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EVALUATING SECTOR SPECIFIC PERFORMANCE AMONG STOCKS FROM NIFTY: DOES DIVIDEND PAYOUTS EFFECT STOCK RETURNS?

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ABSTRACT

Present study is an attempt to recognize best performers among fifty companies listed under Nifty during year 2011-2015 based on Continuous compounding Returns for five years. Returns from stocks investment arrives in two forms that is returns from changes in stock prices and dividend income or bonus if any. In the present study all fifty companies have been categorized under eight sectors, for the purpose for calculating CCR's using sector specific index are taken as proxy for market performance. A comparison of final dividend per share (in percentages) and the Continuous Compounding Returns are correlated to recognize the relationship they share. The major objective is to understand if CCR's are influenced by dividends paid by corporates, and in also the understanding this behavior from different sectors.

KEY WORDS: *dividends, Returns, Stock Returns, Nifty, India*

INTRODUCTION

Investments in equity stocks have been lucrative source of gaining additional returns in the present time. But, choosing the right stock for investment depends upon many objectives and is a strategic task. However once an investor is aware about three important aspects (i.e.) timeframe of investment, risk taking ability and the expected value of return, the decision making process becomes easy to some extent.

In India, most of the investors make their decisions based on intuition, after looking at a few broad parameters', insights available from publicly available sources. Well most important goal of investment in stocks is that investors think that they can make money, get better returns when compared to any other avenue. Inspire of the fact that they are not experts in making such decisions, however their motivations is fuelled by the trust they have in the law makers, financial systems and businessmen. In the present paper we try and understand which stock investment has given better returns by considering continuous compounding returns, and if the dividend paid by the respective companies each year has any influence on its returns.

LITERATURE

Indian capital markets consist of stocks from large financial sectors, FMCG companies, Pharmaceutical companies and other such corporates. There are majorly two exchanges where most of the trading takes place National stock exchange (NSE) and Bombay Stock Exchange (BSE). While BSE is one of the oldest stock exchanges and was established in 1875, NSE started trading since 1994.

Some of the studies in Indian scenario Mahapatra and Sahu (1993) major determinants of dividends are net earnings that are derived from cash flows. Glan et al. (1995) find that in the emerging

markets firms have target dividend payout rates but exhibit high volatility of dividend over time. M.C. Jensen (1968) Jensen's alpha (or Jensen's Performance Index, ex-post alpha) is used to determine the abnormal return of a security or portfolio of securities over the theoretical expected return. It is a version of the standard alpha based on a theoretical performance index instead of a market index. The security could be any asset, such as stocks, bonds, or derivatives. The theoretical return is predicted by a market model, most commonly the capital asset pricing model (CAPM). The market model uses statistical methods to predict the appropriate risk-adjusted return of an asset. The CAPM for instance uses beta as a multiplier. Burton Makiel (2011) in his book defines "**investing** as a method of purchasing assets to gain profit in the form of reasonably predictable income (dividends, interest, or rentals) and/or appreciation over the long term. It is the definition of the time period for the investment return and the predictability of the returns that often distinguish an investment from a speculation." **Rahman L et.al. (2012)** Through his study analyzed the impact of different types of dividend declarations like cash and stock dividends using event study methodology based upon 16 firms which declared only stock dividends and 23 firms which declared only cash dividend for the period between 1 January 2007 and 31 December 2007. The findings show that record day is a very important indicator for realizing abnormal returns for stock dividend. The above study supports partially that dividend announcement do have an impact on the stock prices and investors can use this information to their favor by trading on the significant effect days of the study period.

OBJECTIVES OF THE STUDY

The objectives of the study are as follows:

- ✡ To evaluate if there is a relationship between continuous compounding returns of the companies and dividend paid.
- ✡ To evaluate if there is a relationship between continuous compounding returns and dividends paid by companies, depending upon sectors to which they belong.

DATA AND METHODOLOGY

Daily closing price data for stocks listed in Nifty 50 and Sector indexes during the period 2011-2015 (both inclusive) have been used for the analysis. Information about dividend paid has been taken from moneycontrol.com.

