

Risk Return Relationship of Selected Scrips in the Bombay Stock Exchange

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Abstract

Risk and return analysis plays a important role in investment decision making process. The present study examines the risk and return of selected scrips from FMCG, Healthcare, Banking & Finance, Telecom and Energy sectors. Data is collected for 50 scrips for a period of 10 years. The study analyses the risk return relationship by using mean and standard deviation. Capital Asset Pricing Model is used to determine the expected return of the scrips. Results based on this model reveals that Dwarikesh Sugar Industries Ltd., Strides Shasun Ltd., Indusind Bank Ltd., ITI Ltd. and Alphageo India Ltd have high expected returns in their respective sectors. Britannia Industries Ltd., Lupin Ltd., ICICI Bank Ltd., Reliance Communications Ltd and Aban Offshore Ltd. have the highest rank based on excess returns to beta value.

Keywords:

- ✓ Risk
- ✓ Return
- ✓ Beta
- ✓ Capital Asset Pricing Model

Introduction

Every investment is characterized by risk and return. An estimation of the risk return profile of a security or portfolio is an important aspect in investment management. The Capital Asset Pricing Model (CAPM) was independently developed by Sharpe (1964), Lintner (1965) and Mossin (1966). The model makes certain assumptions about the behaviours of the individual and the

workings of the capital market. On the basis of the assumptions the model derives a specific linear relationship between expected rate of return and risk. The present study examines the risk return relationship of selected scrips listed on the Bombay Stock Exchange. The scrips are selected from FMCG, Healthcare, Banking and Finance, Telecom and Energy sectors.

Review of Literature

Numerous studies have examined the risk return relationship in the Indian capital market (Gupta, 1981; Yalawar, 1988; Gupta and Sehgal, 1993; Ansari, 1997; Navin, 2003; Singla 2008; Basu and Chawla, 2010). Gupta (1981) investigated a sample of 276 companies from Bombay, Calcutta and Madras Stock Exchanges from 1961 to 1976 to ascertain the characteristics of the rates of return on equities in the Indian capital market. The study concluded that the rate of return provided by equities is not satisfactory since 20% of the returns for various holding periods were negative.

Srinivasan (1988) empirically tested the validity of CAPM in India with stock prices of 85 firms selected from Calcutta and Bombay Stock Exchanges from the period July 1982 to October 1985 using Economic Times Index of ordinary shares as market proxy. The study found that CAPM relationship was valid in Indian capital market.

Yalawar(1988) tested the excess returns version of the market model by way of considering the monthly returns for 20 years from 1963 to 1982 relating to 239 stocks regularly traded in Bombay Stock Exchange. Further significance of the beta estimate was tested with the statistical approach to

establish it to be explanatory variables for security returns. The results extended the support for the applicability of CAPM and could be regarded as good descriptor of security returns in the Indian equity market.

Ramachandran(1989) selected 132 scrips of Bombay Stock Exchange from January 1979 to December 1986 to test the validity of CAPM in Indian market. He found that there was no evidence to prove that the model holds well in Indian context. Sehgal (1994) studied the concept of skewness in determining the nature of return. An attempt was made to explore the nature of return by taking 80 individual securities from Bombay Stock Exchange during the period of 1984 to 1993. The tests revealed that the individual securities and the NATEX showed the non normal return.

Ansari (1997) made an attempt to find the applicability of CAPM in Indian context for 96 stocks of the BSE. The study used SENSEX as proxy for market portfolio and term deposit rate for risk free rate of return. It further divided the sample into six equally weighted portfolios. It was found that there was no validity of CAPM in Indian context. Navin(2003)

investigated the extent of relation between scrip return and market return by taking 30 scrips from BSE. The study found evidence that there was a strong relationship between scrip return and market return indicated by high power of R square and the coefficient of beta value was significant.

The effect of diversification was studied by **Raj and Rakesh (2006)**. The study analysed the closing price of 100 scrips from BSE for a span of 10 years. The scrip returns were regressed with market return with the help of market index model. The result showed that

there was a high positive correlation between portfolio return and risk.

Singla (2008) examined the validity of CAPM in Indian market by tracing 320 scrips spanning 6 years from BSE. The study tested the concept of CAPM. The study found that higher level of return was reflected with higher level of risk indicating the proof of validity of CAPM in Indian market. Madhu and Tamimi (2010) in their study revealed that CAPM held good in Indian stock market in explaining the systematic risk and establishing the tradeoff between risk and return.

