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A TECHNICAL ANALYSIS OF FIVE SELECTED LISTED COMPANIES AT NATIONAL STOCK EXCHANGE OF INDIA LTD

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Abstract—*In finance, technical analysis is an analysis methodology for forecasting the direction of prices through the study of past market data, primarily price and volume. Behavioural economics and quantitative analysis use many of the same tools of technical analysis, which, being an aspect of active management, stands in contradiction to much of modern portfolio theory. The efficacy of both technical and fundamental analysis is disputed by the efficient-market hypothesis which states that stock market prices are essentially unpredictable. The aim of investors' is getting investment opportunities with minimum risk and maximum returns. Risk and returns are important variables that investors are looking for, at the time of investment decision making. To suggest the better ways and means for investor to enhance the knowledge about stock investment in the secondary market. To Test the Variability between Variables, Such as variance of returns co - Relations standard deviation. To study the variation in the stock returns for the study period of one years. To offer meaningful suggestions to the investors based on the findings of the study The Data Analysis and Interpretation Specialization take you from data novice to data expert in just four project-based courses. You will apply basic data science tools, including data management and visualization, modelling, and machine learning using your choice of either SAS or Python, including pandas and Scikit-learn. Throughout the Specialization, you will analyze a research question of your choice and summarize your insights. In the Capstone Project, you will use real data to address an important issue in society and report your findings in a professional-quality report. You will have the opportunity to work with our industry partners, DRIVENDATA and The Connection. This Specialization is designed to help you whether you are considering a career in data, work in a context where supervisors are looking to you for data insights, or you just have some burning questions you want to explore. No prior experience is required. By the end you will have mastered statistical methods to conduct original research to inform complex decisions.*

Keywords—*Behavioural Economics, Investors, Stock, Stock Exchange, Stock Market Prices.*

INTRODUCTION

An investment instrument has issued by a corporation, government, or other organization which offers evidence of debt or equity. The official definition, from the securities exchange act of 1934, is: "Any note, stock, treasury, bond, debenture, certificate of interest or participation in any profit-sharing agreement or in any oil, gas, or other mineral royalty or lease, any collateral trust certificate, pre-organisation certificate or subscription , transferable share, investment contact, voting-trust certificate, certificate of deposit, for a security, any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or in general, any instrument commonly known as a 'security'; or any certificate of interest or participation in, temporary or interim certificate for, receipt for, or warrant or right to subscribe to or purchase, any of the foregoing; but shall not include currency or any note, draft, bill of exchange, or bankers' acceptance which has a maturity at the time of issuance of not exceeding nine months, exclusive of days of grace, or any renewal thereof the maturity of which is likewise limited."

STATEMENT OF THE PROBLEM

The aim of investors' is getting investment opportunities with minimum risk and maximum returns. Risk and returns are important variables that investors are looking for, at the time of investment decision making. Naturally rational investors

would expect a high return for bearing high risk. If there is no trade-off between risk and return, there is no need of considering about the risk. The rate of return on equities should commensurate with its riskiness. Estimating the required return on investment to be made in the stock market is a challenging job before an ordinary investor. Different market models and techniques are being used for taking suitable investment decisions. The past behaviour of the price of a security and the share price index play a very important role in security analysis.

NEED OF THE STUDY

Technical analysis uses historical stock statistics, usually price and volume data, to forecast future prices. In layman's terms, a technical analyst finds a pattern in a stock's data, makes the assumption that the pattern is going to repeat into the foreseeable future, and accordingly places his/her trade in the direction signalled by the pattern. Technical indicators are frequently used by technical analysts to help make their trading decisions. Popular technical indicators include moving averages, MACD, regressions, support/resistance levels, etc. Technical analysts essentially look for trends in the market. Their basic assumption is that price of a stock already has all information priced into it and that a stock is either always 'trending' up, down, or sideways. Prices move in patterns and price action repeats itself. Charts are frequently used by technical analysts to help make their trading decisions.

OBJECTIVE OF THE STUDY

1. To suggest better ways and means for investor to enhance the knowledge about stock investment in the secondary market.
2. To Test the Variability between Variables, Such as variance of returns co - Relations standard deviation.
3. To study the variation in the stock returns for the study period of one years.
4. To rank the companies on the basis of return and risk
5. To find out the risk and return of security consisting of 5 stocks and compare it with risk and return of individual stock.
6. To offer meaningful suggestions to the investors based on the findings of the study.

SCOPE OF THE STUDY

The 5 companies in NSE are INFOSYS, BHEL, SBI, AXIS, and ICICI. The scope of the study as follows.