Daily stock returns are calculated after making adjustment for price changes on account of dividend/bonus/splits/right issue.

CALCULATION OF CONTINUOUS COMPOUNDING RETURNS

Step 1: Daily returns for each stock are calculated using natural log.

Current Returns (CR) = Ln(Current Day Closing Price/Previous Day Closing Price) * 100

Step 2: Daily Average Returns = Average (CR) for each year.

Step 3: Continuous Compounding Returns (CCR) = Average (CR) * No.of trading days for each year.

Higher values of CCR are indicative of better performance of the stock in comparison to their peers from same sector.

In addition to the above information the final dividends paid by each company during the period 2011 to 2015 have been used for calculating correlations.

ANALYSIS AND INTERPRETATION OF RESULTS

Table: 1

COMPANY	2011	2012	2013	2014	2015	CCR and Div Correlation	Average CCR
Bajaj Auto Ltd. CCR's	-25.54	40.18	-11.91	46.37	16.60	0.71	13.14
Bajaj Auto (Dividend)	400%	450%	450%	500%	500%		
Tata Motors Ltd. CCR's	-197.48	52.98	19.67	25.23	-25.45	-0.28	-25.01
Tata Motors Ltd. Dividend	200%	200%	100%	100%	-		
Mahindra & Mahindra Ltd. CCR's	24.95	15.29	32.91	17.29	-44.65	0.30	9.16
Mahindra & Mahindra Ltd. Dividend	230%	250%	260%	280%	240%		
Maruti Suzuki Ltd. CCR	-38.16	43.69	8.86	67.51	31.51	0.29	22.68
Maruti Suzuki Ltd. Dividend	150%	150%	160%	240%	500%		
Heromotocorp Ltd. CCR	-3.82	-0.24	8.45	39.62	-19.89		
Heromotocorp Ltd. Dividend	1750%	2250%	3000%	3250%	3000%	0.09	4.83

CCR- Continuous Compounding Returns

Above table-1 holds information concerning annual dividends paid by respective companies during the period 2011-2015. It also contains the returns earned by each stock annually termed as CCR (as mentioned in the methodology for calculation of CCR). We notice that except in the case of Tata Motors Ltd. All other companies in the sample have paid dividend every year and mostly increasing payout percentage every year. It is interesting to notice that in the year 2015 there are no dividends paid and stock returns are also negative from Tata Motor's. This is the possibly the reason for a negative correlation. We also find that there is a positive correlation among the CCR and dividends among all companies except in the case of Tata Motors Ltd.

Table: 2

COMPANY	2011	2012	2013	2014	2015	CCR and Div Correlation	Average CCR for (2011-2015)
Axis Bank CCR	-52.82	55.67	-7.53	67.95	-12.91	0.23	10.07
Axis Bank (Dividend)	140	160	180	200	230		
Bank of Baroda CCR	-27.31	28.39	-32.32	48.53	-32.12	-0.71	-2.97
Bank of Baroda (Dividend)	165	170	215	105	160		
HDFC Ltd. CCR	11.00	1.55	-47.19	56.98	9.44	0.26	6.36
HDFC Ltd. (Dividend)	165	215	275	342.5	400		
ICICI Bank CCR	-46.06	52.20	-6.81	50.90	-32.47	0.11	3.55
ICICI Bank (Dividend)	140	165	200	230	250		
IndusInd. Bank Ltd. CCR	-9.49	57.90	2.06	62.38	14.12	0.14	25.39
IndusInd. Bank Ltd. (Dividend)	20	22	30	35	40		
Kotak Mahindra Bank Ltd. CCR	0.92	44.01	12.22	55.00	-64.37	-0.40	9.55
Kotak Mahindra Bank Ltd. (Dividend)	10.00	12.00	14.00	16.00	18.00		
State Bank of India CCR	-51.85	38.15	-30.78	-177.13	-28.10	0.85	-49.94
State Bank of India (Dividend)	300.00	350.00	415.00	150.00	350.00		
HDFC Bank Ltd. CCR	-9.44	47.64	-2.63	18.96	10.68	0.20	13.04
HDFC Bank Ltd. (Dividend)	450.00	550.00	625.00	700.00	650.00		
IDFC Bank CCR	-59.64	56.52	-52.07	36.38	-18.20		
IDFC Bank (Dividend)	20.00	23.00	26.00	26.00	26.00	0.22	-7.40
PNB Bank CCR	-46.57	16.70	-36.84	41.13	-34.05		
PNB Bank (Dividend)	220.00	220.00	270.00	0.00	165.00	-0.73	-11.93