Objectives of the study:

- To compare the return and risk of the selected securities from various sectors.
- To analyse beta of the selected securities.
- To determine the expected return using CAPM.
- To rank the companies on the basis of excess returns to beta.

Methodology:

The sample consists of 50 companies listed on the Bombay Stock Exchange across five sectors viz., FMCG, Healthcare, Finance, Telecom and Energy. The time period of the study is 2007 to 2016.

The daily returns are calculated for both the individual securities as well as market index using the following equation

$$R_{j,t} = \frac{P_t - P_{t-1}}{P_{t-1}} \times 100 \quad \dots 1$$

Where, $R_{j,t}$ = Returns on security j on time t

P_t = Price of the security at time t

P_{t-1} = Price of the security at time t-1

Beta is a measure of a stock's volatility in relation to the market. It is computed as follows:

$$\beta = \frac{N \sum XY - (\sum X)(\sum Y)}{N \sum X^2 - (\sum X)^2} \quad \dots 2$$

Standard deviation is a measure of how much stock's returns can vary from its average return. It is computed as follows:

$$\sigma = \sqrt{\frac{\sum_{i=1}^N (X_i - \bar{X})^2}{N}} \quad \dots 3$$

The expected return based on CAPM is calculated as follows:

$$R_i = R_f + \beta (R_m - R_f) \quad \dots 4$$

Where R_i = Return of individual security

R_f = Risk free rate

β = Beta of the individual security

R_m = Market return

Risk free rate is the rate of interest on the 364 days Treasury bill.

Daily prices of the individual securities are collected from the BSE website.

Excess Return is determined by calculating the difference between actual return and expected return. The securities are ranked from highest to lowest based on the excess returns to beta value.

Analysis and Interpretation:

Table No. 1 Average Returns of selected companies from 2007 to 2016 (in %)

Sl. No.	Company	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Mean Returns
1	Colgate Palmolive	7.07	3.42	53.33	28.81	14.54	47.78	-10.69	29.84	-40.40	-5.63	12.80
2	Hindustan Unilever Ltd.	2.47	20.07	8.66	19.42	29.68	26.77	12.33	30.61	15.93	-3.57	16.23
3	Dwarikesh Sugar Industries Ltd	36.70	-42.17	117.64	8.81	-97.56	18.42	-25.22	37.76	195.63	164.04	41.40
4	ITC Ltd	21.07	-16.13	43.21	-17.39	15.70	37.45	13.54	14.72	-10.89	-22.68	7.86
5	Britannia Industries Ltd.	33.59	-7.17	28.17	-63.14	12.17	14.22	67.76	73.74	51.74	0.32	21.14
6	Balrampur Chini Mills Ltd.	43.56	-34.11	115.72	-35.73	-83.37	52.78	-1.65	43.79	31.29	69.66	20.19
7	Dhampur Sugar Mills Ltd.	8.94	-66.74	194.58	-41.09	-89.41	71.47	-33.66	33.68	68.83	92.84	23.94
8	Dabur India Ltd.	-17.88	-24.28	67.63	-24.93	2.33	27.28	29.43	33.42	18.25	2.43	11.36
9	Kohinoor Foods Ltd.	73.17	-14.556	-22.55	6.83	-50.54	3.59	43.28	4.17	30.34	48.86	12.25
10	Dalmia Bharat Sugar and Industries Ltd.	31.77	-162.85	102.20	-86.54	-95.18	42.29	-16.78	48.77	169.65	113.36	14.66
11	Lupin Ltd.	8.42	4.43	94.10	-24.04	-4.72	33.28	42.07	48.97	30.16	-16.92	21.57
12	Divis Laboratories Ltd.	60.73	-23.21	-31.29	-2.11	21.36	38.59	13.33	37.72	-14.82	-28.45	7.18
13	Strides Shasun Ltd.	-22.38	-84.16	118.48	68.83	1.65	110.93	-58.15	111.32	38.44	-10.55	27.44

