.535
	Sig. (2-tailed)		.073
	N	12	12
Risk_Monthly	Karl Pearson's coefficient of correlation	-.535	1
	Sig. (2-tailed)	.073	
	N	12	12

OBSERVATION

- There is negative moderate Karl Pearson's coefficient of correlation between Return and Risk (Volatility) for Month of the year Effect on CNX FMCG index.
- The maximum and minimum returns are observed in November and January month respectively.
- The maximum risk (volatility) is observed in May month.

INTERPRETATION

Karl Pearson's coefficient of correlation value between Risk and Return is -.535 indicates negative moderate correlation (rage of negative moderate correlation -.50 to -.80) and *p*=0.073 is greater than 0.01 hence the test is not significant. It can be concluded that November month is giving maximum returns. January, May and October months are giving negative returns. May month is highly risky because this month is showing Maximum Volatility and returns are also negative. There is significant difference in the returns among the different months of the year for CNX FMCG index; hence the hypothesis gets rejected for CNX FMCG Index because it shows maximum returns in the month of November as compare to other months.

FINDINGS

The following are important findings of the study

- The study found that the CNX Auto index, CNX Bank index, CNX FMCG index earned maximum quarterly returns of 14.218, 18.126, 10.844 in Quarter 2 respectively and minimum quarterly returns recorded in Quarter 4 i.e. 0.21, -4.624, 2.838 respectively during the study period. Therefore it is suggested that the investors would yield good returns Quarter 2.
- It is advised that the investors should buy shares in Quarter 4 and sell the same in Quarter 2 in CNX Auto index, CNX Bank index and CNX FMCG index.
- The study also found that the highest value of standard deviation of CNX Auto index, CNX Bank index and CNX FMCG index was recorded in Quarter 1 and least value of standard deviation in Quarter 2. The same is observed even for "NIFTY index 1st Quarter which is comparatively more volatile than other quarters". This indicates that Indian stock market is more volatile in Quarter 1. For CNX Auto index, CNX Bank index and CNX FMCG index quarter 2 is the best period to yield maximum returns with minimum risk.
- It is to be noted that the return distribution is positively skewed in Quarter 1, 2 and 4 for CNX Auto index, Quarter 1, 3 and 4 for CNX Bank index and Quarter 4 for CNX FMCG index. It is observe that the return distribution is negatively skewed in Quarter 3 for CNX Auto index, Quarter 2 for CNX Bank index, Quarter 1, 2 and 3 for CNX FMCG index.
- The returns of month wise analysis revealed the fact that there is a highest mean return recorded in the month of September for CNX Auto index, CNX Bank index i.e. 5.777, 10.301 respectively whereas CNX FMCG index yield highest mean return in the month of November i.e. 4.869. Negative mean returns recorded in the month of January, May, June and October for CNX Auto index, January, February, May, June, August and October for CNX Bank index, January, May and October for CNX FMCG index. January, May and October are common months in all 3 indices. The same is observed even for "NIFTY index shows negative returns in January, May and October".
- The study found that the months of September and July offer reasonably high returns in CNX Auto index, CNX Bank index whereas November and September months are giving high returns in CNX FMCG index. Thus, it is advised that the investors want to sell their holdings; September and July could be considered as the best period for CNX Auto index, CNX Bank index, for FMCG November and September could be the best month to liquidate the position in respective index.
- The Study provides evidence that the market was not able to price the risk appropriately as higher returns were possible by taking less risk and this indicates market inefficiency. Hence the market regulators should take appropriate steps to stabilize the volatility for the benefits of long term and small investors.
- The highest value (13.312) and lowest value (4.888) of Standard Deviation has been recorded in the month of May and April respectively for CNX Auto index, for CNX Bank index highest value of Standard Deviation (17.790) and lowest value of Standard Deviation (7.120) in May and February months respectively. The highest value (8.894) and lowest value (2.904) of Standard Deviation has been recorded in the months of May and April respectively for CNX FMCG index. Hence all indices indicate maximum volatility in the same month i.e. May month whereas CNX Auto index and CNX FMCG index indicates maximum volatility in the month of April. The same is observed even for "NIFTY shows maximum volatility in the month of May". This indicates that Indian stock market is more volatile in the month of May.
- All 6 hypotheses are tested with the help of descriptive and inferential statistics for this study. All hypotheses are rejected and it clearly indicates that the quarter of the year effect, month of the year effect exists in CNX Auto index, CNX Bank index, CNX FMCG index for the study period.

CONCLUSION

In this study returns are measured by mean and risk is measured by standard deviation. This study reveals that there is significant difference in quarterly, monthly returns of CNX Auto index, CNX Bank index, CNX FMCG index compared with remaining quarters, months. All 6 hypotheses are tested with the help of descriptive and inferential statistics for this study are rejected and it clearly indicates that the quarter of the year effect, month of the year effect exists in CNX