Financial sector consists of ten stocks in the sample, a review of dividend paid by them indicates that almost all of them have paid annual dividend during the period of study (2011-2015), except for one case that is Punjab National Bank which made no annual dividend payment in year 2014, (however gave interim dividend of 100% in same year). From the table it appears that CCRs were positive for that year which could be on account of good stock's performance. PNB had a Dividend payout ratio on Net profits of 20.10% in year 2013 which declined to 10.83% in 2014, which is a probable reason for negative correlation between CCR and dividend paid. There are other two stocks which had a negative correlation, Bank of Baroda and Kotak Mahindra Bank, which show a negative correlation which could be due to the reason that the company has not been following a stable dividend payout policy, there are no particular trends being followed. It can also be

noticed from data that the earnings retention ratios are quiet high among these companies.

Overall it is can be concluded that such stocks which are not following a particular policy for dividend payout also have negative CCR's, thereby indicating that dividend policy pays an important role in producing returns of the stocks.

Table: 3

POWER SECTOR	2011	2012	2013	2014	2015	CCR and Div Correlation	Average CCR for (2011-2015)
GAIL Ltd. CCR	-30.53	-7.27	-4.13	26.19	-21.58	0.47	10.07
GAIL Ltd. (Dividend)	55	57	56	59	30		
NTPC CCR	-21.86	-2.77	-13.28	4.98	-3.53	0.24	-2.97
NTPC Ltd. (Dividend)	8	5	20	17.5	17.5		
ONGC Ltd. CCR	-0.32	4.35	7.51	16.68	-37.10	0.09	6.36
ONGC DIVIDEND	15	40	10	5	10		
Reliance Ltd. CCR	-39.39	16.58	5.43	-0.79	11.49	0.60	3.55
Reliance Ltd. (Dividend)	80	85	90	95	100		
Tata Power Ltd. CCR	-44.04	21.06	-20.67	-8.70	-21.41	0.05	25.39
Tata Power Ltd. (Dividend)	125	125	115	125	130		
BPCL Ltd. CCR	-32.12	38.67	-1.13	62.14	33.08	0.34	9.55
BPCL Ltd. Dividend	140	110	110	170	225		
CAIRN Ltd. CCR	-6.47	1.71	-0.27	-13.90	-50.63	0.24	-49.94
CAIRN Ltd. (Dividend)	0	0	60	65	40		
POWERGRID Ltd. CCR	1.71	12.66	-13.67	32.96	0.62	0.74	13.04
POWERGRID Ltd. (Dividend)	12.5	13.1	11.4	13.1	13.1		

It appears from the table -5 that all the companies in the sample from Power sector have been regularly paying dividends. Further it can be noticed that in such cases where the CCR's are negative the percentage of dividend paid is lower than the previous year for example in the case of GAIL for 2011, NTPC for 2012, ONGC for 2011, Reliance Power for 2011 and 2014, Tata Power for 2011, 2014 and 2015, BPCL for 2013, Cairn India for 2011 and 2013 and Power Grid for 2013. To summarize we can conclude that a lower dividend announced by company reflected its effect on the CCR's of the company, mostly showing a negative CCR's.

Above table indicates the values of correlation between CCR's and dividends paid by the stocks of Power sector which includes eight stocks. Figures indicate that there is positive correlation, among all the stocks for dividend paid and CCR's, although in few cases the CCR's for five years were negative.