- To understanding the course of requirements including investment& security option, the investment process and management.
- To know about major securities of the share market investment opportunities.
- Adoption of cost – Reducing Investments.
- Adoption of Income-Increasing Investments.
- A combination of the preceding securities.
- Identify Profitable Investment Alternatives.

REVIEW OF LITERATURE

Seema Narayan (2015) This paper shows that changes in risk sharing ability in international financial markets have implications for the trade of goods and services. The ability to share risk in international financial markets is captured as time varying correlations between stock markets in the US and 11 Asian countries. We find that trade in the 11 Asia and their ability to share risk in US equity market are mostly substitutes over the full sample (1993:01 to 2014:01) and in extreme market conditions (such as a financial crisis). However, once we account for the decoupling-recoupling hypothesis during the GFC period, we only find strong evidence of complementarity between Asian trade and risk sharing in the US stock markets. We find further support for this complementary link between the real and financial markets in our analyses of when we examined the relationship between US stock market spill overs and Asian trade during the full sample, the GFC period, and under bearish market conditions. We explain our approach and results making connections with several related areas of research and evaluate the results against cases where international risk sharing is with equity markets in China and Japan.

Waldo Rocha Flores (2014) This paper presents an empirical investigation on what behavioural information security governance factors drive the establishment of information security knowledge sharing in organizations. Data was collected from organizations located in different geographic regions of the world, and the amount of data collected from two countries – namely, USA and Sweden – allowed us to investigate if the effect of behavioral information security governance factors on the establishment of security knowledge sharing differs based on national culture. The study followed a mixed methods research design, wherein qualitative data was collected to both establish the study's research

model and develop a survey instrument that was distributed to 578 information security executives. The results suggest that processes to coordinate implemented security knowledge sharing mechanisms have a major direct influence on the establishment of security knowledge sharing in organizations; the effect of organizational structure (e.g., centralized security function to develop and deploy uniform firm-wide policies, and use of steering committees to facilitate information security planning) is slightly weaker, while business-based information security management has no significant direct effect on security knowledge sharing. A mediation analysis revealed that the reason for the nonsignificant direct relation between business-based information security management and security knowledge sharing is the fully mediating effect of coordinating information security processes. Thus, the results disentangle the interrelated influences of behavioural information security governance factors on security knowledge sharing by showing that information security governance sets the platform to establish security knowledge sharing, and coordinating processes realize the effect of both the structure of the information security function and the alignment of information security management with business needs.

Peng William He (2016) This paper studies the trading volume and market share of brokers around seasoned equity offerings (SEOs) in the Australian equity market based on a unique broker ID dataset. We examine the drivers behind the behaviour of affiliated and unaffiliated brokers around SEOs. The findings contribute to the understanding of how broker affiliation impact SEO trading activity. Results show that SEO affiliation is positively related to broker trading volume and market share on both the announcement day and issuance day. However, there is no evidence suggesting that lead managers or co-manager generate additional trading volume compared to other co-underwriters. Broker reputation, market capitalization and relative SEO size of the offering firm are shown as the primary determinants influencing broker trading activity.

Sachin B. Modi (2015) The rise in front-end service outsourcing in recent years, despite its advantages, has also exposed buyer firms to unique challenges. One of the most salient risks for buyer firms in service triads is service failure due to the service provider. Indeed, such service failures may be costlier for firms due to the greater relational and operational costs that may arise from the presence of the third-party provider. Yet, neither the services literature nor extant operations literature on service triads has paid much attention to the financial consequences to the buyer firm – i.e., service risks – of such service failures in triads. To fill this gap, we investigate the financial penalty of service failures due to the service provider using the event study methodology and a sample of 146 customer information security breaches as our empirical context. Analysis of the abnormal returns reveals that service failures due to the front-end service provider lead to greater shareholder losses than such failures due to the buyer firm. This provides important new insight into the financial risks arising from outsourcing front-end services. Further, we investigate the ability of the buyer firm's employee and financial resources to temper these shareholder losses. We find that buyer firm employee productivity can moderate the greater financial penalty associated with such triadic service failures but that buyer firm leverage tends to not have such a mitigating effect. This provides new guidance for theory and practice regarding how buyer firms can position themselves to buffer the financial risks arising from service failures due to front-end service providers.

