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Does Sustainable Growth Rate Style of Investment Deliver Superior Equity Return? : An Evidence

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ABSTRACT

The present paper makes an attempt to evaluate whether sustainable growth rate style of investment deliver superior equity returns or not. The study provides evidence that companies with high sustainable growth rate can deliver superior equity returns in the third and fifth year of investment. However, the portfolio of stocks constructed on this style of investment has generated negative return in the first year. Thus the study concludes that, the sustainable growth style of investment delivers superior equity returns provided investors stay invested for a minimum period of three years and a maximum period of five years.

Keywords: Sustainable growth rate, Return on equity, Retention ratio.

INTRODUCTION:

There are a number of styles of stock investing and their adherent vouch for the efficacy of their respective styles. Broadly, all styles of stock investing can be categorized into two: fundamental investing and technical investing. While a fundamental investor studies financial details and other company-related information to pick his stocks, a technical investors studies price patterns, trends, mathematical models and other graphical data to pick stocks. The fundamental style of investing can itself be divided into many sub-styles. Since it entails studying a company's financial data and other company or sector or economy related information, a fundamental investor can use a combination of these to formulate his 'own' stock-investing style. For instance, an investor may give more weightage to certain financial parameters and club them with his subjective judgment of the sector dynamics to pick a stock.

Though the styles of fundamental investing are many, the more popular ones are growth investing and value investing. Growth investing seeks to invest in those companies that have ample room to grow and expand. Such companies tend to belong to booming industries. Think of the information-technology sector in the last decade. Indian, IT companies were growing at a feverish pace. They were the most sought-after by investors. Given their 'privileged' status, growth stocks command a premium and are available at high valuations.

Value investing, on the other hand, is about spotting companies which are available at a 'bargain'. Value companies are available at less than their intrinsic worth. An analogy for this is how people shop for vegetables. You check many stalls, locate the freshest veggies, ask the price, and if the price looks high, tell the vendor how much you are ready to pay.[1]

In addition to growth and value investing strategy there exist some other popular investment strategies such as Contrarian Investment strategy, Sector Investing strategy, and Index investing strategy. However, the present paper emphasizes on growth investment strategy and makes an attempt to evaluate whether investing in companies with high sustainable growth rate can yield superior equity in returns or not.

[1] "Styles of Stock Investing" Wealth Insight, February 2017, PP-8.

Concept of Sustainable Growth rate:

The sustainable growth rate (SGR) is the maximum rate of growth that a firm can sustain without having to increase financial leverage or look for outside financing. The SGR is a measure of how large and how quickly a firm can grow without borrowing more money. After a firm has passed this rate, its growth will decline in the long term, and it must borrow funds to facilitate additional growth.

A company's sustainable growth rate is the product of its return on equity and the percentage of its plowed back into the firm. Sustainable growth rate is calculated as ROE × (1-dividend-payout ratio). The Sustainable growth rate calculation assumes that a company wants to maintain a target capital structure of debt and equity, keep a static dividend payout ratio, and accelerate sales as quickly as the organization allows.[2]

A firm's return on equity and its dividend payout policy determine the pool of funds available for growth. Of course the firm can grow at a rate different from its sustainable growth rate if its profitability, payout policy, or financial leverage changes. Therefore, the sustainable growth rate provides a benchmark against which a firm's growth plans can be evaluated. If the firm intends to grow at higher rate than its sustainable growth rate, one could assess which of the ratios are likely to change in process. This analysis can lead to asking business questions such as these; where is the change going to take place? Is management expecting profitability to increase? Or asset productivity to improve? Are these expectations realistic? Is the firm planning for these changes? If the profitability not likely to go up, will the firm increase its financial leverage or cut dividends? What is the likely impact of these financial leverages? [3]

REVIEW OF LITERATURE:

The following studies have been reviewed to undertake the present research work.