Table: 4

FMCG SECTOR	2011	2012	2013	2014	2015	CCR and Div Correlation	Average CCR for (2011-2015)
HUL CCR	27.99	24.68	7.39	30.15	13.00	-0.31	20.64
HUL DIVIDEND	350	400	550	750	900		
ITC CCR	13.82	35.15	7.39	37.15	-12.53	-0.47	14.79
ITC DIVIDEND	445	450	525	600	625		
ASIAN PAINTS CCR	-9.02	51.23	9.19	46.76	12.8	0.64	22.19
ASIAN PAINTS DIVIDEND	95	305	110	420	430		

Above table has data from three companies listed under FMCG sector. The above information suggests that all three companies have been distributing dividends regularly and in almost increasing returns. The CCR's are also positive mostly except for a few three cases, that is in ITC for 2011 and 2015 and also Asian Paints for 2015.

From the results of correlation it appears that except for Asian Paints other two companies have a negative correlation between dividends paid and returns. HUL's dividend payout ratio on net profits was very high between 60%-75%, although its CCR's came down to 7% in 2013 from 28% in 2011. This seems to be the reason for negative correlation. ITC had negative returns as stock performance for years 2011 and 2015 were negative although it paid dividend regularly. It can therefore be concluded that FMCG sector has not been following the trend of distributing higher dividends in case of higher returns.

Table: 5

MINING AND MINERALS SECTOR	2011	2012	2013	2014	2015	CCR and Div Correlation	Average CCR for (2011-2015)
COAL INDIA CCR	-5.99	17.14	-24.66	31.39	-16.63	0.25	6.90
COAL INDIA DIVIDEND	0	0	4	5	43		
HINDALCO CCR	-74.53	11.44	-11.97	25.60	-58.75	-0.09	-21.64
HINDALCO DIVIDEND	150	155	140	100	100		
JINDAL CCR	-47.38	-3.60	-57.80	-51.57	-52.00	0.08	-42.47
JINDAL DIVIDEND	0	150	160	160	150		
TATA STEEL CCR	-72.82	24.26	-1.90	-3.96	-44.02	0.89	-19.68
TATA STEEL DIVIDEND	0	200	200	100	100		
NMDC CCR	-55.93	-1.88	-18.02	1.04	-43.10	0.11	-23.56
NMDC DIVIDEND	100	250	300	0	130		

Above table -9 indicates the results of CCR's and dividend paid by five companies listed under energy sector. It seems from the figures that dividends are not being paid regularly as observed during 2011, 2012 and 2014, remaining two years 2013 and 2015 all three companies have made dividend announcements. The CCR's are almost mostly negative which suggests that the company's performance during the timeframe have not been satisfactory.

It can be told from the above data that from among the energy sector companies two of them have a negative correlation between CCR's and dividend paid. While coal India and Hindalco had a very low value of CCR's and sometimes negative, Hindalco distributed dividends.

Table:6

PHARMA SECTOR	2011	2012	2013	2014	2015	CCR and Div Correlation	Average CCR for (2011-2015)
CIPLA CCR	-17.02	22.91	-5.86	44.64	6.62	-	10.25
CIPLA DIVIDEND	100	100	100	100	100		
REDDYS CCR	-7.23	17.72	24.54	20.69	2.00	0.22	11.54
REDDYS DIVIDEND	225	275	300	360	400		
SUN PHARMA CCR	1.57	34.20	46.26	31.96	0.19	-0.60	22.83
SUN PHARMA DIVIDEND	350	0	250	150	300		
LUPIN CCR	-8.97	25.79	41.83	38.43	29.31	0.15	25.27
LUPIN DIVIDEND	150	160	200	150	375		

There are three major companies in the Pharma sector, the table above illustrates that throughout five years that is 2011 to 2015 these companies have been paying dividends regularly except for one instance, in 2012 by Sun Pharma, although it had declared an interim dividend. We also find that the correlations are positive among the CCR's of these companies and dividends paid except in the case of Sun Pharma, as the ratio of dividend was not found proportionate to the rise in returns. Hence we can conclude that mostly Pharma sector companies show a strong positive correlation between dividends and CCR's.