Mehmet Demirbag (2016) This study explores the efficiency of securities firms in Turkey and offers conceptual and managerial insights utilizing data envelopment analysis. Through a sample of local and foreign owned securities firms in Turkey, we examine the impact of liabilities of foreignness (LOF) and localness (LOL) upon knowledge intensive firm efficiency in an emerging market economy. We have extended this approach through our consideration of liability associated with market globalness (LOMG). Our findings indicate the importance of size for firm efficiency with bank affiliation and foreign ownership also having positive effects on efficiency. Our study makes a contribution conceptually, methodologically and empirically to a growing literature on emerging economies. We also make a valuable addition to the limited empirical work conducted on the securities industry to date. Finally, through our contextualization of Turkish securities firms as professional services firms (PSFs), our research extends the narrow focus on law and accounting which currently dominates the burgeoning research strand on PSFs.

Gunther Capelle-Blancard (2016) In this paper, we assess the impact of the securities transaction tax (STT) introduced in France in 2012 on market liquidity and volatility. To identify causality, we rely on a distinctive design of the tax, which is imposed on large French firms only, all listed on Euronext. This provides two reliable control groups (smaller French firms and foreign firms listed on Euronext) and allows us to use a difference-in-difference approach in order to isolate the impact of the tax from the other economic changes that have occurred simultaneously. We find that the STT has reduced stock trading, but we find no significant effect on theoretically based measures of liquidity, such as price impact, and no significant effect on volatility. The results are robust whether we rely on different control groups (German stocks listed on the Deutsche Börse), different datasets (firm-level or aggregated data), different periods (from one to six months), or different methodologies (propensity score matching, regression discontinuity design).

RESEARCH METHODOLOGY

Research is common parlance refers to a search for knowledge. Once can also define research as a scientific systematic search for pertinent information on a specific topic. In fact, research is art of scientific investigation. Research as a careful investigation or inquiry especially through search for facts in any branch of knowledge.

THE STANDARD DEVIATION

The standard deviation is the most common measure of variability, measuring the spread of the data set and the relationship of the mean to the rest of the data. If the data points are close to the mean, indicating that responses are fairly uniform, then the standard deviation will be small. Conversely, if many data points are far from the mean, indicating that there is a wide variance in the responses, then the standard deviation will be large. If all the data values are equal, then the standard deviation will be zero. The standard deviation is calculated using the following formula.

$S2=\sum (nX - M1)2$

Where $\sum$ =Sum of

X=Individual score

M=Mean of all score

N=Sample size (number of scores).

CORRELATION COEFFICIENT: DEFINITION

The correlation coefficient, denoted by r is a measure of the strength of the straight –line or linear relationship between two variables. The correlation coefficient takes on value ranging between +1 and-1 The following points are the accepted guidelines for interpreting the correlation coefficient:

0 indicates no linear relationship

+1 indicates a perfect positive linear relationship: as one variable increases in its values, the other variable also increases in its values via an exact linear rule.

-1 indicates a a perfect negative linear relationship: as one variable increases in its values, the other variable also decreases in its values via an exact linear rule.

Values between 0 and 0.3 (0 and -0.3) indicate a weak positive (negative) linear relationship via a shaky linear rule.

Values between 0.3 and 0.7 (0.3and -0.7) indicate a moderate positive (negative) linear relationship via a fuzzy-firm linear rule.

Values between 0.7 and 1.0(0.7 and -1.0) indicate strong positive (negative) linear relationship via a firm linear rule.

The Value of r squared is typically taken as "the percent of variation in one variable explained by the other variable", or "the percent of variation shared between the two variables."

The correlation coefficient is calculated as:

$$\rho_{xy} = \frac{\mathrm{Cov}(r_x, r_y)}{\sigma_x \sigma_y}$$

LIMITATION OF THE STUDY

- Time and cost fact is the major limitation to this study
- The data were collected only for five months these duration of data is not enough to say the strength of the sharers.
- The research work done only on technical view of the stocks i,e, fundamental factors are not considered to this study

DATA ANALYSIS AND INTERPRETATION

The Data Analysis and Interpretation Specialization take you from data novice to data expert in just four project-based courses. You will apply basic data science tools, including data management and visualization, modelling, and machine learning using your choice of either SAS or Python, including pandas and Scikit-learn. Throughout the Specialization, you will analyze a research question of your choice and summarize your insights. In the Capstone Project, you will use real data to address an important issue in society and report your findings in a professional-quality report. You will have the opportunity to work with our industry partners, DRIVENDATA and The Connection. Help DRIVENDATA solve some of the world's biggest social challenges by joining one of their competitions, or help The Connection better understand recidivism risk for people on parole in substance use treatment. Regular feedback from peers will provide you a chance to reshape your question. This Specialization is designed to help you whether you are considering a career in data, work in a context where supervisors are looking to you for data insights, or you just have some burning questions you want to explore. No prior experience is required. By the end you will have mastered statistical methods to conduct original research to inform complex decisions.