Auto index, CNX Bank index, CNX FMCG index for the study period. In India festive season starts from September hence buyers are buying automobiles in the month of September. Due to high sales this sector gives positive returns in quarter 2 and in the month of September. Thus study reveals that the seasonal variation exists very much among CNX Auto index, CNX Bank index and CNX FMCG index. The results established that these 3 indices are not efficient and investors can improve their returns by timing their investment. The present study would be useful to investors, traders and arbitrageurs who could formulate profitable trading strategies if they were able to predict the share price behaviour of these 3 indices with full information on these anomalies. The study also provides evidence that the market is not able to price the risk appropriately as higher returns were possible by taking less risk and this indicates market inefficiency to the extent in CNX Auto index, CNX Bank index, CNX FMCG index. It has been observed that stock market follows risk and returns anomalies due to market capitalisation size of the companies. Temperature has severe impact on volatility. Behaviour finance has shown that temperature significantly affects mood, and mood changes in turn cause behavioural changes. Evidence suggests that lower temperature can lead to aggression, while higher temperature can lead to both apathy and aggression. In this study all 3 indices are also showing maximum volatility in the month of May. Government policies play an important role in stock market volatility and returns. Variation in demand and supply drives the market momentum. Variation in monetary policy leads to increase or decrease in interest rates and interest rates ultimately decides the direction of banking stocks. Monetary policy decisions have huge impact on consumption and savings. Business cycle phases i.e. recession, recovery and stagnation has impact on consumers psyche to buy luxurious items or not for e.g. automobiles sales are going down during recession phase. Rather than economic event Union Budget is political event. Due pre and post budget analysis and discussions this period i.e. quarter 4 is giving minimum returns with comparatively maximum risk. Various macroeconomic parameters have impact on risk and returns of CNX Auto index, CNX Bank index and CNX FMCG index. Holiday effect has an impact on stock market risk and return including these 3 indices. Dividend factor also plays an important role in risk and returns of these 3 indices. Monsoon has positive impact on various sectors of economy. Speculators, hedgers and arbitragers behavior has an impact on stock market including these 3 indices. Both the mentioned objectives are covered in this research article.

REFERENCES

1. Aggarwal, R., and P. Rivoli. (1989). “Seasonal and Day-of-the Week Effects in Four Emerging Stock Markets”.Financial. Review 24: 541–550.
2. Agrawal, A., and K. Tandon. (1994). “Anomalies or Illusions? Evidence from Stock Markets in Eighteen Countries.”Journal of International Money and Finance 13: 83–106.
3. Akgiray, V. (1989). “Conditional Heteroscedasticity in Time Series of Stock Returns: Evidence and Forecast.”Journal of Business 62: 55–80.
4. Alexakis, P., and M. Xanthakis. (1995). “Day of the Week Effect on the Greek Stock Market.”Applied Financial Economics 5: 43–50.
5. Bachelier, L. (1900), Theory of Speculation. Reprinted in English (1964). "The random character of stock market prices." Cambridge: MIT Press.
6. Baillie, R. T., and R. P. DeGennaro. (1990). “Stock Returns and Volatility.”Journal of Financial and Quantitative Analysis 25: 203–214.
7. Chakrabarti, G., and C. Sen (2007), "November Effect: An Example of Calender Anomaly in Indian Stock Market." West Bengal University of Technology, Kolkata, India. Online at: http://ssrn.com/abstract=1121606
8. Chaudhury, S. K. (1991). Seasonality in share returns: preliminary evidence on day of the week effect. Chartered Accountant (India). 40: 107-9.
9. Chia, et al. (2006), "Calendar Anomalies in the Malaysian Stock Market." MPRA Paper No. 516. Online at http://mpra.ub.uni-muenchen.de/516/
10. Cross, F. (1973). “The behavior of stock prices on Friday and Monday”, Financial Analysts Journal, 29, 67–9.
11. David Hirshleifer, Kewei Hou and Siew Hong Teoh (2010) The Accrual Anomaly: Risk or Mispricing?
12. Dubois, M.L. (1986). “The day-of-the-week effect: The international evidence”. Journal of Banking and Finance 20, 1463-1484.
13. E. Barone (1990) The italian stock market☆: Efficiency and calendar anomalies
14. Fama, E F (1965), "The Behaviour of Stock Market Prices," Journal of Business, Vol 38, pp 34-105
15. Fama, E. F. (1970), "Efficient Capital Markets: A review of Theory and Empirical Work." Journal of Finance 25, 383-417
16. French, K R (1980). "Stock Returns and Week-end Effect," Journal of Financial Economics, Vol 8, pp 55-69.
17. Haugen, R., and J. Lakonishok (1988), "The Incredible January effect: The Stock Market's Unsolved Mystery." Dow Jones-Irwin, Homewood, Illinois
18. Ignatius, R. (1998), "The Bombay Stock Exchange: Seasonalities and Investment Opportunities." Managerial Finance 24, 52-61.
19. Kelly Busche, Christopher D. Hall (1988) “An Exception to the Risk Preference Anomaly”
20. Lauterbach, B. and M. Ungar.(1995). Real vs. nominal stock return seasonalities: Empirical evidence International Review of Economics and Finance, 4(2), 133-147.
21. Mandelbrot, B (1963), "The Variation of Certain Speculative Prices," Journal of Business, Vol 36, pp 394-419.
22. Melanie Cao, Jason Wei (2005) “Stock market returns: A note on temperature anomaly”
23. Parikh, A (2008), “The December Phenomenon: Month of Year Effect in the Indian Stock Market,” downloaded from NSE website.
24. Raj, M., Thurston, D. (1994), "January or April? Tests of the turn-of-the-year effect in the New Zealand stock market", Applied Economic Letters, Vol. 1, pp.81-93.
25. Sahar Nawaz1, Nawazish Mirza (2012) “Calendar Anomalies and Stock Returns: A Literature Survey”
26. Schwert, G. W. (2002), "Anomalies and Market Efficiency." Handbook of the Economics of Finance, 937-972.
27. Shailaja Yadav (2013), “Calendar Anomaly in Indian Stock Market With Respect to Empirical Study of Quarter of the Year Effect, Month of the Year Effect, Day of the Week Effect on NIFTY For The Years Jan. 1996- Mar. 2013”.
28. WERNER F. M. De BONDT, RICHARD THALER (2012) “Does the Stock Market Overreact?”

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