



An internship Report on Surma Securities Holding Company Ltd (SSHCL)

An Internship Report Presented in Partial Fulfillment of the Requirements for the
Degree of Master of Business Administration (MBA)

Submitted to
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Fall -2014

Date of Submission: December 23, 2014

December 23, 2014

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Subject: Submission of Internship Report- Fall, 2014.

Sir,

It is my great pleasure to inform you that as per the requirement to complete internship for MBA program at BRAC University, here is my internship working report on “Surma Securities Holding Company Ltd (SSHCL)”. I am submitting this report as the part of my internship (BUS 699) in SSHCL. During preparing this report, I tried my level best to follow your instructions and instructions that have been given to me by my organization supervisor.

The entire report is based on my practical experience in the SSHCL’s Motijill Branch. I tried my best to provide that I have learnt during the internship program at SSHCL.

I would be highly encouraged if you are kind enough to accept the report. If you have any further enquiry regarding any additional information, I would be very pleased to clarify that.

Thank you so much for your time and assistance during my internship program.

Sincerely yours,

Imran Ahmed

ID # 13164140

Acknowledgement

At the very beginning, I would like to express my gratitude to Almighty Allah for whose kindness, I am enough sound mentally and physically to prepare this internship report. I would like to show my appreciation and gratefulness to my supervisor *Mr. Ariful Ghani*, Lecturer, BRAC Business School, BRAC University for his persistent guidance and invaluable suggestions throughout the duration of this internship report. My appreciation is also extended to *Mr. S.M. Arifuzzaman*, Assistant Professor, BRAC Business School, BRAC University who has devoted a great deal of time for me and given me extra assistance and resources to aid this report.

I would also like to thank my host organization supervisor *Mr. Mansoor Mumin*, Director of Surma Securities Holding Company Ltd (SSHCL) for providing me an opportunity to work in SSHCL as an intern.

I also like to extend my gratitude to *Mr. Ashfaqur Rahman*, Senior Associate, Trading and sales who helped me to gain knowledge of many new things during my internship program. At last I like to thank *Abdul Muktedir* (Clients Support department) for providing valuable advices in the successful completion of this project.

Executive Summary

As I intend to become a financial analyst in future, I was determined to do my MBA Internship in a bank or a brokerage house. I felt very fortunate when I got response from SSHCL, which is one of oldest brokerage house in Bangladesh. When I started doing my internship, I began only with the few basic concepts of stock markets that I had learnt in my MBA program. But while working, I learned many of new things which improvised my thought capacity more than ever and I found myself gradually turning from an amateur to a semi-professional.

As I had three objectives and had quite little ideas on the issues, I started working with all of them at once and soon found myself completely engrossed in books, magazines, newspapers, etc, not being pressurized by the tough objectives, but to douse my curiosity for learning more about the stock market every moment.

The first objective being to identifying the most efficient portfolio comprises of multiple stock security companies of different industries. Hence, I developed a mathematical method which can evaluate the efficiency of any portfolio on given weights. I believe, this method can help the investors by acting as a reference for future use.

My second objective was to evaluate and show individual stocks and portfolio interacts with each other. Under this report, I have used some methods to relate the correlation among individual security stocks and portfolio. This correlation may suggest the investors how the entire security stocks are connected with the ups and downs of stock market.

The third objective was to develop such a mathematical analysis which may be helpful for the existing clients of SSHCL. Because existing clients of SSHCL want to invest certain amount of money in their preferred stocks company but they feel hesitate in investing those amounts for achieving maximum return against minimum risks. My report may help to show them possible risks and returns trade off.

Also, I have included detailed work activities at SSHCL. Finally, I must say that my Internship experience could have never been better than what I experienced in SSHCL. I declare, what I learnt here, has added a golden feather in my career and this will surely act as the key contributor in my mission of being a competent financial analyst.

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1.0 Introduction

Surma Securities Holding Co. Ltd is a stock dealer and it participates in bidding of block subscription of share for newly listed companies. The main business of Surma Securities Holding Co. Ltd includes executing shares trades in Dhaka Stock Exchange on behalf of its customers as well as providing all kinds of support services like statistics and strategy planning, research materials to its customers. Surma Securities Holding Co. Ltd holds strong commitment toward the development of Bangladesh capital market. Surma Securities Holding Co. Ltd has got approx. 9000 retail investors clients and 12 corporate clients as institutional investors. Its current daily average turnover is over 18 crore. It has 3 direct branches and 14 sub branches.

1.1 History

Surma Securities Holding Co. Ltd, a corporate member of Dhaka Stock Exchange Ltd. It is one of the top stock security brokers and it provides brokerage services to the retail and institutional investors. Surma Securities Holding Co. Ltd received membership of the Dhaka stock Exchange (DSE) in 1994. It has also got approval of SEC and DSE to launch its brokerage business in the same year. Surma Securities Holding Co. Ltd is also a full service depository of participant of the Central Depository Bangladesh Ltd (CDBL).

It is founded by well known business-man of Sylhet division and Ex-President of Sylhet Chamber of Commerce & Industry (SCCI), Ex-Vice President of Federation of Chamber of Commerce & Industry (FBCCI) Mr. M.A.Mumin.

(About Surma securities Holding Co. Ltd, facebook, 2014)

1.2 Mission

The mission of Surma Securities Holding Co. Ltd is “Providing Brokerage service to its client's and maintain and obeying Securities & Exchange Law's of the country”.

(About Surma securities Holding Co. Ltd, facebook, 2014)

1.3 Service offerings

Trading Services: Surma Securities Holding Co. Ltd is one of the leading brokerage of Bangladesh and it has solid trade infrastructure for trade services. To be the best trade service

provider it has already taken some big steps towards success by establishing latest IT infrastructure, dedicated female trading booth and large screen display for large trading floor. It also provides services for Debentures, Treasury-Bonds, Mutual-Funds etc as per law of Bangladesh Securities and Exchange Commission.

Depository Services: It deals with all depository services which comprises of opening and maintaining of BO account, transfer and transmission of instruments, dematerialization and re-materialization of instrument through service depository participant of CDBL.

Client Services: It offers the highest level of convenience to clients through highly skilled traders who fully understand client's requirements. Also it provides expert advice to clients and executes order accurately and instantly to obtain clients total satisfaction.

Online Trading: Very soon Surma Securities Holding Co. Ltd is going to introduce online trading system for its client's. It will facilitate them to transact shares from anywhere of the world through internet.

1.4 Operational Network Organogram

The operational organogram of Surma Securities Holding Co. Ltd is given below:

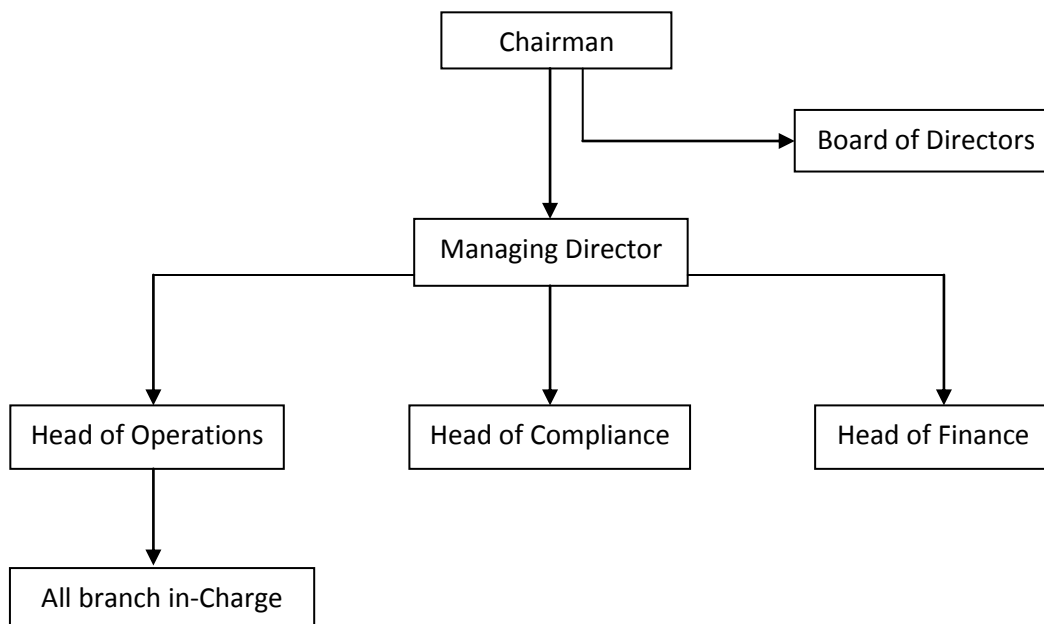


Exhibit 1: Operational organogram of SSHCL

2.0 Job Description

I have started working at Surma Securities Holding Co. Ltd (SSHCL) as an intern from 28th September, 2014 under the direct supervision of Mr. Mansoor Mumin (Managing Director of SSHCL). Till now I am performing the duties that are assigned by my supervisor. So far I have performed many tasks that enriched both of my practical and professional knowledge. I have got a chance to experience and familiarized with many updated softwares like Sis, TESA etc. A brief description of my job responsibilities are described below,

