

An Analytical Study on the Risk and Return Scrutiny by using Selection of Equity and Nifty

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ABSTRACT

The money an individual obtain is somewhat exhausted and the rest put amazing to one side for meeting future costs. Rather than keeping the reserve funds inert one may get a kick out of the chance to utilize reserve funds so as to get return on it later on is called venture. One needs to contribute to acquire return on inert assets, create a predetermined entirety of cash for a particular objective throughout everyday life and to make an arrangement for a dubious future. One can stop their assets in speculation roads like non-attractive budgetary resources, securities, common store plans, land, value shares, currency showcase instruments, disaster protection approaches, stores, govt sparing plans, retirement items, money related subordinates and different valuable articles. The key parts of any speculation are hazard and return. The best portfolio is discovering balance between boosting the arrival and limiting the hazard. The goal is to choose interests so as to broaden dangers while not diminishing anticipated return.

1. RISK AND RETURN ANALYSIS

Return expresses the amount which a financial specialist really earned on a speculation during a particular phase. Return incorporated the intrigue, profit and capital additions; while chance speaks to the vulnerability related with a particular errand. In money related terms, hazard is the opportunity or likelihood that a particular speculation could conceivably convey the real or anticipated returns. The hazard return exchange off says that the potential return ascends with an expansion in chance. It is significant for a financial specialist to settle on a harmony between the longing for the most minimal conceivable hazard and most noteworthy conceivable return. The hazard/return exchange off could without much of a stretch be known as the "capacity to rest around evening time test".

1.1 POTFOLIO MANAGEMENT

Portfolio is a group of financial assets which a financial specialist really earned on a venture during a particular phase. Return incorporated the conspiracy, profit and capital increases; even as chance speaks to the susceptibility connected by particular undertaking. In money related terms, exposure is the opening or likelihood that a particular venture could conceivably convey the real or probable returns. The hazard revisit exchange off says that the possible revisit ascends with an expansion in chance. It is significant for a financial specialist to settle on a synchronized among the craving by most reduced imaginable risk and most noteworthy imaginable revisit. The risk/return replace off could without much of a stretch be known as the "capacity to rest around evening time test".

1.2 NEED FOR THE STUDY

Investing money in the resources where the hazard is less has consistently been hard to choose, that implies the financial specialist might want to see the hazard and return before contributing.

The requirement for study is to dissect the hazard and return related with the chose loads of different industries listed in the NSE.

To find the industry that provides maximum return and minimum risk

1.3 OBJECTIVES OF THE STUDY

To measure the average rate of return of selected equity stocks.

To calculate the risk associated with equity stocks of selected industries.

To highlight the association among the rate of return of selected equity stocks of various industry groups with market rate of return i.e., NSE Nifty Index.

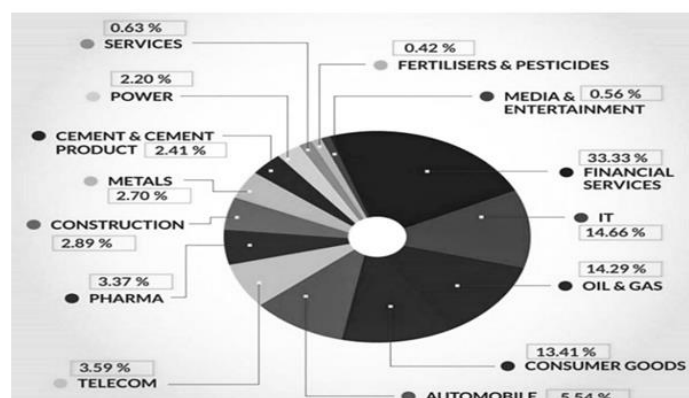
To know the statistical association among the rate of return of selected equity stocks and market portfolio return using multiple regression model

2. RESEARCH METHODS

2.1 SOURCES OF DATA

The relevant information for the study is a secondary source; data is collected from the website www.nseindia.com

SAMPLE SIZE



TOOLS AND TECHNIQUES

Statistical tools

- Return, Average Return
- Standard deviation
- Variance
- Correlation coefficient
- ANoVA
- Multiple regression etc

3. DATA ANANYSIS

AUTOMOBILE INDUSTRY

ASHOK LEYLAND LTD

Company is headquartered in Chennai owned by Hinduja Group. Ashok Leyland Ltd was founded on 7 September, 1948 and Dheeraj Hinduja is the Chairman. There are more than 11550 employees generating revenue of around US\$3.2 billion as of 2018.

