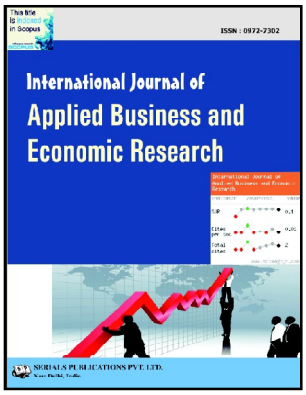


International Journal of Applied Business and Economic Research

ISSN : 0972-7302

available at http: www.serialsjournal.com

© Serials Publications Pvt. Ltd.

Volume 15 • Number 17 (Part-II) • 2017

Portfolio Management: A Study on Investment Risk and Return of Selected Companies

Shivani Tyagi[1] and Manjula Shastri[2]

[1] *Research Scholar, Amity Business School, Amity University, Uttar Pradesh*
[2] *Assistant Professor, Amity Business School, Amity University, Uttar Pradesh*

Abstract: In today's complicated financial environment every human being is needed to sacrifice a certain amount of consumption and save a portion of his income and start investing in the secured life and for the bright future. Most of the people acknowledge investing to be complicated activity. They are puzzled by the excess wealth and rise of investment alternatives, afraid by the variation in financial prices, distressed by the presence of secure and great institutional investors, perplexed by unusual instruments and perplexing investment strategies, puzzled by the tax system, and crabbed by the financial deceit or fraud. In investment, judgment is very challenging and perplexed task. A procedure needs to be pursued while making any decision. Portfolio management is one aspect where a practice or approach is to be pursued to form an investment decision and after the judgment is made, an approach is followed to emerge the decision. The method pursued to make an investment decision is known as the techniques of portfolio management and once the technique is approved, the investment is built based on plan called as the investment strategy. Investment strategy is a professionally investing money services and it is an essential part of financial services sectors of entire developed economies. Portfolio is an integration of different instruments and it constructed with the income of wealth of people over a time with a view to handling the preference for risk and return. Portfolio Management is a combined set of stages carried out in a consistent way to maintain and create proper integration of investment assets. The present paper calculates the risk - return analysis of selected securities. Moreover, in this paper the correlation between 5 selected companies listed in the National Stock Exchange (NSE) is calculated for the period of last five years i.e. (2012-2016) to know the diversification benefit of investment. The conclusion of this paper will be valuable for approach creators, a wide range of speculators, enterprises and other market members.

Key Words: Portfolio Management, Investment, Risk, Return.

INTRODUCTION

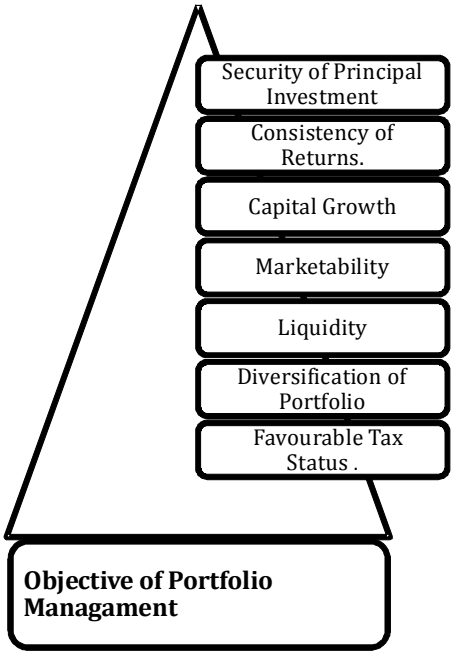
The Portfolio management is a combined set of stages carried out in a consistent way to maintain and create a proper portfolio i.e. an integration of assets to meet the stated goal of client. The portfolio

management initiates into planning through execution process and then moves to feedback. The investment policies and objectives are formulated in step of planning, strategic allocations of assets are set up and expectations of market are formed. In step of execution the portfolio manager builds the portfolio. The manager supervises and estimates the portfolio compared with plan for the feedback step. Any alternations recommended by feedback are investigated to assure that they indicated considerations of long run. Similarly, the investment strategy comprises the asset allocation process and selection of security as these decide what to spend in at which point in time to produce positive active returns. The investment strategy needs evaluations every when the portfolio is to be weighted again A specified investment strategy is needed to frame the portfolio management. This investment strategy can either be Active Investment Strategy (Aggressive investment strategy) or Passive Investment Strategy (Defensive Management Strategy). An individual or institutional investor who perceive the basic principles and analytical aspects of portfolio management features a higher probability of success.