Client Service: In SSHCL, I need to keep and maintain update of trade confirmation note/ record every day. I have to keep the record of prior days total trade volume in a Microsoft Excel document sheet. In this excel sheet, all trading ID is preserved. Also different sections of SSHCL maintains a separate documentation to manually record the trade confirmation and related trade volumes. I have to maintain the print copies of the trade confirmation notes for both clients and offices records and distribute those copies to clients and keep the office copies in separate folders.

Trading: There are many techniques and rules for trading in DSE. I have learned many things in dealing with trading tasks. In trading SSHCL uses a web enabled special software named TESA. TESA is electronic securities architecture software (based on HP proprietary operating system and database management system) which enable the trading functions of DSE. TESA is built and designed for global stock securities markets. There are many features that TESA usually deals such as client / server design techniques, fault tolerant computers, intelligent workstations etc. These features provide high message system integrity, cooperative processing continuous operation and complete automatic recovery. Under the trading section, I did the following tasks,

- **Market Information:** I need to supply DSE market information to formulate buy and sell decisions. TESA software helps me to provide market information to clients and other employees inside SSHCL.
- **Market Price:** Every day clients want to know/ see the market price of different shares. I do provide the buying and selling prices by using TESA. Because of some constraints and higher authority restrictions, I can only provide the price information but I cannot buy or sell any share for clients.

- **Market Index:** I need to provide both DSE general index and weighted average index to clients as per our client's requirement.

BO account opening: Some time I need to work on BO account opening for clients of SSHCL. To open a BO account, the potential client will need to apply for BO account by fulfilling BO account opening form. This form includes the type of account (Bangladeshi or NRB), applicants name, permanent address, present address, nationality, national identity/ passport number, date of birth, occupation, signature of the applicant, nominee name and signature of nominee, deposit amount, Bank statement / certificate and special instructions (if any) etc. I have to check all these information before the potential clients submit it SSHCL. My direct supervisor has already instructed me to check these information before collecting it from potential clients.

Portfolio analysis and portfolio management: For maintaining client's portfolio management profile, I have to examine overall market index and each and every individual stock prices as per clients preferences. Here I can suggest which stock could be less risky and which are risky and very risky stock. When I can understand the clients risk taking ability against his / her preferred gain / loss margin, then I can show them how it could be the outcomes if they invest their money in stocks. The portfolio stock analysis enables a client to minimize risk and ultimately maximize Profit by investing money in multiple stocks rather than individual stocks.

2.1 Different Aspects of Job performance:

SSHCL is a performance driven brokerage company, where career development opportunities are completely driven from the merit and performance of its employees. Employees of SSHCL enjoy a competitive compensation package. The performance appraisal process evaluates its employees twice a year and SSHCL have in place a strictly performance based reward system.

SSHCL always be aware to recognize the efforts of people who want to make a difference. At the time of annual performance bonus, it give "Spot Awards" to those of those employees who have the spirit to take on new challenges and who have contributed significantly in areas outside their regular responsibilities.



PROJECT WORK
ON
PORTFOLIO ANALYSIS

3.0 Summary of the project:

In an investment portfolio, there is a collection of investments held by an individual or institution in the form of stocks, bonds, options, currencies etc. The main purpose of investment portfolio analysis is to invest these assets in an efficient manner to get the best possible return comparing with lower possible risks. Here in this project, 10 individual stock securities have been selected within 3 different industries. 5 stock securities are selected under Pharmaceuticals industries which are ACI Limited, Beximco Pharma, Glaxo SmithKline, Reckitt Benckiser (BD) Limited and Renata Limited. 4 stock securities are selected under Insurance industries which are Bangladesh General Insurance Company Limited (BGIC), Green Delta Insurance, National Life Insurance and Sandhani Life Insurance. Only Grameen Phone has been selected under Telecom Industry. This report is prepared to help and suggest the clients of Surma Securities Holding Company Limited as per their investment requirements. This report can help and suggest them to where they can invest their money effectively and efficiently as per their investment requirements and expected returns. This report has a sample analysis which generated individual and industry stocks average returns, risks, diversifiable risks and non-diversifiable risk, colleration among them and lastly best possible risks & returns for a given recruitments.

3.1 Objectives of the project:

- ✓ To find out the most efficient portfolio comprises of 10 securities in three different industries.
- ✓ To evaluate how individual securities and portfolio interact with each other.
- ✓ To underline some possible moves for SSHCL in order to minimize risks and maximize returns for existing clients.

3.2 Methodology:

Quantitative Research: Relevant data were collected from the website of DHAKA Stock Exchange. These data were the key resource to reach the objectives of this report based on calculative results.

Observation: Previous experiences on some security industries and continuous observation on those security industries played an important role to make few portfolios which comprised 10 different securities among 3 different industries.

Investment measure methods: Some guided methods were the medium of reaching in results of followings,

- Totals return of individual securities and Security industries
- Weighted average (mean) of individual securities, each Securities industry and each portfolio.
- Diversifiable risk and non diversifiable risk
- Correlation of coefficient among individual securities, among industries.
- Portfolio management.

3.3 Limitations of this report:

- Though it was my objective to reach in the solution of best risk & return of an individual portfolio for a given weight of that particular portfolio. But it would be much more efficient if I can show the efficient portfolio analysis by Markowitz Frontier Model with global minimum points of various risks & returns trade off.
- The topic of this project contains lots of other relevant factors which could not be covered with the limited knowledge and time. Otherwise the report could be more precise and informative.
- The capital market is extremely dynamic anywhere in the world. So it is often hard for an intern to reach in a quick and proper judgment without being an expert of this arena.

4.0 Project:

Stock Companies Overview



GlaxoSmithKline (GSK) Bangladesh Limited carries with it an enviable image and reputation for the past 6 decades. A subsidiary of GlaxoSmithKline plc- one of the world's leading research-based pharmaceutical and healthcare companies GSK Bangladesh, continues to be committed to improving the quality of human life by enabling people to do more, feel better and live longer. The Company's principle activities include secondary manufacture of pharmaceutical products and marketing of vaccines, pharmaceutical healthcare products and health food drinks. In 1949 the Company commenced its journey in Bangladesh with its' corporate identity as Glaxo in Chittagong as an importer of products from the Glaxo Group Companies. It started spreading its spectrum from being an importer to a manufacturer by establishing its own manufacturing unit at Chittagong in 1967. The facility till date is considered as one of the Centres of Excellence in Global Manufacturing & Supply Network of the Group. The global corporate mergers and acquisitions have seen the evolution of the Company's identity in the past 6 decades. In line with mergers and acquisitions the identity changed from Glaxo to GlaxoWellcome Bangladesh Limited following the Burroughs Wellcome acquisition in 1995 and finally to GlaxoSmithKline Bangladesh Limited during 2002 after merger with SmithKlineBeecham in December 2000. The mega merger of the Company enables it to deliver cutting edge advancements in health care solutions. The relentless commitment, setting of standards of ethical standards and quality backed leading edge technology of the Company has built a strong relationship between the stakeholders and GSK Bangladesh. GSK is committed to developing new and effective healthcare solutions.