TABLE 1: SHARE PRICES OF FIVE COMPANIES IN NATIONAL STOCK EXCHANGE IN THE YEAR OF 2016-2017

in Rs.

DATES	*INFOSYS*	*BHEL*	*ICICI*	*AXIS*	*SBI*
01-04-2016	1205	116	238	449	195
02-05-2016	1200	127	226	471	186
01-06-2016	1256	118	240	513	198
01-07-2016	1172	132	240	542	219
01-08-2016	1085	141	249	550	227
01-09-2016	1037	135	260	596	252
03-10-2016	1037	137	256	550	255
01-11-2016	988	141	275	475	258
01-12-2016	976	128	259	465	255
02-01-2017	1001	122	251	446	243

Source: nseidia.com

INTERPRETATION

The above table.1 shows the share price of five companies from various sectors for the period of April 2016 to January 2017.

STANDARD DEVIATION

The standard deviation of a data set is a calculated number that tells you how close, or how far, the values of that data set are in relation to the mean. It's important because it can tell us more information about a data set than the mean itself will provide.

To calculate the standard deviation, you must first find the **variance** of the data set. The variance is defined as the average of the sum of the squared differences for each value in the set. In other words, you find this difference between each point and the mean of the data set and then square that difference. You will do this for every number in the data set and then add all those squared values together.

Finally, you will divide the variance by either the number of items in the data set, which is usually referred to as *n*, or by one less than the number of items in the set, which is written as *n* - 1. What you divide by depends on whether you are calculating the variance of the whole population or just a sample. When you are **calculating the variance for an entire population, divide by *n***. For a **sample of the entire population, divide by *n* - 1**. Once you have found the variance for the data set, you can then find the standard deviation by taking the square root of the variance.

TABLE 2: CALCULATION OF STANDARD DEVIATION OF INFOSYS

in Rs.

Date	*Share Price (x)*	*Average (x)*	*Deviation*	D^2
01-04-2016	1205	1095.7	109.3	11946.49
02-05-2016	1200	1095.7	104.3	10878.49
01-06-2016	1256	1095.7	160.3	25696.09
01-07-2016	1172	1095.7	76.3	5821.69
01-08-2016	1085	1095.7	-10.7	114.49
01-09-2016	1037	1095.7	-58.7	3445.69
03-10-2016	1037	1095.7	-58.7	3445.69
01-11-2016	988	1095.7	-107.7	11599.29
01-12-2016	976	1095.7	-119.7	14328.09
02-01-2017	1001	1095.7	-94.7	8968.09
Total	**10957**			$\sum \mathbf{d^2}$=99689.79

($\sum$x/n) 10957/10 = 1095.7

Variance = (1/n-1) ($\sum d^{2)}$ = 1 / (10-1) (99689.79) = 11076.64

Standard deviation = $\sqrt{}$11076.64 = 105.25

INTERPRETATION

The above table 2 shows the calculation of standard deviation of INFOSYS securities for the period of April 2016 to January 2017, thus the value obtained was 105.25.

TABLE 3: CALCULATION OF STANDARD DEVIATION OF BHEL

in Rs.

Date	**Share Price (x)**	**Average (x)**	**Deviation**	$\mathbf{D^2}$
01-04-2016	116	129.7	-13.7	187.69
02-05-2016	127	129.7	-2.7	7.29
01-06-2016	118	129.7	-11.7	136.89
01-07-2016	132	129.7	2.3	5.29
01-08-2016	141	129.7	11.3	127.69
01-09-2016	135	129.7	5.3	28.09
03-10-2016	137	129.7	7.3	53.29
01-11-2016	141	129.7	11.3	127.69

01-12-2016	128	129.7	-1.7	2.89
02-01-2017	122	129.7	-7.7	59.29
Total	1297			$\sum d^2$=736.1

($\sum x/n$) 1297/10 = 129.7

Variance = (1/n-1) ($\sum d^{2)}$ = 1 / (10-1) (736.1) = 81.78

Standard deviation = $\sqrt{}$81.789 = 9.04

INTERPRETATION

The above table 3 shows the calculation of standard deviation of BHEL securities for the period of April 2016 to January 2017, thus the value obtained was 9.04.