REASON FOR INDULGENCE IN PORTFOLIO MANAGEMENT

Preceding investment in portfolio was confined to abundant and business class. But in recent times it has turned into a common activity. The upsurge in interest in men and women towards portfolio management can be attributed to the following reason: Increase in working inhabitants which paves way for greater income which in return ends in higher cost savings. Provision of tax incentives according of investment in specified channels. Availableness of large and attractive investment alternatives. Availableness of investment to provide income and capital gain. Increase in investment related promotion. Increase in the propensity of individual for hedge against inflation.

OBJECTIVE OF PORTFOLIO MANAGEMENT



Source: Image Credits © Moon Rodriguez

Security of Principal Investment: One of the main important objectives of portfolio management is minimization of risks or safety of investment. A careful overview of industry and economy trends is essential before providing safety. Investment investor needs that his basic amount of investment should stay safe. Consistency of Earnings: Portfolio supervisor also ensures to supply the stability of results by reinvest the same attained come back profitable and good portfolios. The portfolio helps to produce steady returns. The earned results should compensate the ability cost of the money invested. Capital Progress: By reinvest in development securities or through purchase of expansion securities, capital expansion can be attained. Capital understanding is very important to the portfolio to be able to guard the trader from any erosion in purchasing ability anticipated to inflation and other economic factors. A portfolio must contain those opportunities, which tend to appreciate in real value after altering for inflation. Marketability**:** Marketability is the truth with which a security can be purchased or sold. This is needed for providing flexibility to investment portfolio. Liquidity: Portfolio management is prepared so that it helps to use maximum good things about various good opportunities upcoming on the market. The portfolio should ensure that we now have enough funds offered by brief notice to manage the investor's liquidity needs. Diversification of Portfolio To reduced threat to capital and or income by buying numerous kinds of securities over a variety of industries will be the basic objectives of creating a portfolio. Favorable Tax Status: Portfolio management is organized so to improve the effective produce traders gets from his surplus invested funds. By lessening the tax burden, produce can be effectively improved on. An excellent portfolio should provide a favorable tax shelter to the investors.

LITERATURE REVIEW

Saltuk and Idrisi, (2012 in their study titled "A portfolio approach to impact Investment" They analyzed about the impact on investments in portfolio management with the performances of three dimensional approaches from assets like impact, risk and return. The investors allot the team or an individual to build an investment plan for portfolio to manage and invest in markets with different strategy. The target is fixed to invest in the portfolios with the increased number of targeted people, the business reaching the people targeted, output scales and the output quality. The business is modelled by the investors to provide the services for the populations, the distribution of products of the target is utilized, supplier's demands are satisfied and efficiency of resources with implementation of energy is inhibited. The investments are made with six dimensions based on primarily on surmise rather than adequate evidence are appreciation, ecosystem, products, income, investment and process. Another study was conducted by Hayk Zayimtsyan (2006) titled, "Optimal Portfolio Construction for financing in the International Finance Markets" on the matter of Ideal portfolio layout of Opportunities in the international Finance Market: The Exemplary case of the Central Bank of America: The major center point of the scholarly review was functional and theoretical facet of portfolio construction. For constructing the portfolio, he uses Markowitz's mean – variance model**.**

Ashish Garg and Ajay Chauhan (2012) in their study titled, " The impact of the developed world on the Indian industrial portfolio's return: Empirical evidence", they factors out the effect of the developed international market on the Indian commercial portfolio's returns by using taking returns of Dow Jones index and Morgan Stanly Composite Index (MSCI) as representatives of the advanced global market's returns and returns of diverse sectoral indices, constructed by means of Bombay Stock Exchange (BSE) as representatives of the Indian business portfolio's reward. For the cause, a settled of parametric and econometric are utilized on every day data, January 2000 to December 2009.The discoveries demonstrate that auto, metal, banking, human services, innovation and land are the most influenced division by the

United Sate of America market and developed worldwide market. The review uncovers that the Indian markets moreover impact the advance worldwide markets.