ACI's mission is to achieve business excellence through quality by understanding, accepting, meeting and exceeding customer expectations. ACI follows International Standards on Quality

Management System to ensure consistent quality of products and services to achieve customer satisfaction. ACI also meets all national regulatory requirements relating to its current businesses and ensures that current Good Manufacturing Practices (CGMP) as recommended by World Health Organization is followed properly. ACI has been accepted as a Founding Member of the Community of Global Growth Companies by the World Economic Forum which is the most prestigious business networking organization.



Beximco Pharmaceuticals Ltd (BPL) is a leading manufacturer of pharmaceutical formulations and Active Pharmaceutical Ingredients (APIs) in Bangladesh. The company is one of the largest exporter of pharmaceuticals in the country and its state-of-the-art manufacturing facilities are certified by global regulatory bodies of Australia, European Union, Gulf nations, Brazil, among others. The company is consistently building upon its portfolio and currently producing more than 500 products in different dosage forms covering broader therapeutic categories which include antibiotics, antihypertensive, antidiabetics, antiretroviral, anti-asthma inhalers etc., among many others. With decades of contract manufacturing experience with global MNCs, skilled manpower and proven formulation capabilities, the company has been building a visible and growing presence across the continents offering high quality generics at the most affordable cost. Ensuring access to quality medicines is the powerful aspiration that motivates more than 2,800 employees of the organization, and each of them is guided by the same moral and social responsibilities the company values most.



Renata Limited (formerly Pfizer Limited) is one of the leading and fastest growing pharmaceutical and animal health product companies in Bangladesh. The company started its operations in 1972 as Pfizer (Bangladesh) Limited. In 1993, Pfizer transferred the ownership of its Bangladesh operations to local shareholders and the name of the company was changed to Renata Limited. Renata manufactures about 300 generic pharmaceutical products including hormones, contraceptives, anti-cancer drugs, oral preparations, cephalosporins, parental

preparations as well as other conventional drugs. In addition, we also offer about 95 animal health products.



RB's health, home and hygiene brands are sold in nearly 200 countries around the world. RB's entrepreneurial and creative people drive its marketing, sales, research and development. RB's vision is a world where people are healthier and live better. RB's purpose is to make a difference by giving people innovative solutions for healthier lives and happier home. As RB makes and markets health care brands there is an obligation for each of RB employees to note any "adverse events" that they come across that may involve one of RB's health care products and report it to RB's drug safety officers.

BANGLADESH GENERAL INSURANCE COMPANY LTD.

Bangladesh general insurance company Ltd. or "BGIC Ltd" is the first general insurance company in Bangladesh in the private sector. BGIC was incorporated as a public limited company and started business on 29 July, 1985. In December 2008, the numbers of shareholders of the company was 7,708, who held 1,769,705 shares. BGIC has since developed substantially with all the strengths and details prudently essential of an insurance company. It is primarily staffed with professionals of longest experience, qualified insurance technocrats of highest order of international repute and a team of highly educated and skilled personnel of commendable status. The equity structure of the company was carefully selected, not only for the financial benefit, but to support the growth of a dynamic company with the goal a major player both in the domestic and international insurance markets. The company ownership is prudently distributed to sponsor Director 22.94%, public Director 1.64%, institutions 14.67% and 60.75% General public shareholders. It's mission is to transform the company into an ideal insurance company, with larger growing equity base, that will provide more opportunities and options for utilization of funds in a prudent manner and help to increase profitability through economy of scale.



Green Delta Insurance Company Limited (GDIC) is one of the leading private non-life insurance companies in Bangladesh. GDIC was incorporated in December 14, 1985 as a public limited company, under the Companies Act 1913. Actual operations started on 1st January 1986, with a paid up capital of BDT 30.00 million. Now, Green Delta Insurance Company Ltd. is amassed about BDT 637.875 million with a credit rating of AA1 and ST1. GDIC holds the proud distinction of being the first ever company to raise its paid up capital to such a level. This is also the 1st Insurance Company in Bangladesh to have equity partnership with IFC. With a presence in the strategically important parts of the country, which includes 38 branches, Green Delta Insurance Company Ltd. has established its prominent presence with equity participation in Delta Brac Housing Ltd., Progressive Life Insurance Co Ltd, United Hospital Ltd. FinExcel Ltd. and BD Venture Ltd. Green Delta Capital Ltd. and Green Delta Securities Ltd. are two of the direct subsidiaries. GDIC provides stock brokerage services through Green Delta Securities Ltd. (GDSL) and investment supports through Green Delta Capital Ltd. (GDCL).

National Life Insurance Co. Ltd.

The era of privatized insurers started in Bangladesh with the establishment of National Life Insurance Company, the first ever private life insurance company introduced in the People's Republic of Bangladesh. It started functioning on 23rd April, 1985. The company having 703 crore Premium income in the year 2012 with a hefty Life fund of 2419 crore happens to be a dominant insurer and is moving fast on a new growth trajectory surpassing its previous records. The motto of the company is to ensure a guarantee for a planned future. Three visions of the company are- To encourage & induce saving of the high/mid income population and especially of the low income & marginal group. The company has diversified its products to match customers' needs & preferences. Currently it provides multifarious life assurance products to cater the aspirations & needs as well as religious beliefs of the clients. Benefits to the policyholder of NLI are high as they are now enjoying high level rate of policy bonus compared to other competent companies.



SLIC is one of the leading Life Insurance Company in Bangladesh since 1990. Clients are the spirit of our business, so we build a genial & realistic relationship with clients. SLIC enlarge its network by establishing agency offices. As a result in 31st December 2010 8.61 lac Policyholder is now under the shade of Sandhani. SLIC provide Life Insurance coverage in the remote area as well as within all the people of the country. The core business activities of SLIC covers Micro Insurance for the Poor People, Ordinary Life Policy for the General, Group Insurance for the Corporate, Education Policy for the Students, Hajj Policy for the Religious People and so on. To be a competent service provider, SLIC maintain the quality, also increasing the growth rate by maximizing the Return on Investment. As a whole SLIC is a complete package with corporate practice, diversified business profile and foster entrepreneurship.



grameenphone

Grameenphone started its journey with the Village Phone program: a pioneering initiative to empower rural women of Bangladesh. The name Grameenphone translates to “Rural phone”. Starting its operations on March 26, 1997, the Independence Day of Bangladesh, Grameenphone has come a long way. Grameenphone pioneered the then breakthrough initiative of mobile to mobile telephony and became the first and only operator to cover 98% of the country’s people with network. Since its inception Grameenphone has built the largest cellular network in the country with over 8500 base stations. Presently, nearly 99 percent of the country's population is within the coverage area of the Grameenphone network. Grameenphone has always been a pioneer in introducing new products and services in the local telecom market. GP was the first company to introduce GSM technology in Bangladesh when it launched its services in March 1997. Grameenphone was also the first telecommunication operator in Bangladesh to introduce the pre-paid service in September 1999. It established the first 24-hour Call Center, introduced value-added services such as VMS, SMS, fax and data transmission services, international roaming service, WAP, SMS-based push-pull services, EDGE, personal ring back tone and many other products and services.

5.0 Findings & Analysis

Pharmaceutical, Insurance & Telecom Industry Performance

Pharmaceuticals Industry:

Component	BXPHARMA	GLAXOSMIT H	ACI	RENATA	RECKITT BEN	Industry Average
Total Return	-6.57%	1.30%	-25.84%	2.21%	1.95%	-5.39%
Mean	-0.15%	0.03%	-0.60%	0.05%	0.05%	-0.13%
Standard Deviation	2.64%	1.43%	2.91%	1.21%	1.56%	1.03%
Rho (with DSEX index)	0.597241793	0.039235538	0.318409714	0.481219092	0.074085565	0.630305679
Alpha (Intercept)	-0.000838037	0.000326258	-0.005605289	0.000767133	0.000504988	-0.00096899
Beta (Slope)	1.504239786	0.053707164	0.882654844	0.555219804	0.110541973	0.621272714

Figure 01: Pharmaceuticals industry performance

In pharmaceuticals industry there are five companies. Among them both RENATA & RECKITT BEN has the highest average return 0.05% but only RENATA has the lowest standard deviation 1.21% among all of them. Industry average return is -0.13% and S.D. is 1.03%. RENATA has the highest alpha and BXPHARMA has the highest beta.