3.1 BAJAJ AUTO LTD

Bajaj auto ltd is the Indian two-wheeler and three-wheeler produce organization. Bajaj Auto produces and sells bikes, bikes and auto carts. It is a piece of Bajaj Group established by Jamnalal Bajaj in Rajasthan on 29 November, 1945. Its base camp is in Pune. Rahul Bajaj is the Chairman and Rajiv Bajaj is the CEO. There are around 9200 employees generating revenue of US\$3.5 billion as of 2018. It is the world's 6th largest manufacturer of motorcycles and the 2nd largest in India. It is the world's largest three wheeler manufacturer

b. EXIDE INDUSTRIES LTD

Exide industries are a capacity battery delivering organization in India. It produces car and modern leadcorrosive batteries, submarine batteries and home UPS. It has 7 factories located across the country. The company was founded on 31 January, 1947 and its headquarters is in Kolkata. R.G.Kapadia is the Chairman. Exide is only company which provides Submarine Batteries to Indian Navy.

3.2 HERO MOTOCORP LTD

Hero motocorp ltd once Hero Honda is an Indian bike (<250cc) and bike maker. The organization is the biggest bike producer in India having a market share of 46%. It was founded by Dr. Brijmohan LalMunjal on 19 January, 1984 and headquarters is located at Gurgaon. Pawan Munjal is the Chairman, MD and CEO. The company has around 5850 employees generating revenue of US\$3.8 billion as of 2013. It was ranked 108 on the Forbes list of the 200 world's most respected companies in 2006.

3.3 MAHINDRA & MAHINDRA LTD

Mahindra & Mahindra ltd (M&M) is an Indian worldwide vehicle fabricating partnership established in 1945 and headquartered in Mumbai. Anand Mahindra is Executive Chairman and Pawan Goenka in MD. It is one of the biggest vehicle makers by creation in India and the biggest makers of tractors on the planet. It was positioned 21 on a rundown of top organizations in India by Fortune India 500 of every 2011. It has around 39300 representatives creating income of US\$1.4 billion starting at 2017.

3.4 TATA MOTORS LTD

Tata motors ltd formerly TELCO is an Indian worldwide car producing organization established in 1945, headquartered in Mumbai and an individual from Tata Group. Its items incorporate traveler vehicles, trucks, vans, mentors, transports, sports vehicles, development hardware and military vehicles. Natarajan Chandrasekaran is the Chairman and Guenter Butschek is the CEO. It has around 60000 employees generating revenue of US\$42 billion as of 2018.

3.5 MARUTI SUZUKI INDIA LTD

Maruti Suzuki India ltd formerly Maruti Udyog ltd is a car producer in India established in 1981, headquartered in New Delhi. It is a 54.2% claimed auxiliary of Japanese vehicle and cruiser producer Suzuki Motor Corporation. R.C.Bhargava is the Chairman and Kenichi Ayukawa is the MD & CEO. It has around 25000 employees generating revenue of US\$9.1 billion as of 2018.