Sharif, *et al* (2014) in her study titled, "Factors Affecting Portfolio Investment in Pakistan: Evidence from Time Series Analysis. She researches about the investment in portfolio and analysis about the factors that affect the strategies of the market. The components of the private investment solely require portfolio investments. The main time series of the portfolio is calculated with the auto-regression modelling. The two variables of the portfolio are dependent variable and independent variable. The dependent variable consists of the Net Portfolio Investments or NPI whereas, the independent variables consists of Foreign Direct Investments, lagging of one period variable, capitalization of market, broad money, openness in trading, and return of deposits with average weight. The groupings of ventures are made with key-ideas in economy like employment opportunities spontaneous creation, improving the payment, GDP growth, performance of business sector, stabilization of exchange rate, and income per capital.

Ms. Anju Bala (2013) in her study titled, "Indian Stock Market", Review of Literature. She advocates that Stock markets is one of the most dynamic zones in the financial atmosphere, denoting an imperative commitment to money related improvement. Securities exchange plays out a vital part of empowering corporate, business visionaries to improve resources subsequently of their associations and business through open issues. Both long term and short term investors are intrigued to put resources into the share trading system as opposed to contribute anyplace. The Bombay Stock Market (BSE), The National Stock Market (NSE) and the Calcutta Stock Market (CSE) will be the three-vast stock exchange of Indian Currency Markets. The primary aim of present audit is to give survey of books identified with Indian Stock Markets.

OBJECTIVE OF THE STUDY:

1. To comprehend how Stock Portfolio Management is done.
2. To compute the portfolio risk and portfolio return of sample selected.
3. To calculate the correlation between different stocks of selected sample.

RESEARCH METHODOLOGY

The research methodology is devoted to the use of Markowitz model. The essential portfolio model originated by Harry Markowitz (1952,1959), who produced the reward for a profile of investment and an expected risk solution. Markowitz confirmed that the variance of the required rate of return was an important measure of stock portfolio risk under a restorable group of assumptions, and he produced the method of processing the variance of a portfolio. This Portfolio standard deviation and variance method not only suggested the value of diversification of investment to reduce the overall expected risk of a portfolio but also exhibited how effectively diversify.

Source of Data: The methodology followed or used in this study was on secondary data collection i.e. Organizations Total Annual Studies, data gathered from Internet, Magazines, Information gave by Inter Connected Stock Market.

Period of the Study: Financial data has been accumulated from the entire 2012-2016 of chosen companies i.e. GAIL, ITC, CIPLA, DLF AND BHARTI AIRTEL.

LIMITATIONS OF THE STUDY

- Construction of Portfolio is restricted to two corporations supported Markowitz model.
- Only a few and at random hand -picked scripts /companies are analyzed from National Stock Exchange (NSE).
- Data Series was Strictly limited to Secondary source.
- No Primary record is related to the project.

DATA ANALYSIS AND INTERPRETATION

The study incorporates the calculation of correlations between the different securities to have the capacity to realize at what proportion cash ought to be spent among the organization in the gathering. Also, the analysis includes the computation of specific Standard Deviation of securities and ends at the computation of weights of specific securities mixed up in collection. These percentages assist in allocating the money designed for investment predicated on risky portfolio.

Investor always expect a good return from other ventures. Rate of return could be interpreted as the total income the investor or the business receives through the holding period mentioned as a share of the purchasing price at the start of the holding period. Average return is the easy numerical average of a series of return produced over a period.

Table 1
Average Return of Selected Companies

Average Return of Gail company					
Year	P0	P1	(P1-P0)	Dividend	D+(P1-P0)/P0* 100
2012	384.00	356.75	356.75	8.70	-0.00048
2013	359.00	342.30	342.30	9.60	-0.0021
2014	344.00	444.80	444.80	10.40	0.00324
2015	443.00	375.10	375.10	6.00	-0.0017
2016	374.75	439.20	439.20	5.50	0.00185
Average Return of DLF Ltd.					
2012	184.70	230.60	230.60	2	0.00259
2013	233.65	166.70	166.70	2	-0.2777
2014	167.60	137.40	137.40	2	-0.172619
2015	137.00	116.00	116.00	2	-0.001386
2016	115.95	111.40	111.40	2	-0.02241
Average Return of Bharti Airtel					
2012	344.50	317.10	-27.4	1	-0.000766
2013	318.55	330.25	11.7	1	0.000398
2014	331.00	352.70	21.7	3.43	0.000759
2015	354.40	340.40	-14	2.22	-0.000332
2016	3339.0	305.65	-3.43	1.36	-0.000968