TABLE 4: CALCULATION OF STANDARD DEVIATION OF ICICI

in Rs.

Date	**Share Price (x)**	**Average (x)**	**Deviation**	**D^2**
01-04-2016	238	249.4	-11.4	129.96
02-05-2016	226	249.4	-23.4	547.56
01-06-2016	240	249.4	-9.4	88.36
01-07-2016	240	249.4	-9.4	88.36
01-08-2016	249	249.4	-0.4	0.16
01-09-2016	260	249.4	10.6	112.36
03-10-2016	256	249.4	6.6	43.56
01-11-2016	275	249.4	25.6	655.36
01-12-2016	259	249.4	9.6	92.16
02-01-2017	251	249.4	1.6	2.56
Total	**2494**			**$\sum d^2$=1760.4**

($\sum x/n$) 2494/10 = 249.4

Variance = (1/n-1) ($\sum d^2$) = 1 / (10-1) (1760.4) = 195.6

Standard deviation = $\sqrt{}$195.6 = 13.985

INTERPRETATION

The above table 4 shows the calculation of standard deviation of ICICI securities for the period of April 2016 to January 2017, thus the value obtained was 13.985.

TABLE 5: CALCULATION OF STANDARD DEVIATION OF AXIS

in Rs.

Date	Share Price (x)	Average (x)	Deviation	D^2
01-04-2016	449	460.8	-11.8	139.24
02-05-2016	471	460.8	10.2	104.04
01-06-2016	513	460.8	52.2	2724.84
01-07-2016	542	460.8	81.2	6593.44
01-08-2016	550	460.8	89.2	7956.64
01-09-2016	596	460.8	135.2	18279.04
03-10-2016	550	460.8	89.2	7956.64
01-11-2016	475	460.8	14.2	201.64
01-12-2016	465	460.8	4.2	17.64
02-01-2017	446	460.8	-14.8	219.04
Total	**4608**			**$\sum d^2$=44192.2**

($\sum$x/n) 4608/10 = 460.8

Variance = (1/n-1) ($\sum d^2$) = 1 / (10-1) (44192.2) = 4910.24

Standard deviation = $\sqrt{4910.24}$ = 70.073

INTERPRETATION

The above table 5 shows the calculation of standard deviation of AXIS securities for the period of April 2016 to January 2017, thus the value obtained was 70.073.

TABLE 6: CALCULATION OF STANDARD DEVIATION OF SBI

in Rs.

Date	Share Price (x)	Average (x)	Deviation	D^2
01-04-2016	195	228.8	-33.8	1142.44
02-05-2016	186	228.8	414.8	172059.04
01-06-2016	198	228.8	-30.8	948.64
01-07-2016	219	228.8	-9.8	96.04
01-08-2016	227	228.8	-1.8	3.24
01-09-2016	252	228.8	23.2	538.24
03-10-2016	255	228.8	26.2	686.44
01-11-2016	258	228.8	29.2	852.64

01-12-2016	255	228.8	26.2	686.44
02-01-2017	243	228.8	14.2	201.64
Total	**2288**			$\sum d^2$=177214.8

($\sum x/n$) 2288/10 = 228.8

Variance = (1/n-1) ($\sum d^2$) = 1/(10-1) (177214.8) = 19690.53

Standard deviation = $\sqrt{}$19690.53 = 140.32

INTERPRETATION

The above table 6 shows the calculation of standard deviation of SBI securities for the period of April 2016 to January 2017, thus the value obtained was 140.32.