1. **K.C.Chan(1988),** reports that the contrarian strategy earns a very small abnormal return, which is probably economically insignificant. An Investor who follows the contrarian strategy is likely to find that his or her risk exposure varies inversely with the level of economic activity.
2. **Johan J. Cheh, et.al (2008):** analyzed investment performance of high- and low P/E ratio portfolios for different holding periods (portfolio rebalancing frequencies). The major observations of the study are as follows.
   - Performance of high-and low P/E portfolios are affected by stock market conditions and trading frequency.
   - The average investment performance would be better with Low-P/E stocks than High –P/E stocks.
   - An investment strategy of rotating between high P/E growth stocks and low P/E value stocks in terms of the business cycle and stock market conditions would yield grater return than a buy-and-hold strategy with a high P/E portfolio or a low-P/E portfolio.
3. **Rui Huang & Guiying Liu(2009),** established the sustainable growth model based on the leverage degrees, and proved the fixed costs and debt interest influenced the leverage degrees and influenced the main rule of corporate growth in the subsequent period, and finally study concluded that the sustainable growth rate is positively proportional with two leverage co-efficient and the DFL possessed the instructive function for the investor.
4. **Nasrollah Amouzesh(2011),** finds that the deviation of actual growth rate from sustainable growth rate is having relationship with ROA and P/B ratios. Further, study reveal that there is no significant association with the deviation of actual growth rate from sustainable growth rate and current acid ratios.
5. **Belghis Bavarsad et.al.(2014),** Identified the variables effective on the return and price of stocks of those firms listed in Tehran Stock Exchange. The study tries to examine the relationship between the variables in the Fama and French model in addition to the asset growth. The results show that the developed model of Fama and French has more explanatory power than Fama and French model.
6. **Khatin Kholisma N. et.al(2016),** Concluded that for firms listed in Sri Kehati Index, Stock price has positive and significant effect on Sustainable Growth Rate (SGR), Return on Asset (ROA) has negative and significant effect on SGR, price to earning ratio (PER) has negative insignificant effect on SGR, and current ratio(CR) has positive insignificant effect on SGR. The study shows that for the firms listed in Business 27 Index, the stock price has positive and significant effect on SGR, ROA has positive insignificant effect on SGR. PER has negative insignificant effect on SGR, and CR has negative significant effect on SGR.
7. **Norfhadzilahwati Rahim(2017),** studied the relationship between sustainable growth rate and firm performance. The findings of the study reveal that there is a significant relationship between debt ratio, equity ratio, total asset turnover, and size of the firm with sustainable growth rate.

[2] https://www/investopedia.com/terms/s/sustainablegrowthrate.asp
[3] Krishna G .Palepu et.al, (2007), "Business Analysis and Valuation", IFRS Edition, London, Thomson Learning. PP-216.

After reviewing the above literature it has come to our understanding that, there exist several studies where the authors have attempted to test and evolve different investment strategies to make money in equities. However, no specific study is done to test whether companies with high sustainable growth rate are capable of delivering superior equity returns or not. In this context the paper attempts to test whether sustainable growth style of investment delivers superior return or not.

OBJECTIVES OF THE STUDY:

The following objectives have been set for this paper:

1. To find the sustainable growth rate of earnings of select BSE listed companies.
2. To ascertain the equity returns of select companies consisting of dividend return and capital return.
3. To evaluate whether companies with high sustainable growth rate deliver superior equity returns.
4. To offer suggestions in the light of our findings.

METHODOLOGY:

The study attempts to evaluate whether sustainable growth rate style of investment delivers superior equity returns or not. In order to achieve this objective, companies listed on BSE-100 index were considered for the study. Further, the companies were filtered on the basis of their volume of trade, and sustainable growth rate was calculated for the companies for the year 2012 and the performance of the portfolio is being evaluated for the period of 1 year, 3 years and 5 years consecutively. Finally top ten companies having high sustainable growth rate were selected for the study.

The methodology adopted for calculating sustainable growth rate is as follows

Firstly, the return on equity is considered as proxy for performance and retained earnings as proxy for provision for growth. Accordingly, Sustainable growth rate is found by multiplying return on equity with retained earnings. Secondly, equity returns of select companies are computed using the following, Dividend Yield + Capital gain (closing price/ opening price -1). Finally, analysis was carried out to offer suggestions in the light of our findings.

Sources of Information:

The present study relies on secondary source of information. To be specific, the study covers top 10 select scripts (companies with high Sustainable Growth rate) of BSE-100 Index. The secondary data for the study is generated from financial websites such as value researchonline.com and Moneycontrol.com with the study period covering from March 2012 to March 2017.