Average Return of Cipla Company					
2012	320.90	414.25	93.35	2	0.002970
2013	416.00	400.80	-15	2	-0.00312
2014	402.50	626.40	225.4	2	0.00564
2015	626.50	649.75	22.8	2	0.0395
2016	653.20	568.80	-84.2	2	-0.00125
Average Return of ITC Ltd					
2012	201.85	286.80	85	4.50	0.00616
2013	287.35	321.85	35	5.25	0.0014
2014	322.30	368.70	46.4	6.00	0.0016
2015	367.60	327.80	-39.9	6.25	-0.00091
2016	327.60	241.65	-85.95	9.70	-0.00232

The formula for calculating the Average Return is following:

Average Return = D+ (P1-P0)/P0*100

Inference: As shown in Table 1, it can be stated that last five-year data of Gail company was gathered from NSE. Positive return demonstrates that the stock increased during the calendar year of 2014 and 2016.Negative return shows that stock dropped during the calendar year of 2012, 2013, 2015. Average Return of the GAIL company is computed for the period of last five year i.e. 2012 -2016 and the return is 0. 00081.Positive return of DLF Ltd demonstrates that the list expanded during the schedule year of 2012.Negative return demonstrates that record dropped amid the logbook year of 2013, 2014, 2015 and 2016. Average Return of the DLF ltd company is ascertained for the time of most recent five year i.e. 2012 -2016 and the return is -0. 4715. The above analysis indicates that previous five-year data of Bharti Airtel was gathered from NSE. Positive return demonstrates that the list expanded amid the schedule year of 2013, 2014. Negative return demonstrates that record dropped aimed the logbook year of 2012,2015 and 2016. Average Return of the Bharti Airtel company is ascertained for the period of last five year i.e. 2012 -2016 and the return is 0. 000891.Positive return of CIPLA Ltd demonstrates that the list expanded amid during the schedule year of 2012, 2013, 2014.Negative return demonstrates that record dropped amid the logbook year of 2013 and 2016. Average Return of the CIPLA Ltd company is ascertained for the time of most recent five year i.e. 2012 -2016 and the return is 0. 0412.Positive return of ITC Ltd demonstrates that the list expanded amid the schedule year of 2012, 2013, 2014. Negative return demonstrates the record dropped amid the logbook year of 2015 & 2016. Average e Return of the ITC Ltd. company is ascertained for the period of last five year i.e. 2012 -2016 and the return is 0. 00595.

Table 2
Calculation of Standard Deviation of Selected Companies

Year	*Return*	*Average Return*	*(R R)*	*(R R) ²*
Standard Deviation of Gail company				
2012	0.0005	0.00081	-0.129	0.016641
2013	0.0021	0.00081	-0.291	0.084681
2014	0.0032	0.00081	0.239	0.057121
2015	0.0017	0.00081	-0.251	0.063001
2016	0.00185	0.00081	0.104	0.010816
Standard Deviation of DLF Ltd.				
2012	0.0025	-0.4715	0.474	2,246.76
2013	-0.0277	-0.4715	19.45	378.30
2014	-0.172	-0.4715	0.4715	2223.1
2015	-0.0013	-0.4715	0.4702	2210.8
2016	-0.02241	-0.4715	44.909	2016.8
Standard Deviation of Bharti Airtel				
2012	-0.000766	0.000891	0.0125	0.00015
2013	0.000398	0.000891	0.1289	0.016615
2014	0.000759	0.000891	0.165	0.027225
2015	-0.00032	0.000891	0.0559	0.00312
2016	-0.000968	0.000891	-0.0077	0.000059
Standard Deviation of ITC Ltd.				
2012	0.006163	0.00595	0.0213	0.00045
2013	0.001402	0.00595	-0.4548	0.20684
2014	0.001625	0.00595	-0.4325	0.187056
2015	-0.00912	0.00595	-0.6862	0.4708
2016	0.00595	0.00595	-0.827	0.6839
Standard Deviation of CIPLA Company				
2012	0.002970	0.0412	-3.83	14.66
2013	-0.000312	0.0412	-4.151	17.23
2014	0.00564	0.0412	-3.556	12.64
2015	0.0395	0.0412	-0.17	0.0289
2016	-0.00125	0.0412	-0.125	0.015625

Standard Deviation is calculated for the period of last five year (2012-2016)

Calculation of Standard Deviation

Where Standard Deviation is equal to $\sqrt{variance}$. Variance is 1/n (R R) ², R is the Return of each period and (R) is Average Return.