DATE	Average returns of stock prices (%)							INDUS T RY AVG
	ASHOK LEY	BAJAJ -AUTO	EXIDEIND	MOTOCO	M&M	TATA MOTORS	MARUTI	
28/04/2019	10.66	-0.63	0.17	12.86	6.09	3.76	10.52	6.20
31/03/2019	1.01	2.09	2.45	3.00	3.78	-1.49	8.46	2.76
28/02/2019	-6.73	1.80	5.90	2.67	-1.92	1.99	1.57	0.75
31/01/2019	-0.11	-2.74	7.37	-1.08	5.81	-12.76	0.48	-0.43
30/12/2018	13.30	7.65	9.55	4.23	4.68	10.92	10.80	8.73
30/11/2018	0.75	-1.97	-0.58	-3.87	-0.03	2.77	1.02	-0.27
30/10/2018	-12.97	-5.13	-8.72	-5.55	-10.02	-13.66	-10.69	-9.53
30/09/2018	14.76	0.10	8.44	-1.80	-6.31	-0.54	7.65	3.18
31/08/2018	-9.08	-5.07	-1.24	-3.60	-2.15	-0.53	8.38	-1.90
29/07/2018	-8.08	10.28	3.46	10.56	-2.06	6.86	6.22	3.89
30/06/2018	-3.15	0.52	5.79	0.78	2.57	9.57	13.62	4.24
31/05/2018	-9.73	2.62	3.07	2.56	8.14	-0.09	0.62	1.03
29/04/2018	2.01	5.07	11.54	6.95	-0.65	12.56	9.67	6.74
31/03/2018	-1.66	3.57	5.67	-1.64	9.93	5.63	2.11	3.37
29/02/2018	23.90	9.30	8.99	17.83	-1.42	29.00	14.82	14.63
29/01/2018	-2.18	-6.01	6.32	-2.56	-0.42	-11.04	-20.98	-5.27
31/12/2017	1.93	-7.51	-17.89	-4.77	-3.07	-13.90	-11.38	-8.08
30/11/2017	-7.08	2.13	-1.45	-0.19	-6.82	-7.55	0.33	-2.95

7									
30/10/201									
7	0.96	-2.79	-0.60	4.56	15.37	9.95	3.55	4.43	
30/09/201									
7	1.57	14.23	-3.95	7.81	-6.35	28.92	-5.05	5.31	
31/08/201									
7	2.16	0.00	1.33	-0.11	3.51	-12.22	12.44	1.02	
31/07/201									
7	6.93	-11.59	5.03	-10.64	-10.46	-11.38	-3.79	-5.13	
30/06/201									
7	16.40	-0.66	-1.38	6.31	6.34	-11.59	7.66	3.30	
TOTAL	35.57	15.27	49.30	44.31	14.55	25.17	68.03		36.02
MEAN	1.55	0.66	2.14	1.93	0.63	1.09	2.96		1.57
STANDA RD DEVIATI ON	9.05	5.90	6.39	6.36	6.32	12.08	8.65		5.49

Interpretation

The companies Ashok Leyland, Bajaj Auto, M&M, and Tata Motors are giving lower returns than industry returns whereas Exide Industries, Hero Moto Co. and Maruti are giving higher returns.

All the companies are at high risk comparing with Industry risk

Formulae used

$$\text{RETURN} = \frac{\text{closing price of current month} - \text{closing of previous month}}{\text{closing price of previous month}} \times 100$$

To know the average rate of return (R) the following formula has been used Average = $\Sigma R / N$

Where ΣR = sum of rate of returns

N = total number of months

The next step is to know the risk associating with each selected security. For such, the formula is

Standard Deviation (SD) = $\sqrt{\text{variance}}$

Variance = $\frac{1}{N} \sum (-)^2$

Where $(-)^2$ = squares of difference between sample and mean.

FINDINGS:

The Banking & Finance, FMCG, IT, Pharmacy and Energy & Power industries are giving lower returns than Nifty returns whereas Automobile, Cement & Construction and Mining & Metal industries are giving higher returns.

All the industries are having higher risk than Nifty risk. The data is under normal distribution.