Sl. No.	Company	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Mean Returns
14	Sun Pharmaceutical Industries Ltd.	25.85	-8.29	38.83	-33.49	4.33	41.00	-8.01	41.33	4.50	-24.38	8.16
15	Wockhardt Ltd.	19.75	-109.72	58.82	97.83	-15.39	193.4	-88.03	106.23	58.91	-62.99	25.88
16	Jubilant Life Sciences Ltd.	39.05	-84.00	124.26	-13.80	-33.57	25.52	-27.92	-3.27	148.54	67.07	24.18
17	Biocon Ltd.	47.17	-105.12	100.66	45.54	-37.96	6.96	51.96	-3.22	21.15	66.58	19.37
18	Aurobindo Pharma Ltd.	-19.43	-62.07	201.39	39.63	-153.3	92.62	90.41	114.45	-5.62	-21.41	27.66
19	Dishman Pharmaceuticals Chemicals Ltd.	49.33	-66.04	83.79	-33.47	-126.7	134.3	10.13	44.80	112.34	-8.71	19.97
20	Dr Reddys Laboratories Ltd.	-6.96	-34.12	100.11	40.68	-3.54	15.80	34.45	29.25	1.80	0.32	17.77
21	Union Bank of India	60.09	-10.26	56.75	30.87	-65.79	64.38	-60.05	79.81	-37.26	-10.35	10.81
22	Indusind Bank Ltd.	116.86	-99.48	161.62	67.48	-10.57	68.91	7.25	70.82	21.91	16.35	42.11
23	ICICI Bank Ltd.	37.37	-81.04	91.83	29.25	-44.61	58.34	4.02	-28.16	-28.69	3.87	4.21
24	Kotak Mahindra Bank Ltd.	129.82	-96.72	110.99	-43.69	-0.23	44.99	14.06	58.38	-36.17	1.87	18.33
25	Yes Bank Ltd.	64.64	-90.85	160.89	19.95	-20.07	75.59	-5.36	87.13	-3.19	52.53	34.12
26	State Bank of India	71.91	-42.98	71.23	25.14	-50.73	45.89	-25.44	-41.16	-30.69	17.28	4.04
27	Axis Bank Ltd.	80.98	-43.51	85.36	33.86	-43.36	59.63	7.99	-8.87	-8.09	4.61	16.86
28	Bajaj Finance Ltd.	23.56	-154.05	185.65	86.71	-10.12	87.33	22.56	83.68	61.07	-45.32	34.10
29	HDFC Bank Ltd.	53.34	-43.82	60.21	35.58	-84.51	49.30	0.23	37.76	14.51	12.05	13.46
30	Punjab National Bank	32.06	-13.37	70.63	31.86	-39.37	18.46	-22.96	-16.12	-56.18	15.54	2.05
31	Bharti Airtel Ltd.	48.26	-26.96	-50.36	14.09	-1.28	-2.06	9.95	9.16	-0.77	-7.62	-0.75

Sl. No.	Company	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Mean Returns
32	Reliance Communications Ltd	54.06	-97.72	1.95	-3.95	-57.83	26.95	86.35	-39.92	17.19	-81.67	-9.45
33	Sterlite Technologies Ltd.	44.31	-109.78	213.10	-78.73	-83.14	20.10	-17.81	118.89	56.06	8.92	17.19
34	Mahanagar Telephone Nigam Ltd.	36.52	-68.71	6.79	-21.27	-77.45	30.52	-39.49	87.80	-6.29	-2.89	-5.44
35	Himachal Futuristic Communications Ltd.	96.83	-108.77	28.79	7.77	21.51	-1.71	-13.01	108.17	20.44	-43.03	11.69
36	ITI Ltd.	66.36	-114.27	162.54	-13.11	-77.11	32.28	-21.44	73.59	19.19	47.83	17.58
37	Tata Communications Ltd.	69.54	-22.34	-31.12	-22.31	-13.93	11.98	40.15	41.66	0.53	44.07	11.82
38	GTL Infrastructure Ltd.	126.25	-91.96	31.82	25.36	-127.2	-43.8	-58.44	48.75	18.77	100.84	3.03
39	TATA Teleservices Ltd.	136.78	-61.74	31.72	-28.60	-35.08	10.31	-39.46	9.11	15.75	-22.01	1.67
40	Aksh Optifibre Ltd.	90.96	-158.59	76.93	-11.14	-57.69	113.8	-10.08	9.79	25.66	42.41	12.20
41	Oil and Natural Gas Corporation	41.75	-46.79	64.52	12.02	-89.96	5.89	13.85	20.94	-31.19	-12.62	-2.15
42	Alphageo India Ltd.	185.29	-147.42	132.38	-18.03	-95.69	-12.9	60.93	252.66	22.33	69.17	44.87
43	Hindustan Petroleum Corporation Ltd.	39.11	-5.52	45.83	10.44	-39.69	18.10	-11.63	90.79	49.27	-16.59	18.01
44	Indian Oil Corporation	71.31	-39.07	0.81	17.44	-27.59	8.13	-17.28	52.22	27.74	-8.66	8.50
45	Chennai Petroleum Corporation Ltd.	76.98	-88.04	79.23	16.73	-40.48	-9.85	-59.55	11.35	124.67	38.57	14.96
46	Reliance Industries Ltd.	87.86	-73.16	11.35	0.33	-38.28	21.83	8.32	2.99	15.87	8.03	4.51
47	Aban Offshore Ltd.	141.42	-146.46	138.27	-28.70	-73.71	18.07	20.32	36.85	-73.39	16.07	4.87
48	Bharat Petroleum Corporation Ltd.	53.45	-0.75	57.89	8.99	-28.43	-5.38	4.81	69.72	35.09	-16.08	17.93
49	Selan Exploration Technology Ltd.	90.90	20.02	122.03	17.71	-45.05	36.14	0.24	27.66	-44.32	-4.34	22.10