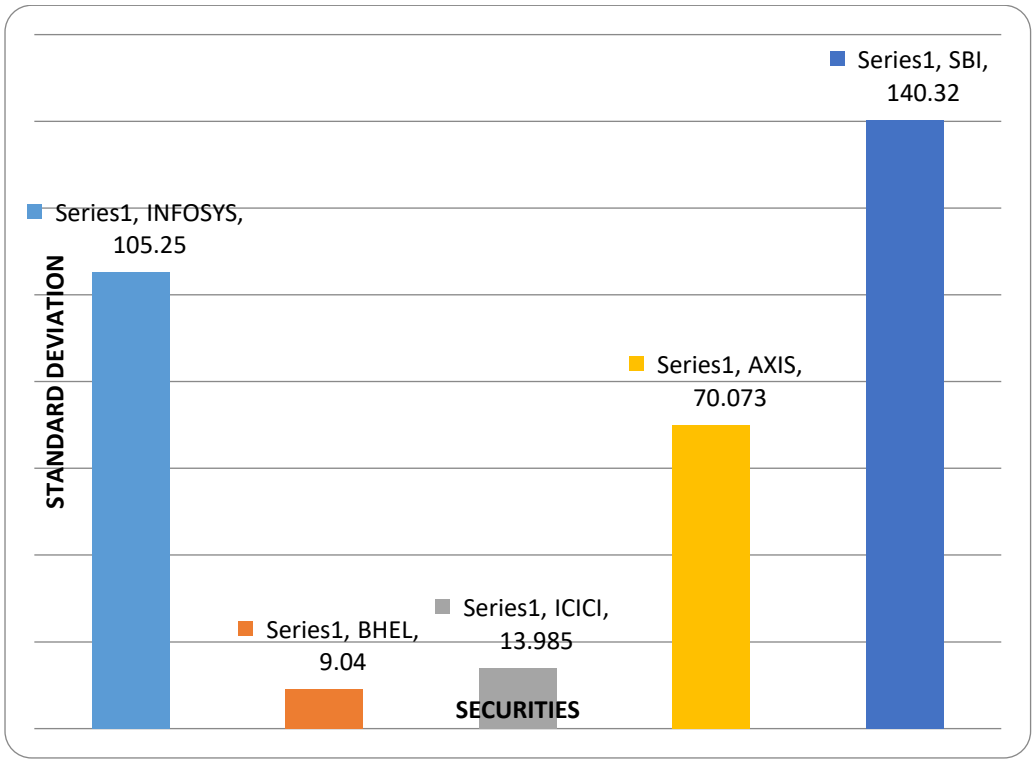
TABLE 7: CALCULATED STANDARD DEVIATION

SECURITIES	STANDARD DEVIATION
INFOSYS	105.25
BHEL	9.04
ICICI	13.985
AXIS	70.073
SBI	140.32

INTERPRETATION

As per the above table 7 SBI had got greater deviation of 140.32 so the securities will fluctuate dynamically and preferably those investors which are interested in speculation will buy and on the other side security with less deviation can give a steady return, the security BHEL had lesser standard deviation 9.40 and give steady returns.

CHART 1: - VARIATION OF STANDARD DEVIATION



CORRELATION

A correlation coefficient is a statistical measure of the degree to which changes to the value of one variable predict change to the value of another. In positively correlated variables, the value increases or decreases in tandem. In negatively correlated variables, the value of one increases as the value of the other decreases.

Correlation coefficients are expressed as values between +1 and -1. A coefficient of +1 indicates a perfect positive correlation: A change in the value of one variable will predict a change in the same direction in the second variable. A coefficient of -1 indicates a perfect negative correlation: A change in the value of one variable predicts a change in the opposite direction in the second variable. Lesser degrees of correlation are expressed as non-zero decimals. A coefficient of zero indicates there is no discernable relationship between fluctuations of the variables.

TABLE 8: CALCULATION OF CORRELATION OF SECURITIES

CORRELATION BETWEEN INFOSYS AND BHEL

Date	*Deviation of INFOSYS*	*Deviation of BHEL*	*Product of Deviation*
01-04-2016	109.3	-13.7	-1497.41
02-05-2016	104.3	-2.7	-281.61
01-06-2016	160.3	-11.7	-1875.51
01-07-2016	76.3	2.3	175.49
01-08-2016	-10.7	11.3	-120.91
01-09-2016	-58.7	5.3	-311.11
03-10-2016	-58.7	7.3	-428.51
01-11-2016	-107.7	11.3	-1217.01
01-12-2016	-119.7	-1.7	203.49
02-01-2017	-94.7	-7.7	729.19
Total			**-4623.89**

Cov AB = (1/n) $\sum$(dx) (dy) = (1/10) -4623.89 = -4623.79

Correlation coefficient cov/$\sigma a \sigma b$ = 4623.79 / (105.25 * 9.04) = 4.85

INTERPRETATION

The above table 8 shows the model calculation of INFOSYS & BHEL which got the correlation coefficient of 4.85.