Table: 7

IT SECTOR	2011	2012	2013	2014	2015	CCR and Div Correlation	Average CCR for (2011-2015)
INFOSYS CCR	-20.83	-22.45	42.22	11.00	10.12	4.01	0.19
INFOSYS DIVIDEND	400	640	540	860	590		
TCS CCR	1.38	5.94	59.48	9.62	-0.51	15.18	-0.53
TCS DIVIDEND	300	1600	400	2000	2400		
WIPRO CCR	-19.52	0.43	36.62	-2.06	3.39	3.77	0.26
WIPRO DIVIDEND	200	200	250	250	350		
HCL CCR	-17.28	48.71	72.20	19.83	-57.97	13.10	-0.57
HCL DIVIDEND	0	0	100	0	300		

There are three companies among the IT sector in the sample; it can found from the above table that except for HCL Limited other two companies have been paying dividends regularly, although the ratio of dividend percentage are not found to be fixed. Wipro has been distributing dividend in higher proportions every year irrespective of its returns. Overall a strong positive correlation can be found between dividends and returns.

Table: 8

INFRASTRUCTURE SECTOR	2011	2012	2013	2014	2015	CCR and Div Correlation	Average CCR for (2011-2015)
ACC CCR	6.91	18.66	-28.03	24.85	23.40	9.16	0.84
ACC DIVIDEND	205	170	110	190	190		
AMBUJA CCR	9.47	25.95	-16.38	25.61	27.62	14.45	0.66
AMBUJA DIVIDEND	70	90	70	110	160		
GRASIM CCR	3.60	23.60	-20.42	26.94	21.07	10.96	-0.34
GRASIM DIVIDEND	200	225	225	210	180		
ULTRATECH CCR	6.76	55.56	-18.28	47.29	28.40	23.95	0.13
ULTRATECH DIVIDEND	60	80	90	90	90		
DLF CCR	-46.55	23.13	-38.33	-16.17	51.19	-5.35	#DIV/0!
DLF DIVIDEND	100	100	100	100	100		
LARSEN CCR	-68.38	48.79	21.97	39.28	26.29	13.59	0.21
LARSEN DIVIDEND	725	825	616.5	712.5	812.5		
JAIPRAKASH ASSO CCR	-71.22	57.25	-57.87	-67.26	66.25	-14.57	-0.12
JAIPRAKASH ASSO DIVIDEND	20	25	25	0	0		

Among the Infrastructure sector we find a list of seven companies, the table above illustrates that almost all of these companies have been distributing dividends regularly. Among which DLF has been paying constant rate of dividend every year, while we do not find a fixed pattern among other companies. Also, it can be noticed that Jaiprakash Associates is the only company which has not made any dividend payment in the year 2014 and 2015, the probably reason could be the negative returns during 2013 and 2014. It therefore shows a negative correlation. Another company which shows a negative correlation is DLF, and the probably reason could be that inspire of negative returns it has been maintaining the same dividend payout ratio.

CONCLUSIONS

From the above analysis of stocks from eight sectors, we draw results for correlations between CCR's and Dividends distributed by each stock for five years. From the results of individual companies and sector wise comparison it can be understood that:

- ✧ Automobile sector stocks, except for one stock all other four stocks have been paying dividend regularly and show a positive correlation between CCR's and dividends distributed.
- ✧ Among Bank Sector, three companies out of ten in the sample have paid unstable dividends and show negative correlations, this could be on account of negative CCR's
- ✧ Power sector shows positive correlation for all eight stocks in the sample; therefore CCR's have a strong positive correlation with dividends.
- ✧ FMCG sector we find that in spite of negative and low CCR values dividends are paid by majority of companies.
- ✧ Mining and Minerals sector has five stocks and there exists four of them show positive correlation.
- ✧ Among IT sector there are three companies and all show a positive correlation, all companies have made regular dividends payment except once case.
- ✧ Infrastructure sector has seven companies and except one all others show a positive correlation.

From the sample of fifty companies forty have shown a strong positive correlation between CCR's and dividend, thereby leading to conclusion that dividend do have a strong relationship with returns of the companies.

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