Sl. No.	Company	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Mean Returns
50	Petronet LNG Ltd.	89.76	-78.45	73.45	60.26	27.82	4.29	-22.91	56.96	24.46	39.83	27.54
	Mean Returns	55.20	-61.18	77.01	5.25	-40.38	37.79	0.29	45.80	22.80	13.77	

Table No.1 presents the annual returns for the selected companies from 2007 to 2016. It also presents the mean returns company wise and year wise. The FMCG sector companies' returns indicate volatility. In the year 2009, Colgate Palmolive, Balrampur Chini Mills Ltd., Dhampur Sugar Mills Ltd. and Dabur India Ltd. recorded highest returns. Dalmia Bharat Sugar Industries Ltd. recorded a lowest return of -162.85% in 2008. The highest mean return of 41.40% is recorded by Dwarikesh Sugar Industries Ltd. The lowest mean return of 7.86% is recorded by ITC Ltd. The Healthcare sector company recorded very low returns in 2008, but subsequently showed positive returns in 2009. Aurobindo Pharma Ltd. recorded highest returns of 201.39% in 2009, while the lowest returns of -109.72 % was recorded by Wockhardt Ltd. in 2008. Lupin Ltd., Strides Shasun Ltd., Wockhardt Ltd., Jubilant Life Sciences Ltd. and Aurobindo Pharma Ltd. have recorded a mean return of over 20% for the last 10 years. The lowest average returns is recorded by Divis Laboratories Ltd. and Sun Pharmaceutical Industries Ltd. The Banking and Finance sector shows a decline in its returns over the last 10 years. The average of the new age banks for the last 10 years is high as compared to

public sector banks. Industrial Bank Ltd. records the highest average returns of 42.11%, followed by Yes Bank Ltd. with returns of 34.12% for the years 2007 to 2016. Bajaj Finance Ltd. also records a average return of 34.10%. Union Bank of India, State Bank of India and Punjab National Bank being Public Sector banks record low average returns of 10.81%, 4.04% and 2.05% respectively. It is interesting to note that Kotak Mahindra Bank Ltd.'s annual return declined from a high of 129.82% in 2007 to a low of 1.87% in 2016.

The Telecom sector companies' returns show a declining trend from 2007 to 2013. There is a recovery in 2014 followed by fluctuation in the returns in 2015 and 2016. The highest return in this sector was recorded by Sterlite Technologies Ltd. in 2009. On an average this sector record negative to low positive returns for the years 2007 to 2016. The lowest average returns of -9.45% is recorded by Reliance Communications Ltd.

The Energy sector average returns for the last 10 years records a high of 44.87% (Alphageo India Ltd) and a low of -2.15% (Oil and Natural Gas Corporation). The years 2011 and 2008 records negative returns for the energy sector. Positive returns were recorded

in 2014, with highest returns recorded by Alphageo India Ltd. at 252.66%. Indian Oil Corporation, Reliance Industries Ltd. and Aban Offshore Ltd. record single digit returns for the years 2007 to 2016.

Alphageo India Ltd. has highest absolute average returns of 44.87% while Reliance Communications Ltd. has the lowest absolute average returns of -9.45% across all sectors.