Inference: From the above Table 2 it can be stated that Variance also called risk is a measure of the dispersion in results about the expected value. It is used as an indication of the chance natural in the security. Standard Deviation is the square root of variance. The average return of Gail (0.00081) is subtracted from each solitary period return; this difference is then squared. The squared difference is summed. This amount is divided by the number of periods (using inhabitant's data) or the number of period minus 1same and Standard Deviation of Gail Company is 0.22. As the average return of DLF ltd (-0.4715) is subtracted from each solitary period return; this difference is then squared. The squared difference is summed. This amount is divided by the number of period and the Standard Deviation is 181.6 The same procedure of calculation is used to calculate the standard deviation of ITCLTD, CIPLA Ltd and Bharti Airtel.

Table 3
Expected Return and risk of the Selected Stocks

Scrip A	*Scrip B*	*Portfolio Return*	*Portfolio Risk*
GAIL	ITC	0.0072	16.58
GAIL	CIPLA	0.025	24.16
GAIL	AIRTEL	0.0058	8.954
GAIL	DLF	-0.18114	20.14
ITC	CIPLA	0.0235	17.33
ITC	AIRTEL	-0.00023	-12.16
ITC	DLF	0.18503	1.549
CIPLA	AIRTEL	0.0201	-11.67
CIPLA	DLF	-0.086	-1.474
AIRTEL	DLF	-0.3772	-0.0091

Portfolio Return

A single investment or collection of investments is known as to be reliable if no other investment or stock portfolio of property offers higher reward with the same or lower risk or lower risk with the same or more expected return. The expected return on a stock portfolio is calculated the following:

$$E[R_p] = \sum_{i=1}^{N} w_i E[R_i]$$

Where Wi is the proportions of portfolio invested in stock 1 and E(Ri) is the expected return on stock.

Portfolio Risk

Covariance can be an absolute measure of the extent to which two variables tend to move together. The correlation coefficient is a standardized statistical measure of the extent to which two factors are associated which range from perfect positive to perfect negative relationship.

$$Covariance = \frac{\Sigma (Return_{ABC} - Average_{ABC}) * (Return_{XYZ} - Average_{XYZ})}{(Sample\ Size) - 1}$$

Inference: The above Table 3, clearly talks about the results of empirical analysis. The expected return from purchasing in a selected stock over some future positioning period can be an estimate if the near future outcome of this security. Even though normal return can be a gauge of a financial specialist's desire without bounds, it can be gauge by utilizing verifiable information. In case the expected return is equal to or higher than required return, purchase the security. The above analysis show that Portfolio Return of ITC & DLF (0.185) followed by CIPLA & ITC (0.024) & CIPLA & AIRTEL (0.0201) stood at the top while Portfolio Return of GAIL & DLF (-018114), ITC & AIRTEL (-0.00023), CIPLA & DLF (-0.086) stood at the bottom with losses. Portfolio Risk of GAIL & CIPLA (24.16), GAIL & DLF (20.14), ITC &CIPLA (17.33) are staggeringly high while Portfolio risk of Airtel & DLF (0.0091), CIPLA & DLF (-1.474), CIPLA &AIRTEL (-11.67) remained at the base.