CORRELATION

- a) **Automobile sector and others**_ The automobile sector samples show an inter correlation in between Banking & Finance, Cement & Construction, FMCG, Mining & Metal, Energy & Power sectors and Nifty. It is not correlated with pharmacy and IT sectors.
- b) **Banking & Finance sector and others**_ The Banking & Finance sector samples show an inter correlation in between Automobile, Cement & Construction, FMCG, Mining & Metal, Energy & Power sectors and Nifty. It is not correlated with Pharmacy and IT sectors.
- c) **Cement & Construction sector and others**_ The Cement & Construction sector samples show an inter correlation in between Automobile, Banking & Finance, FMCG, Mining & Metal, Energy & Power sectors and Nifty. It is not correlated with Pharmacy and IT sectors.
- d) **FMCG sector and others**_ The FMCG sector samples show an inter correlation in-between Automobile, Banking & Finance, Cement & Construction, IT, Mining & Metal, Energy & Power sectors and Nifty. It is not correlated with pharmacy sector
- e) **IT sector and others**_ The IT sector samples show an inter correlation in between FMCG and Nifty. It is not correlated with Automobile, Banking & Finance, Cement & Construction, Mining & Metal, Pharmacy, Energy & Power sectors.
- f) **Mining & Metal sector and others**_ The Mining & Metal sector samples show an inter correlation in between Automobile, Banking & Finance, Cement & Construction, FMCG, Energy & Power sectors and Nifty. It is not correlated with Pharmacy and IT sectors.
- g) **Pharmacy sector and others**_ The Pharmacy sector samples are not correlated with all the other sectors and Nifty.
- h) **Energy & power sector and others**_ The Energy & power sector samples show an inter correlation in between Automobile, Banking & Finance, Cement & Construction, FMCG, Mining & Metal sectors and Nifty. It is not correlated with Pharmacy and IT sectors.
- i) **Nifty and others**_ The Nifty shows an inter correlation among all the sectors except pharmacy sector.
 - There is significant mean difference between dependent and independent variables. The dependent variable (Nifty) is influenced **90.7%** by the independent variables (different industries taken for the study).
 - From the β coefficients it is concluded that Automobile sector stock prices are influencing NIFTY highly. FMCG, IT and Mining & Metal sectors stock prices are influencing very moderately. The other sectors (Banking & Finance, Cement & Construction, and Pharmacy and Energy & Power sectors) have very low influence on NIFTY
$$\text{NIFTY Return} = -0.92 + 0.344*\text{Auto} + 0.040*\text{BankFinan} + 0.033*\text{CemConst} + 0.145*\text{FMCG} + 0.207*\text{IT} + 0.207*\text{IT} + 0.100*\text{MinMeta} + 0.037*\text{Pharmacy} - 0.001*\text{EnerPower}.$$

4. Conclusion

The present project work has been undertaken to study the optimum investment opportunities available to investors. These avenues are different for different profiles of investors and to know portfolio of the securities. However, it is very important for an investor to identify the risk associated with the returns of

various securities. The larger the value of coefficient of variation, the riskier the stock is. In diminishing the correlation among possessions in the portfolio is the establishment of danger diminution by effectual diversification. In order to manage the risk associated with the returns one has to construct the portfolio. A portfolio is a set of securities which by adding reduces the risk in whole. In this project it is seen how the risk and return of the industries may influence the investor's portfolio. Such type of further study that helps the investors to build a good portfolio is called for. The entire project work is done to identify the best portfolio of industry combinations and the results are found satisfactory.

5. Suggestions

The main aim of constructing a portfolio is to minimize the risk associated with individual securities return. It provides investors to compare and contrast different alternative investment opportunities and helps in measuring of historical returns which in turn, enables the investors to assess how well they have done. It has to be evaluated and modified from time to time. After performing thorough analysis, the following is suggested: The investors can use the security-market return correlation coefficient while considering the investment options. Investors should practice the tools and techniques that are available to conduct company analysis, industry analysis and economic analysis to select a best portfolio for investment. The investors who wish to take High risk can invest in Automobile industry, Moderate risk can invest in FMCG, IT and Mining & Metal industries and low risk can invest in Banking & Finance, Cement & Construction, and Pharmacy and Energy & Power industries.

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