The year wise mean returns for the selected companies' indicates low returns of -61.18% in 2008 due to global recession. The returns turned positive in the year 2009. The returns in the years 2010 to 2016 shows fluctuations reflecting the general stock market trends. The mean returns of the 50 selected companies' posts declining returns from 2007 (55.20%) to 2016 (13.77%).

Table No. 2 Expected and Excess Return of Selected Companies

Company	Actual Return	Beta	Standard Deviation	Expected Return	Excess Return	Excess Return to beta	Rank
BSE Sensex – Return 9.30%				FMCG Sector – Return 16%			
Colgate Palmolive	12.8	0.22	7.82	8.89	3.91	17.76	3
Hindustan Unilever Ltd.	16.23	0.31	6.93	10.40	5.82	18.79	2
Dwarikesh Sugar Industries Ltd	41.4	1.76	24.79	66.94	-25.54	-14.51	10
ITC Ltd	7.86	0.37	8.29	7.81	0.04	0.12	6
Britannia Industries Ltd	21.13	0.21	10.8	10.59	10.54	50.18	1
Balrampur Chini Mills Ltd	20.19	1.38	16.6	24.90	-4.71	-3.41	8
Dhampur Sugar Mills Ltd	23.95	1.71	19.75	35.42	-11.47	-6.71	9
Dabur India Ltd	11.36	0.28	8.43	8.78	2.57	9.18	4
Kohinoor Foods Ltd	12.26	0.66	14.74	10.74	1.52	2.30	5
Dalmia Bharat Sugar And Industries Ltd	14.66	1.19	22.48	15.96	-1.31	-1.10	7
BSE Sensex – Return 9.30%				Banking & Finance Sector – Return 15.84%			
Union Bank of India	10.81	1.14	13.59	11.23	-0.42	-0.37	
Indusind Bank Ltd.	42.11	1.65	13.63	64.41	-22.31	-13.52	10
ICICI Bank Ltd.	4.21	1.67	14.44	1.81	2.40	1.44	1
Kotak Mahindra Bank Ltd.	18.33	1.42	14.19	22.75	-4.43	-3.12	7
Yes Bank Ltd.	34.12	1.67	14.7	51.76	-17.64	-10.56	9
State Bank of India	4.04	1.27	14.13	3.02	1.01	0.80	3
Axis Bank Ltd.	16.86	1.44	14.6	20.85	-3.99	-2.77	6
Bajaj Finance Ltd.	34.1	1.31	15.99	42.25	-8.16	-6.23	8
HDFC Bank Ltd.	13.46	1.1	11.05	14.02	-0.57	-0.52	5
Punjab National Bank	2.05	1.23	14.37	0.72	1.32	1.07	2

Company	Actual Return	Beta	Standard Deviation	Expected Return	Excess Return	Excess Return to beta	Rank
BSE Sensex – Return 9.30%				Telecom Sector – Return 1.88%			
Bharti Airtel Ltd.	-0.75	0.65	9.82	2.23	-2.99	-4.60	10
Reliance Communications Ltd	-9.45	1.67	17.03	-21.00	11.55	6.92	1
Sterlite Technologies	17.19	1.95	19.51	26.12	-8.93	-4.58	8
Mahanagar Telephone Nigam Ltd	-5.44	1.31	15.77	-9.54	4.10	3.13	2
Himachal Futuristic Communications Ltd.	11.7	1.36	18.32	13.10	-1.41	-1.04	7
ITI Ltd.	17.58	1.88	18.77	26.19	-8.62	-4.58	9
Tata Communications Ltd	11.82	0.68	11.55	10.53	1.29	1.90	3
GTL Infrastructure Ltd	3.03	0.9	21.7	3.50	-0.48	-0.53	5
TATA Teleservices Ltd	1.67	1.37	14.95	-0.59	2.26	1.65	4
Aksh Optifibre Ltd	12.21	1.3	17.69	13.53	-1.33	-1.02	6
BSE Sensex – Return 9.30%				Energy Sector – Return 9.97%			
Oil and Natural Gas Corporation	-2.15	1.03	12.17	-2.44	0.30	0.29	3
Alphageo India Ltd	44.87	1.85	22.84	76.38	-31.52	-17.04	10
Hindustan Petroleum Corporation Ltd	18.01	0.99	14	17.90	0.10	0.10	4
Indian Oil Corporation	8.5	0.97	13.39	8.47	0.02	0.02	5
Chennai Petroleum Corporation Ltd	14.96	1.41	14.9	17.89	-2.94	-2.08	8
Reliance Industries Ltd	4.51	0.99	9.77	4.54	-0.03	-0.03	6
Aban Offshore Ltd	4.87	2.03	20.42	1.86	3.01	1.48	1
Bharat Petroleum Corporation Ltd	17.93	0.89	13.28	16.81	1.12	1.25	2
Selan Exploration Technology Ltd	22.1	1.28	16.69	26.10	-4.01	-3.13	9
Petronet LNG Ltd	27.54	1.01	10.93	27.73	-0.20	-0.20	7
BSE Sensex – Return 9.30%				Healthcare Sector Return -15.83%			
Lupin Ltd.	21.57	0.37	11.19	12.88	8.68	23.46	1
Divis Laboratories Ltd.	7.18	0.73	15.08	7.34	-0.16	-0.23	5
Strides Shasun Ltd.	27.44	1.03	15.96	28.02	-0.59	-0.57	6
Sun Pharmaceutical Industries Ltd.	8.16	0.52	11.35	7.98	0.18	0.34	3
Wockhardt Ltd	25.88	1.11	17.9	27.86	-1.99	-1.79	7
Jubilant Life Sciences	24.18	1.18	16.21	27.13	-2.95	-2.50	8