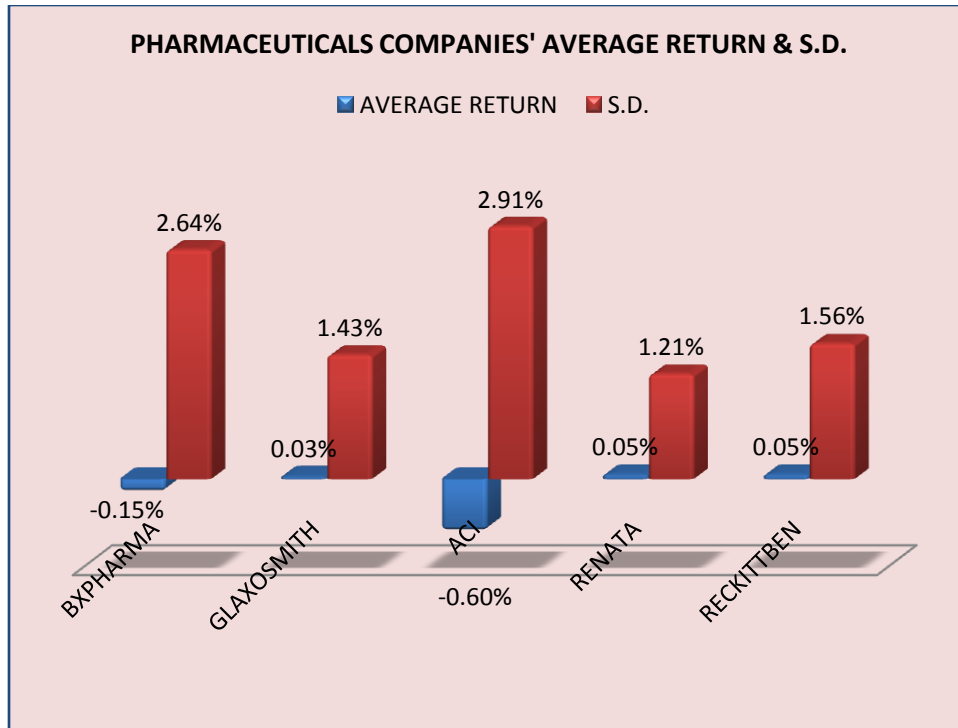
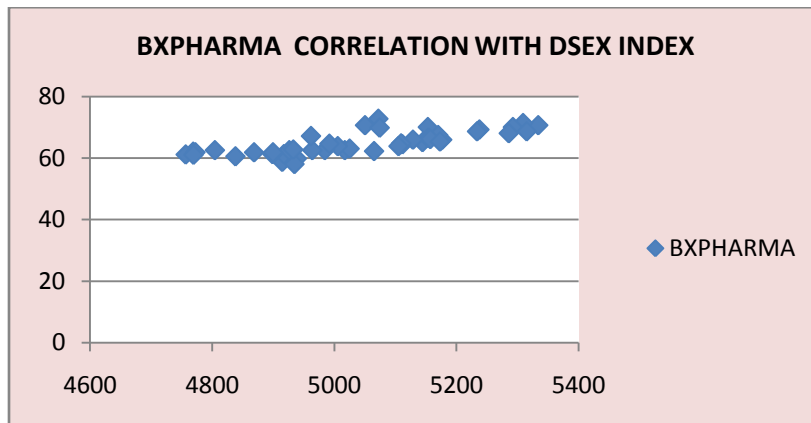
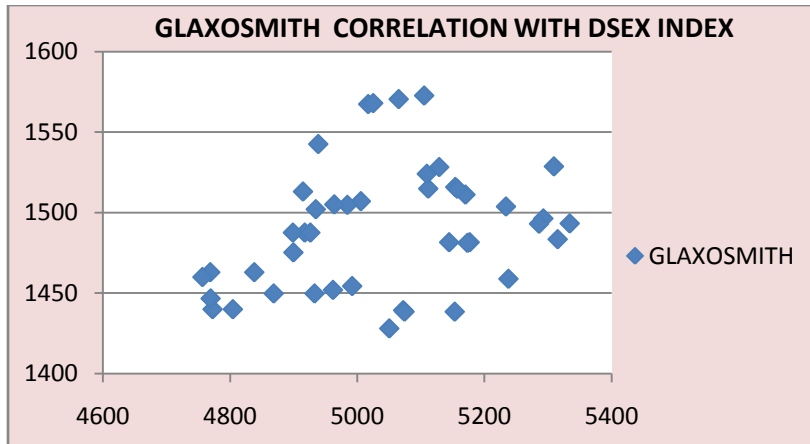


Figure 02: Pharmaceuticals Companies' Average Return & S.D.

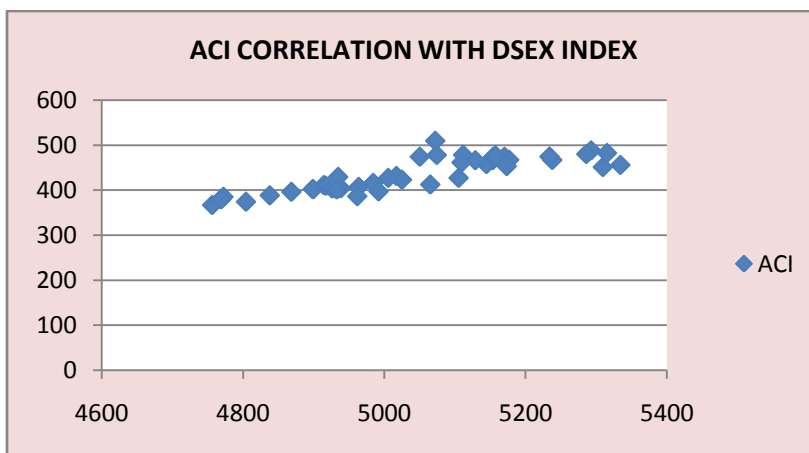
Correlation of Pharmaceuticals Companies with DSEX index:



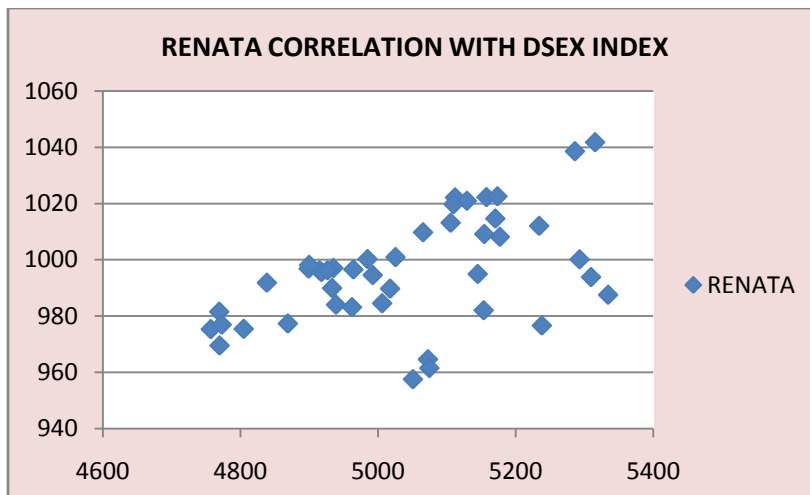
There is a moderately strong positive correlation between BXPHERMA and DSEX index. The correlation is 0.5972 which indicates that if DSEX index increases then price of BXPHERMA also increases but moderately.



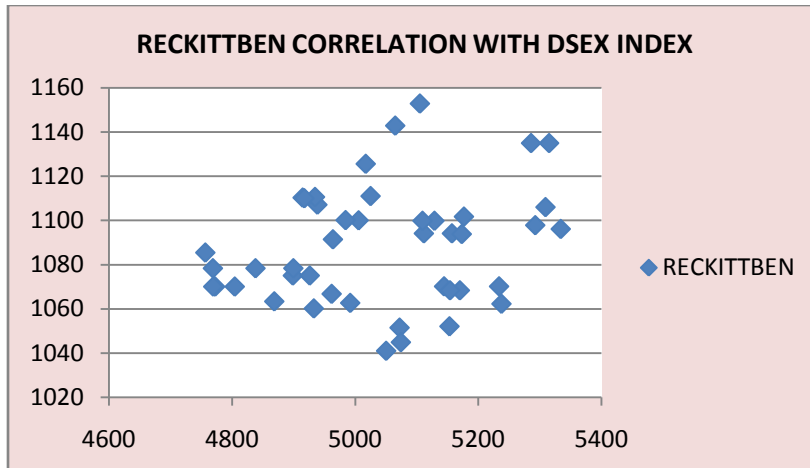
There is a very weak positive correlation between Glaxosmith and DSEX index. The correlation is 0.0392 which indicates that if DSEX index increases then price of Glaxosmith also increases but very little.