TABLE 9: CORRELATION BETWEEN INFOSYS AND ICICI

Date	*Deviation of INFOSYS*	*Deviation of ICICI*	*Product of Deviation*
01-04-2016	109.3	-11.4	-1246.02
02-05-2016	104.3	-23.4	2440.62
01-06-2016	160.3	-9.4	1506.82
01-07-2016	76.3	-9.4	-717.22
01-08-2016	-10.7	-0.4	4.28
01-09-2016	-58.7	10.6	-622.22

03-10-2016	-58.7	6.6	-387.42
01-11-2016	-107.7	25.6	-2757.12
01-12-2016	-119.7	9.6	-1149.12
02-01-2017	-94.7	1.6	-151.52
Total			**3078.92**

Cov AB = (1/n) ∑(dx) (dy) = (1/10) 3078.92= 307.89

Correlation coefficient cov/$\sigma a \sigma b$ = 307.89/ (105.25 * 13.985) = 0.209

INTERPRETATION

The above table 9 shows the model calculation of INFOSYS &ICICI which got the correlation coefficient of 0.209.

TABLE 10: CORRELATION BETWEEN INFOSYS AND AXIS

Date	*Deviation of INFOSYS*	*Deviation of AXIS*	*Product of Deviation*
01-04-2016	109.3	-11.8	-1289.74
02-05-2016	104.3	10.2	1063.86
01-06-2016	160.3	52.2	8367.66
01-07-2016	76.3	81.2	6195.56
01-08-2016	-10.7	89.2	-954.44
01-09-2016	-58.7	135.2	-7936.24
03-10-2016	-58.7	89.2	-5236.04
01-11-2016	-107.7	14.2	-1529.34
01-12-2016	-119.7	4.2	-502.74
02-01-2017	-94.7	-14.8	1401.56
Total			**-419.9**

Cov AB = (1/n) ∑(dx) (dy) = (1/10) -419.9= -41.99

Correlation coefficient cov/$\sigma a \sigma b$ = -41.99/ (105.25 *70.073) = -0.0056

INTERPRETATION

The above table 10 shows the model calculation of INFOSYS &AXIS which got the correlation coefficient of -0.0056.

TABLE 11: CORRELATION BETWEEN INFOSYS AND SBI

Date	*Deviation of INFOSYS*	*Deviation of SBI*	*Product of Deviation*
01-04-2016	109.3	-33.8	-3694.34
02-05-2016	104.3	414.8	43263.64
01-06-2016	160.3	-30.8	-4937.24
01-07-2016	76.3	-9.8	-747.74

01-08-2016	-10.7	-1.8	19.26
01-09-2016	-58.7	23.2	-1361.84
03-10-2016	-58.7	26.2	-1537.94
01-11-2016	-107.7	29.2	-3144.84
01-12-2016	-119.7	26.2	-3136.14
02-01-2017	-94.7	14.2	-1344.74
Total			**23378.08**

Cov AB = (1/n) ∑(dx) (dy) = (1/10) 23378.08= 2337.80

Correlation coefficient cov/$\sigma a \sigma b$ = 2337.80 / (105.25 * 140.32) = 0.158

INTERPRETATION

The above table 11 shows the model calculation of INFOSYS &SBI which got the correlation coefficient of 0.158.

TABLE 12: CALCULATED VALUE OF CORRELATION COEFFICIENT OF COMBINATION OF SECURITIES

No	*Combination of securities*	*Value*
1	Correlation between INFOSYS and BHEL	4.85
2	Correlation between INFOSYS and ICICI	0.209
3	Correlation between INFOSYS and AXIS	5.69
4	Correlation between INFOSYS and SBI	0.158

INTERPRETATION

The above table 12 shows the calculated correlation coefficient values of the combination of INFOSYS to other securities as per the above table 8 correlation between INFOSYS and BHEL had greater positive value of 4.85 so the securities will fluctuate dynamically and preferably those investor which are interested in speculation will buy and on the order side security with negative correlation can give a steady return the security correlation between INFOSYS & AXIS had lesser value of -0.0056 and give steady returns.