Ltd.							
Biocon Ltd.	19.37	0.99	12.07	19.25	0.12	0.12	4
Aurobindo Pharma Ltd.	27.66	1.61	18.51	39.78	-12.12	-7.53	10
Dishman Pharmaceuticals Chemicals Ltd.	19.98	1.41	18.96	24.97	-5.00	-3.54	9
Dr Reddys Laboratories Ltd.	17.77	0.51	8.56	12.87	4.89	9.59	2

Table No. 2 displays the actual returns, beta, standard deviation, expected return, excess return, excess return to beta and ranks for the selected companies. The FMCG sectoral average return is 16%, which is relatively higher than the BSE Sensex return of 9.30%. Sugar companies record a high standard deviation and have a beta of more than 1, indicating that these stocks are more volatile than the market. Britannia Industries Ltd. records excess return of 10.54% and has the highest excess returns to beta value. Dwarikesh Sugar Industries Ltd. has the lowest rank in the FMCG sector.

The Healthcare sector return is 15.83%. Most of the companies in this sector have a beta of more than 0.50. Lupin Ltd has the highest rank since it has a high excess return to beta value. The expected return of Aurobindo Pharma Ltd is 39.78% while actual return is 27.66% with the lowest rank. The standard deviation for these companies ranges from 8.56% to 18.96%.

The Banking and Finance sector gives an average annual return of 15.84%. All the selected securities in this sector have beta more than 1 indicating high volatility in their price movements. The excess returns of these securities are very low or negative. ICICI Bank Ltd. with actual return of 4.21% records highest excess return of 2.40% in this sector. The standard deviation is also consistent for these securities. ICIC Bank

Ltd. leads the ranking, followed by the various PSU banks (Punjab National Bank, State Bank of India and Union Bank of India)

The Telecom sector records an average annual return of 1.88% which is relatively much lower than the Sensex return of 9.30%. ITI Ltd. with a high annual actual return of 17.58% has a beta of 1.88 and negative excess return of 8.62%. Reliance Communications Ltd. has high excess returns to beta value while Bharti Airtel Ltd. has the lowest excess returns to beta value.

The Energy sector return is marginally higher than the Sensex return at 9.97%. The selected securities in the Energy sector records high beta values indicating high volatility. Aban Offshore Ltd. leads the ranking with a beta of 2.03, high excess return to beta value and excess return of 3.01%. Alphageo India Ltd. has the lowest ranking in this sector.

Conclusion

The current study measures the return and risk of selected securities listed on the Bombay Stock Exchange. These securities are chosen from the FMCG sector, Healthcare sector, Finance sector, Telecom sector and Energy sector. Annual returns are determined for years 2007 to 2016. Alphageo India Ltd. has highest absolute average returns of 44.87% while Reliance

Communications Ltd. has the lowest absolute average returns of -9.45% across all sectors. Based on the CAPM, Dwarikesh Sugar Industries Ltd., Strides Shasun Ltd., Indusind Bank Ltd., ITI Ltd. and Alphageo India Ltd

have high expected returns in their respective sectors. Britannia Industries Ltd., Lupin Ltd., ICICI Bank Ltd., Reliance Communications Ltd and Aban Offshore Ltd. have the highest rank based on excess returns to beta value.

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