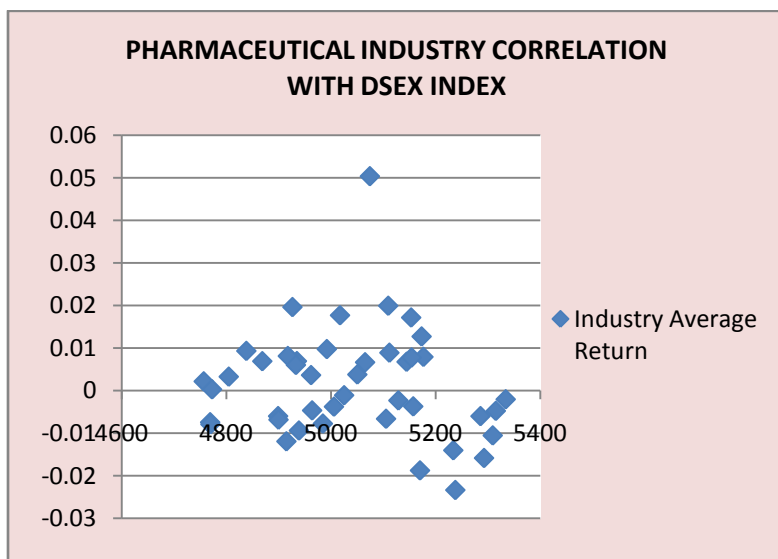
There is a moderately weak positive correlation between ACI and DSEX index. The correlation is 0.3184 which indicates that if DSEX index increases then price of ACI also increases but moderately little.



There is a moderately weak positive correlation between Renata and DSEX index. The correlation is 0.4812 which indicates that if DSEX index increases then price of Renata also increases but moderately little.



There is a very weak positive correlation between Reckittben and DSEX index. The correlation is 0.0741 which indicates that if DSEX index increases then price of Reckittben also increases but very little.



There is a moderately strong positive correlation between pharmaceuticals industry and DSEX index. The correlation is 0.6303 which indicates that if DSEX index increases then price of pharmaceuticals industry (For these 5 companies) also increases and as an industry the effect is more than individual companies.

Insurance Industry:

Component	BGIC	GREENDELTA	NATLIFEINS	SANDHANI	Industry Average
Total Return	-10.97%	-4.40%	4.73%	-5.96%	-4.15%
Mean	-0.26%	-0.10%	0.11%	-0.14%	-0.10%
Standard Deviation	1.94%	1.49%	1.50%	2.06%	1.09%
Rho (with DSEX index)	0.47176436	0.329048948	0.350493555	0.17963398	0.527538276
Alpha (Intercept)	0.002152448	0.000808166	0.001329003	-0.0012251	-0.000714188
Beta (Slope)	0.871880045	0.469013115	0.500991119	0.35226747	0.548537937

Figure 03: Insurance industry performance

In insurance industry there are four companies. All the companies have negative average income except NATLIFEINS. Among them NATLIFEINS has the highest average return 0.11% but GREENDELTA has the lowest standard deviation 1.49%. Industry average return is -0.10% and S.D. is 1.09%. BGIC has both the highest alpha and highest beta.

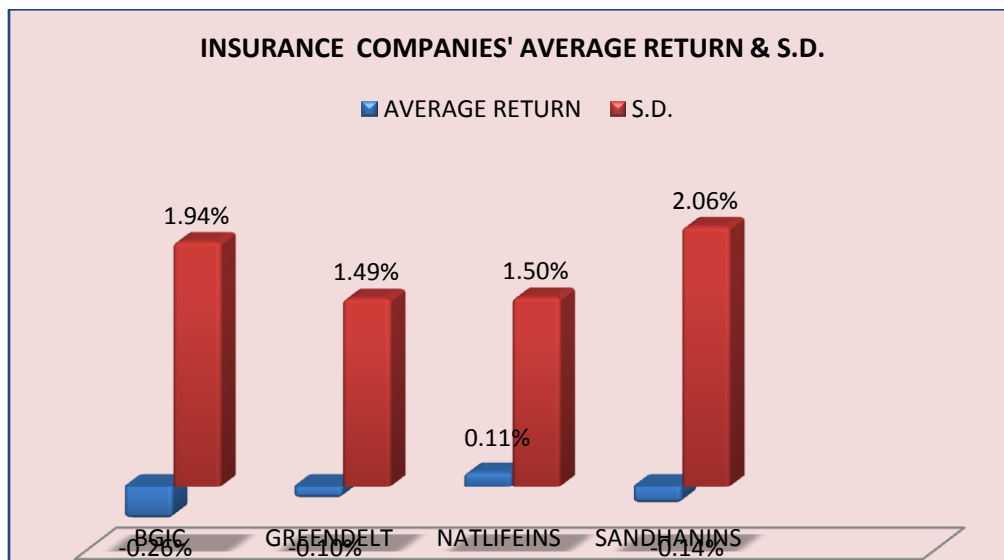
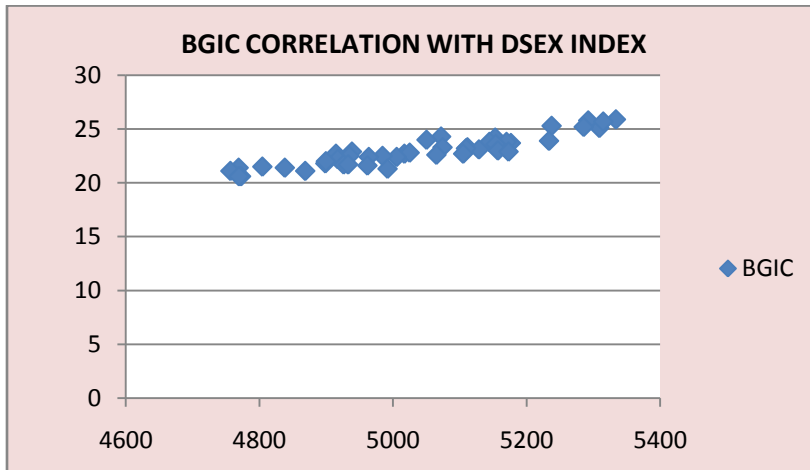
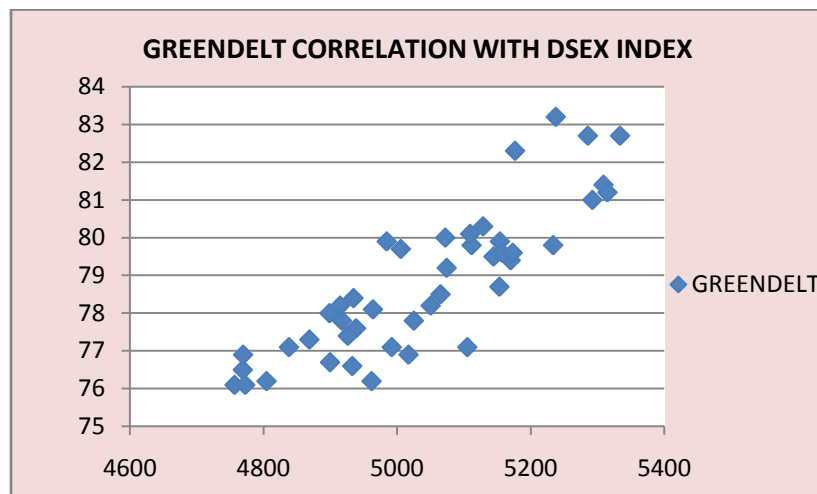


Figure 04: Insurance Companies' Average Return & S.D.