CHART 2

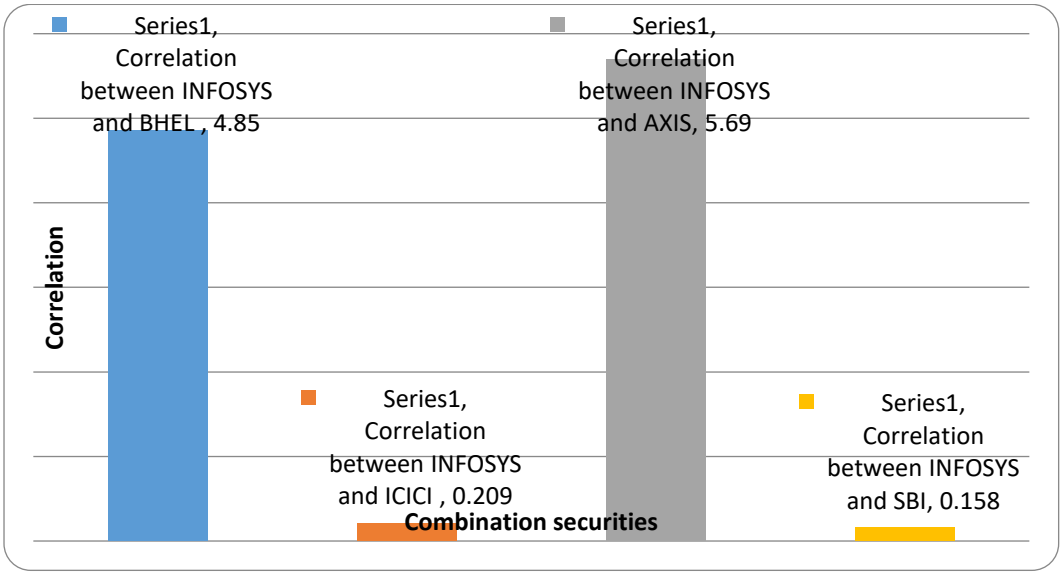


TABLE 13: STANDARD DEVIATION

SECURITIES	*STANDARD DEVIATION*
INFOSYS	105.25
BHEL	9.04
ICICI	13.985
AXIS	70.073
SBI	140.32

As per the above table 7 SBI had got greater deviation of 140.32 so the securities will fluctuate dynamically and preferably those investors which are interested in speculation will buy and on the other side security with less deviation can give a steady return, the security BHEL had lesser standard deviation 9.40 and give steady returns.

TABLE 14: CORRELATION

No	*Combination of securities*	*Value*
1	Correlation between INFOSYS and BHEL	4.85
2	Correlation between INFOSYS and ICICI	0.209
3	Correlation between INFOSYS and AXIS	5.69
4	Correlation between INFOSYS and SBI	0.158

INTERPRETATION

The above table 12 shows the calculated correlation coefficient values of the combination of INFOSYS to other securities as per the above table 8 correlation between INFOSYS and BHEL had greater positive value of 4.85 so the securities will fluctuate dynamically and preferably those investor which are interested in speculation will buy and on the order side security with negative correlation can give a steady return the security correlation between INFOSYS & AXIS had lesser value of -0.0056 and give steady returns.

SUGGESTION

Infosys had got greater deviation of 105.25 so the securities will fluctuate dynamically and preferably those investors which are interested in speculation will buy and on the other side security with less deviation can give some steady returns the security BHEL had lesser standard deviation 9.04 and give steady returns.

Correlation between INFOSYS and BHEL had greater positive value of 4.85 so the securities will fluctuate dynamically and preferably those investors which are interested in speculation will buy and on the order side security with negative correlation can give a steady return the security correlation between INFOSYS & AXIS had lesser value of -0.0056 and give steady returns. So that better to invest INFOSYS and BHEL securities.

CONCLUSION

Though security analysis is also an art, as the analyst must often rely on his knowledge and ability, security analysis has the advantage over commodities market analysis. In security analysis, the investor can protect himself such that even if the results are negative, the purchase might still prove satisfactory.

In this study an attempt is made to measure the security analysis about these angel broking securities and commodities. It is found that customers are invested with their stocks which ever the five major industries share level recommends are to investors portfolio level. Various findings and recommendation conclude that the SBI securities and commodities level well position compare then other industry.

BIBLIOGRAPHY

[1] Bhalla, V.K., (2008), “Investment Management: Security Analysis & Portfolio Managements”, S.Chand. 13th Edition, 2008.

[2] Chris Book (2008), “Introductory Econometrics for Finance”, United States of America by Cambridge University Press, New York.

[3] Commodity Insights Year Book (2009) – A Publication by Price water house Coopers Pvt. Ltd. & Multi Commodity Exchange of India Limited.
[4] Commodity Insights Year Book (2010) A Publication by Price water house Coopers Pvt. Ltd. & Multi Commodity Exchange of India Limited.
[5] Cultivation Practices for Cardamom – Elettaria Cardamom (2009) Published by Spices Board Ministry of Commerce & Industry, Niseema Printers & Publishers, Kochi -18.
[6] Ranganatham,M. & Madhumathi, R. (2009), "Investment Analysis & Portfolio Management", Dorling Kindersley Pvt., Ltd., 4th Edition, 2009.

WEBSITES

[7] www.angelcommodities.com
[8] www.nse.com
[9] www.unctad.org/commodities
[10] www.academicjournals.org

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