FINDINGS

Portfolio Management is an activity of encompassing many activities of investment securities and belongings. It is a dynamic and flexible concept and involves regular and systematic analysis, judgement, and action. A combination of securities presented together gives a beneficial effect if indeed they grouped in a way to secure higher profits after considering the chance elements. Investors will be able to achieve returns when the portfolios return of company stocks and debentures resultant would be known as varied portfolio. Profile building would address itself to three via thus, selectivity, diversification and timing. In case there is portfolio management, correlated investments are most profitable adversely. A legitimate business person would take a gander at his picked stock portfolio both for normal return and risk continually. Individual returns on the decided-on companies including GAIL, ITC, CIPLA, BHARTI AIRTEL & DLF are 0.00081, -0.4715, 0.0412, 0.00595, -0.000891 respectively. Individual risk on the selected stocks including GAIL, ITC, CIPLA, BHARTI AIRTEL & DLF are 0.22, 0.56, 2.9, 0.09 ,1816. Correlation between all the firm is positive except ITC &DLF, CIPLA & AIRTEL, CIPLA &DLF, AIRTEL & DLF. This means almost all the combos of portfolio are in good position to get in future. Portfolio Return of ITC & DLF (0.185) followed by CIPLA & ITC (0.024) & CIPLA & AIRTEL (0.0201) stood at the top while Portfolio Return of GAIL & DLF (-018114), ITC & AIRTEL (-0.00023), CIPLA & DLF (-0.086) stood at the bottom with losses. Portfolio Risk of GAIL & CIPLA (24.16), GAIL & DLF (20.14), ITC &CIPLA (17.33) are extraordinarily high while Portfolio risk of Airtel & DLF (0.0091), CIPLA & DLF (-1.474), CIPLA &AIRTEL (-11.67) remained at the base. The expected return from purchasing in a selected stock over some future positioning period can be an estimate if the near future outcome of this security. Even though normal return can be a gauge of a financial specialist's desire without bounds, it can be gauge by utilizing verifiable information. In case the expected return is equal to or higher than required return, purchase the security. Covariance can be an absolute measure of the extent to which two variables tend to move together. The correlation coefficient is a standardized statistical measure of the extent to which two factors are associated which range from perfect positive to perfect negative relationship.

CONCLUSION

The Primary aim of the Portfolio Management is to help the traders to make sensible choice between alternate purchase without a post trading stocks. Any gathering administration must assign the goals like Maximum outcomes, Optimum Earnings, Capital appreciation, Safe practices and so forth, in the same

prospectus. This service makes optimum profits to the buyers by proper selection and constant shifting of stock portfolio from one system to another structure of in one intend to another plan within the same program. Investment portfolio needs common reviews, the failure of which may additionally impede the funding of the investor. The subsidizing portfolio may have stock which may be the commercial center set up. Consequently, it makes feel to do a periodic evaluation to check the validity of any choice made. A blend of securities displayed together will give a gainful result if they gathered in an approach to secure higher outcomes after thinking about the hazard components. To correctly to manage an investment portfolio, the advisor should perceive an investor's targets and constraints. Portfolio management is an ongoing remarks procedure. It in no way stops, and changing market factors and private investment possibilities require advisors to frequently reveal market conditions and investor responses. The primary targets of the portfolio management are to help the investors to make sensible choice between alternate assets with a post trading stocks. Any portfolio management must specify the aims like getting maximum return, lower risk, capital appreciation etc., in the same prospects. The portfolio return and risk is the essential awareness in investment making plans. Don't neglect approximately how human capital can influence the asset allocation system and how its value is tied to other investment in the portfolio.

BIBLIOGRAPHY

Ashish Garg and Ajay Chauhan, (2012), "The impact of the developed world on the Indian industrial portfolio's return: Empirical evidence", Applied Finance, IUP Publications, New Delhi.

Ms. Anju Bala (2013), "Indian Stock Market", Review of Literature, Amity University, Noida, *India /Asian Journal of Marketing & Management Research*, Vol. 2, Issue 7, ISSN 2279-0667.

Br Akrani, G.(n.d.), What is Portfolio Management? Meaning and Objectives. Retrieved January 24, 2017, from *http://kalyan-city.blogspot.in/2011/10/what-is-portfolio-management-meaning.html*

Lawson S. C. (2008), Portfolio Management: Theory & Practices, Schultz Collins Lawson Chambers, C.A.

Markowitz, H. (1952), Portfolio Selection. *The Journal of Finance,* 7(1), pp.77.doi :10.2307/2975974.

Markowitz, H. (1959), Portfolio Selection (John T. Wiley & Sons, Inc. New York.)

Saltuk.Y and Idrissi E., (2012), A portfolio Approach to impact Investment Global Social Finance, pp. 1-48.

Sharif. I, et (2014), Factors Affecting Portfolio Investment in Pakistan: Evidence from Time Series Analysis, *Pakistan Economic and Social Review,* pp. 141-158.

Russell J Fuller & James Latrell Jr, Modern investment and security analysis, McGraw Hill Internal Editions.

Zayimtsyan H. (2006), "Optimal Portfolio Structure for Investment in the International Financial Markets: The Example of the Central Bank of Armenia", *American Economic Association*.

Website

*www.moneycontrol.com/sensex/bse_*

http://www.answer.com/topics/national_stock_exchange_of_india