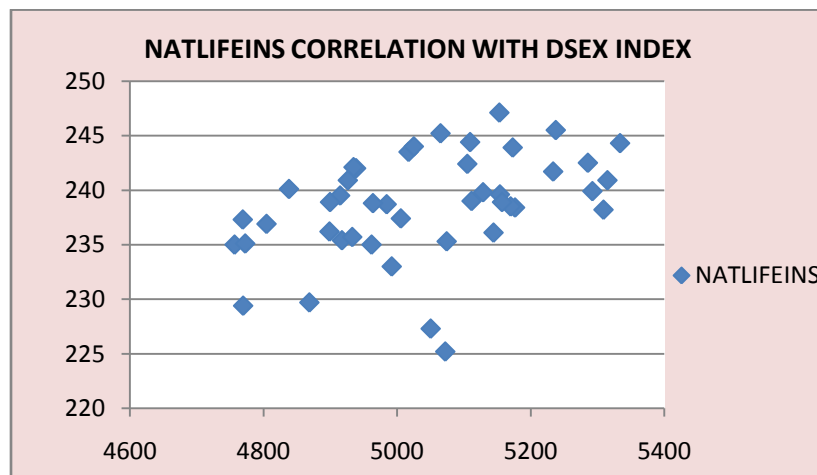
Correlation of Insurance Companies with DSEX index



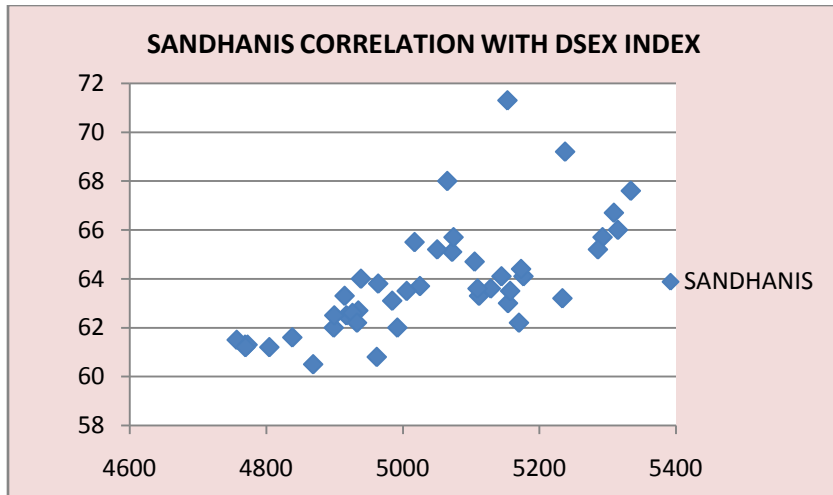
There is a moderately weak positive correlation between BGIC and DSEX index. The correlation is 0.4718 which indicates that if DSEX index increases then price of BGIC also increases but moderately little.



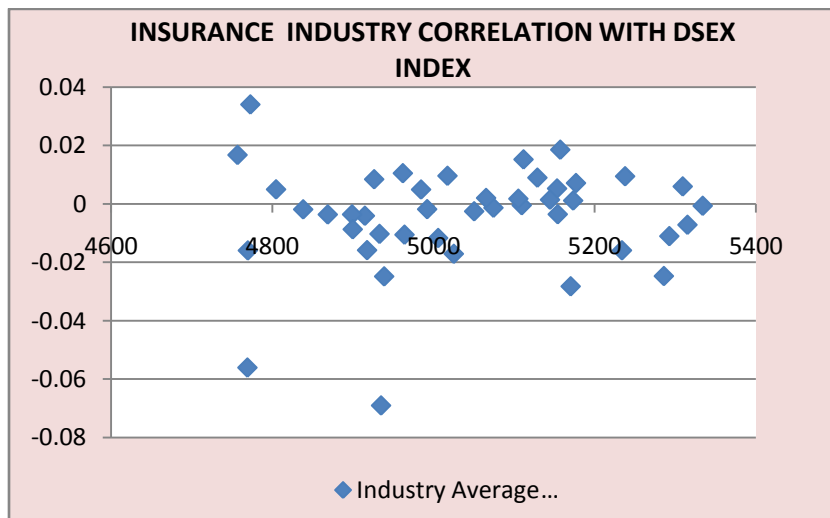
There is a moderately weak positive correlation between GREENDELTA and DSEX index. The correlation is 0.3290 which indicates that if DSEX index increases then price of GREENDELTA also increases but little.



There is a moderately weak positive correlation between NATLIFEINS and DSEX index. The correlation is 0.3505 which indicates that if DSEX index increases then price of NATLIFEINS also increases but little.



There is a weak positive correlation between SHANDHANIS and DSEX index. The correlation is 0.1796 which indicates that if DSEX index increases then price of SHANDHANIS also increases but very little.



There is a moderately strong positive correlation between insurance industry and DSEX index. The correlation is 0.5275 which indicates that if DSEX index increases then price of insurance companies also increases but moderately little.

Telecom Industry:

Component	GP	Industry Average
Total Return	-11.30%	-11.30%
Mean	-0.26%	-0.26%
Standard Deviation	1.79%	1.79%
Rho (with DSEX index)	0.58838834	0.58838834
Alpha (Intercept)	-0.0021675	-0.0021675
Beta (Slope)	1.00698278	1.00698278

Figure 05: Telecom (GP) industry performance

In telecom industry there is one company. The average return of GP is -0.26% and standard deviation is 1.79%. As there is only one company in telecom sector so the industry average and standard deviation would be the same.

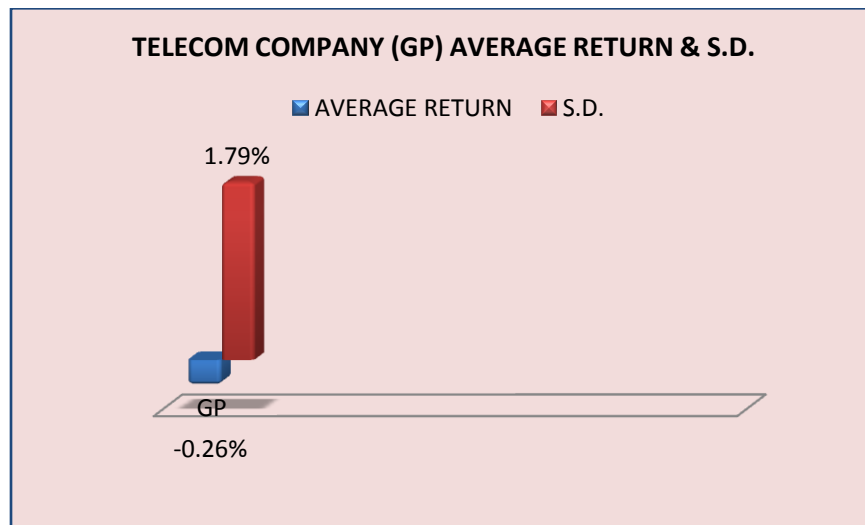
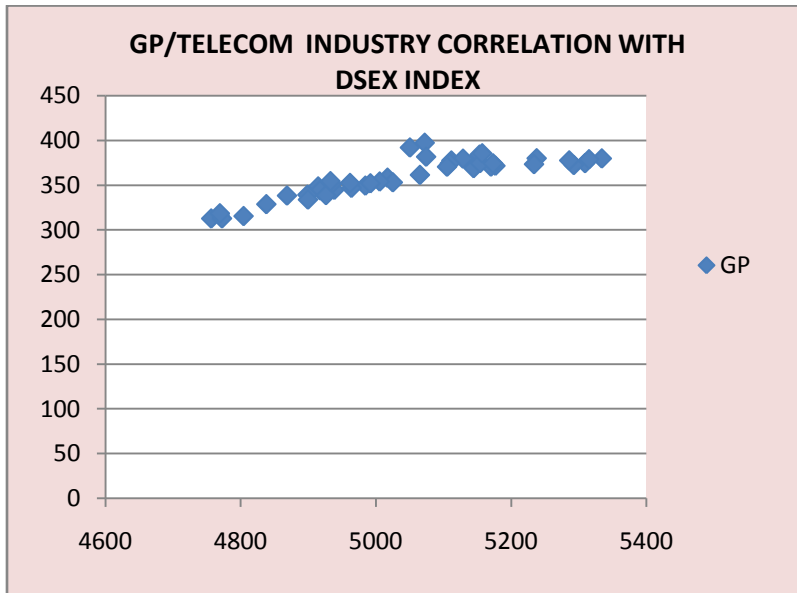


Figure 06: Telecom (GP) Average Return & S.D.

Correlation of Telecom Company with DSEX index



There is a moderately strong positive correlation between telecom industry and DSEX index. The correlation is 0.5884 which indicates that if DSEX index increases then price of telecom companies also increases but moderately less.

DSEX index:

Component	DSEX index
Total Return	-1.97%
Mean	-0.05%
Standard Deviation	1.05%
Rho	1
Alpha (Intercept)	0
Beta (Slope)	1

DSEX index has average return of -0.05% and standard deviation is 1.05%.

Company Correlation:

	BXPH ARMA	GLAX OSMI TH	ACI	RENATA	RECKI TTBEN	BGIC	GREEN DELT	NATLI FEINS	SANDH ANINS	GP	DSEX
BXPH ARMA	1	0.1294	0.2074	0.0449	-0.1176	0.1560	0.0697	0.0192	-0.0104	0.2891	0.5972
GLAXOSMITH	0.1294	1	-0.2656	-0.0177	0.5401	0.0308	-0.0719	-0.0621	-0.0361	-0.0320	0.0392
ACI	0.2074	-0.2656	1	0.2265	-0.1606	0.1855	0.1795	0.1013	-0.2636	0.4197	0.3184
RENATA	0.0449	-0.0177	0.2265	1	0.4094	0.2818	0.1449	0.4000	0.2270	0.3851	0.4812
RECKIT TBEN	-0.1176	0.5401	-0.1606	0.4094	1	0.1627	-0.0079	0.0039	0.0535	0.0858	0.0741
BGIC	0.1560	0.0308	0.1855	0.2818	0.1627	1	0.1405	0.2941	0.1389	0.3099	0.4718
GREEN DELT	0.0697	-0.0719	0.1795	0.1449	-0.0079	0.1405	1	0.0424	-0.0801	0.0407	0.3290
NATLI FEINS	0.0192	-0.0621	0.1013	0.4000	0.0039	0.2941	0.0424	1	0.5240	0.1372	0.3505
SANDHANINS	-0.0104	-0.0361	-0.2636	0.2270	0.0535	0.1389	-0.0801	0.5240	1	0.1121	0.1796
GP	0.2891	-0.0320	0.4197	0.3851	0.0858	0.3099	0.0407	0.1372	0.1121	1	0.5884
DSEX	0.5972	0.0392	0.3184	0.4812	0.0741	0.4718	0.3290	0.3505	0.1796	0.5884	1

Figure 07: ten companies' stock price correlation

There are five pharmaceuticals, four insurance and one Telecom Company. BXPHARMA has weak positive correlation with GLAXOSMITH, ACI, RENATA, BGIC, GREENDELTA, NATLIFEINS, GP and moderately strong positive correlation with DSEX index which means that if stock prices of the above companies increase then stock price of BXPHARMA also increases. The company has weak negative correlation with RECKITTEN and SANDHANINS which indicates that there are inverse relationships among these company stock prices with BXPHARMA stock price.

GLAXOSMITH has weak positive correlation with BXPHARMA, BGIC, DSEX index and moderately strong positive correlation with RECKITT BEN which means that that if stock prices of the above companies increase then stock price of GLAXOSMITH also increases. The company has weak negative correlation with ACI, RENATA, GREENDELTA, NATLIFEINS, SANDHANIS and GP which indicates that there are inverse relationships among these company stock prices with GLAXOSMITH stock price.

ACI has weak positive correlation with BXPHARMA, RENATA, BGIC, GREENDELTA, NATLIFEINS, GP, DSEX index which means that that if stock prices of the above companies increase then stock price of ACI also increases. The company has weak negative correlation with GLAXOSMITH, RECKITT BEN and SANDHANIS which indicates that there are inverse relationships among these company stock prices with ACI stock price.

RENATA has weak positive correlation with BXPHARMA, ACI, RECKITT BEN, BGIC, GREENDELTA, NATLIFEINS, SANDHANIS, GP and slightly strong positive correlation with DSEX index which means that that if stock prices of the above companies increase then stock price of RENATA also increases. The company has weak negative correlation with GLAXOSMITH which indicates that there are inverse relationships with this company stock price with RENATA stock price.

RECKITT BEN has weak positive correlation with RENATA, BGIC, NATLIFEINS, SANDHANIS, GP, DSEX index and moderately strong positive correlation with GLAXOSMITH which means that that if stock prices of the above companies increase then stock price of RECKITT BEN also increases. The company has weak negative correlation with BXPHARMA, ACI and GREENDELTA which indicates that there is an inverse relationship with these company stock prices with RECKITT BEN stock price.

BGIC has weak positive correlation with BXPHARMA, GLAXOSMITH, ACI, RENATA, RECKITT BEN, GREENDELTA, NATLIFEINS, SANDHANIS, GP and relatively strong correlation with DSEX index which means that that if stock prices of the above companies increase then stock price of BGIC also increases. The company does not have any negative correlation with other companies' stock prices and DSEX index.

GREENDELTA has weak positive correlation with BXPHERMA, ACI, RENATA, BGIC, NATLIFEINS, GP, DSEX index which means that that if stock prices of the above companies increase then stock price of GREENDELTA also increases. The company has weak negative correlation with GLAXOSMITH, RECKITBEN and SANDHANIS which indicates that there is an inverse relationship with these company stock prices with GREENDELTA stock price.

NATLIFEINS has weak positive correlation with BXPHERMA, ACI, RENATA, RECKITBEN, BGIC, GREENDELTA, GP, DSEX index and moderately strong positive correlation with SANDHANIS which means that that if stock prices of the above companies increase then stock price of NATLIFEINS also increases. The company has weak negative correlation with GLAXOSMITH which indicates that there is an inverse relationship with this company stock price with NATLIFEINS stock price.

SANDHANIS has weak positive correlation with RENATA, RECKITBEN, BGIC, GP, DSEX index and moderately strong positive correlation with NATLIFEINS. The Company has weak negative correlation with BXPHERMA, GLAXOSMITH, ACI and GREENDELTA.

GP has weak positive correlation with BXPHERMA, ACI, RENATA, RECKITBEN, BGIC, GREENDELTA, NATLIFEINS, SANDHANIS and moderately strong positive correlation with DSEX index which means that that if stock prices of the above companies increase then stock price of GP also increases. The Company has weak negative correlation with GLAXOSMITH which indicates that there is an inverse relationship with this company stock price with GP stock price.

DSEX has weak positive correlation with GLAXOSMITH, ACI, RECKITBEN, GREENDELTA, NATLIFEINS, SANDHANIS and relatively strong correlation with BXPHERMA, RENATA, BGIC and GP which means that that if stock prices of the above companies increase then DSEX index also increases.

Industry Correlation:

	Pharmaceutical	Insurance	Telecom
Pharmaceutical	1	0.192717908	0.491038431
Insurance	0.192717908	1	0.251676973
Telecom	0.491038431	0.251676973	1

Figure 08: Industry stock price correlation

There are weak positive correlation among pharmaceuticals, insurance and telecom industry stock price.

Different Portfolio Return:

PORTFOLIO	PHARMACEUTICALS INDUSTRY		INSURANCE INDUSTRY		TELECOM INDUSTRY		PORTFOLIO RETURN E(Rp)
	RETURN	WEIGHT	RETURN	WEIGHT	RETURN	WEIGHT	
1	-0.13%	0.4	-0.10%	0.4	-0.26%	0.2	-0.14%
2	-0.13%	0.2	-0.10%	0.5	-0.26%	0.3	-0.15%
3	-0.13%	0.3	-0.10%	0.3	-0.26%	0.4	-0.17%
4	-0.13%	0.7	-0.10%	0.2	-0.26%	0.1	-0.14%
5	-0.13%	0.1	-0.10%	0.1	-0.26%	0.8	-0.23%
6	-0.13%	0.33	-0.10%	0.33	-0.26%	0.34	-0.16%
7	-0.13%	0.25	-0.10%	0.25	-0.26%	0.5	-0.19%
8	-0.13%	0.45	-0.10%	0.35	-0.26%	0.2	-0.15%
9	-0.13%	0.35	-0.10%	0.3	-0.26%	0.35	-0.17%
10	-0.13%	0.2	-0.10%	0.3	-0.26%	0.5	-0.19%

Figure 09: Ten portfolios' return

We selected ten different portfolios -combination of three industry stocks. All of these Portfolios have negative return. Among them portfolio 1 and 4 has the negative but highest return -0.14% and portfolio 10 has the lowest return -0.19%. Portfolio return depends on both weight and return rate.

Different Portfolio Risk:

Portfolio	PHARMACEUTICALS INDUSTRY			INSURANCE INDUSTRY			TELECOM INDUSTRY			Portfolio Risk
	Risk	Weight	Correlation (P,I)	Risk	Weight	Correlation (I, T)	Risk	Weight	Correlation (T,P)	
1	1.03%	0.4	0.19272	1.09%	0.4	0.25168	1.79%	0.2	0.49104	0.884%
2	1.03%	0.2	0.19272	1.09%	0.5	0.25168	1.79%	0.3	0.49104	0.963%
3	1.03%	0.3	0.19272	1.09%	0.3	0.25168	1.79%	0.4	0.49104	1.044%
4	1.03%	0.7	0.19272	1.09%	0.2	0.25168	1.79%	0.1	0.49104	0.898%
5	1.03%	0.1	0.19272	1.09%	0.1	0.25168	1.79%	0.8	0.49104	1.517%
6	1.03%	0.33	0.19272	1.09%	0.33	0.25168	1.79%	0.34	0.49104	0.988%
7	1.03%	0.25	0.19272	1.09%	0.25	0.25168	1.79%	0.5	0.49104	1.148%
8	1.03%	0.45	0.19272	1.09%	0.35	0.25168	1.79%	0.2	0.49104	0.888%
9	1.03%	0.35	0.19272	1.09%	0.3	0.25168	1.79%	0.35	0.49104	1.000%
10	1.03%	0.2	0.19272	1.09%	0.3	0.25168	1.79%	0.5	0.49104	1.142%

Figure 10: Ten portfolios' risk

Here we have selected ten portfolios with different weights. Portfolio 1 and 4 contains the highest return -0.14% and portfolio 1 contains the lowest risk 0.884%. As DSEX index is low,

expected return of the portfolios are also low. Because of almost stable share price, portfolio risks don't fluctuate that much.

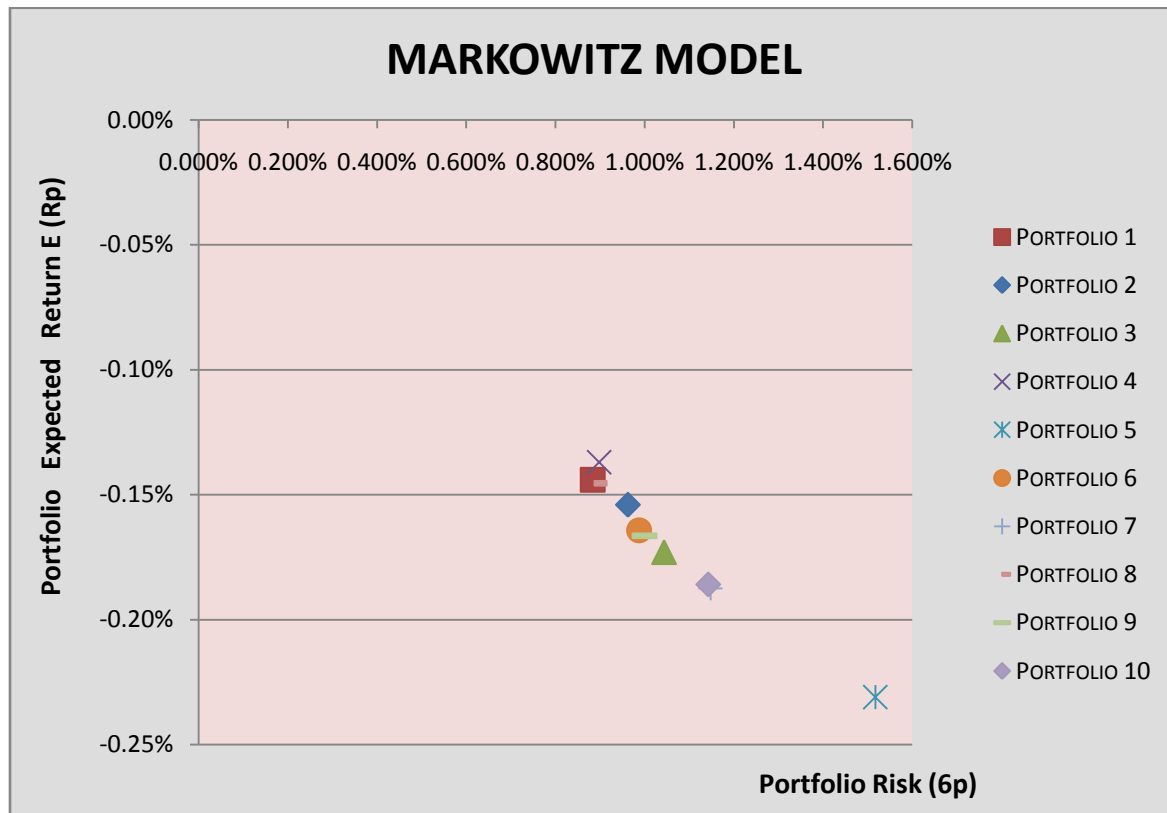


Figure 11: Markowitz Model

To select an optimal portfolio of financial assets using the Markowitz analysis investors identify optimal risk-return combinations available from the set of risky assets being considered by using the Markowitz efficient frontier analysis and they select the optimal portfolio from among those in the efficient set based on their preferences. To maximize portfolio expected [return](#) for a given amount of portfolio risk, or equivalently minimize [risk](#) for a given level of expected return, investors carefully choose the proportions of various [assets](#).

6.0 Critical observation and Recommendation:

- Portfolio risk is always less than a weighted average of the risks of the securities in the portfolio thus diversification almost always lowers risk, and should be taken advantage of.
- Before investing in different stocks we need to consider both the correlation and portfolio weight because portfolio risk is affected by the correlation between stocks and by the percentage of funds invested in each stock.
- The standard deviation of the portfolio is directly affected by the correlation between the two stocks. Portfolio risk will be reduced as the correlation coefficient moves from +1.0 downward. In perfect positive correlation diversification does not lead to a reduction in risk. So, Investors should find securities with the least positive correlation possible.
- Optimal portfolios can be constructed if portfolios are diversified correctly. Investors should not hold only one security; they should always diversify to reduce their risk.
- Regardless of the number of the assets held in a portfolio or the proportion of total investable funds placed in each asset, the expected return on the portfolio is always a weighted average of the expected returns for individual assets in the portfolio. So, investors should consider about individual stock return and what portion of the funds they are investing in those assets.
- Since an investor wants a high profit and a small risk he/she wants to maximize return and minimize risk, therefore he/she should choose a portfolio which gives a combination highest return and lowest possible risk.

7.0 Conclusion

During the time of internship, I was specially introduced to the real life experience. I think it is a unique opportunity for me to learn about the practical work, official accounts, financial and portfolio management system in a reputed organization. This internship has enhanced my knowledge about the capital market to a large extent. During my internship period, I have learnt a lot of belongings about capital market.

Now a day trade in capital market does not mean just purchasing and selling shares. This is very important to conduct the trades in stock market in an organized and effective manner. Now the facts are that how we can make this trade process more effective. Portfolio analysis and portfolio management system can be a bigger solution in this sector. In addition to that maintaining a satisfactory level of clients' satisfaction might make the whole trade process a lot more progressive in capital market. As we all know in the capital market, it is very dynamic and challenging. To enrich and maintain a better business in capital market, it is much more important to do it efficiently. Surma Securities Holding Company Ltd (SSHCL) definitely satisfies their customers and to maintain this scenario in a more efficient and prospective manner. SSHCL maintains the highest standard of service for the clients.

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