Organization of the Study:

The present study is organized in four sections. The first section deals with the introduction and concept of sustainable growth rate. The second section covers the Review of Literature, objectives, methodology and sources of information. Results and analysis was carried out in the third section. Findings, Limitations and suggestions are the subject matter of fourth section.

RESULTS AND ANALYSIS:

Table-1: Showing Portfolio Performance For 12 Months i.e., For 1 Year Period

Company	Capital Allocation	No. of Shares	CMP Mar-2012	CMP Mar-2013	Investment Value as on Mar-12	Investment Value as on Mar-13 (Including Dividend)	One year Return (%) 2013
Tatamotors	10,000	37	272.33	266.29	10,000	9926.73	-1%
Titan	10,000	44	228.55	256.4	10,000	11640.6	16%
Britannia	10,000	17	593	524.95	10,000	9068.65	-9%
Petronet	10,000	120	84.02	67.75	10,000	8430	-16%
Coalindia	10,000	30	343.9	309.1	10,000	9693	-3%
NMDC	10,000	63	161	137.1	10,000	9078.3	-9%

Company	Capital Allocation	No. of Shares	CMP Mar-2012	CMP Mar-2013	Investment Value as on Mar-12	Investment Value as on Mar-13 (Including Dividend)	One year Return (%) 2013
Srtransfin	10,000	17	600.75	694.45	10,000	11924.65	19%
BHEL	10,000	59	171.43	118	10,000	7281.19	-27%
Lupin	10,000	19	529.5	628.55	10,000	12018.45	20%
Adani Ports	10,000	78	129.5	138.7	10,000	10896.6	9%
Total	**1,00,000**				**1,00,000**	**99,958.17**	
Average							**-0.00**

Analysis:
Table-1 presents the one year equity return of top ten select S&P BSE 100 companies. It is clearly evident from the table that out of top ten companies only three companies have posted positive return. To be specific Lupin occupied the first position with 20% equity returns followed by Shriram transport finance company and Adani ports occupying second and third position with 19% and 9% respectively. It is further observed that majority of the companies failed to generate positive returns during one year investment tenure resulting in destruction of investors wealth.

Table 2: Showing Portfolio Performance for 36 Months i.e., For 3 Year Period

Company	Capital Allocation	No. of Shares	CMP Mar-2012	CMP Mar-2015	Investment Value as on Mar-12	Investment Value as on Mar-15 (Including Dividend)	Three year Return (%) 2015
Tatamotors	10,000	37	272.33	544.36	10,000	20141.32	101%
Titan	10,000	44	228.55	391.6	10,000	17634.76	76%
Britannia	10,000	17	593	2,158.55	10,000	36967.35	270%
Petronet	10,000	120	84.02	85.78	10,000	10533.6	5%
Coalindia	10,000	30	343.9	362.9	10,000	11508	15%
NMDC	10,000	63	161	128.75	10,000	8649.9	-14%
Srtransfin	10,000	17	600.75	1,114.35	10,000	19113.95	91%
BHEL	10,000	59	171.43	156.9	10,000	9325.54	-7%
Lupin	10,000	19	529.5	2,008.40	10,000	38302.1	283%
Adani Ports	10,000	78	129.5	308.2	10,000	24125.4	141%
Total					**1,00,000**	**1,96,301.9**	
Average							**96%**

Analysis:
Table-2 presents the portfolio performance of select companies for the period of three years. It can be observed that the three year equity returns of select companies range from-14% to 283%. It is observed that except public sector companies such as NMDC and BHEL all other companies have performed well. To speak specifically, companies such as Lupin, Britannia, Adani Ports and Tata motors have delivered superior returns to the investor class and the same is reflected in the overall portfolio performance. The superior portfolio performance can be gauged from the fact that an investment of Rs.1, 00, 000 in the portfolio consisting of select S&P BSE 100 companies with high sustainable growth rate in the year 2012 has almost doubled the investment value in three years. i.e. had the investor invested Rs, 1, 00,000 in the select companies in the year 2012, at the end of third year the investment value would have been Rs,1,96,301.9 with an average portfolio return of 96%.

Table-3: Showing Portfolio Performance for 60 Months i.e., For 5 Year Period

Company	Capital Allocation	No. of Shares	CMP Mar-2012	CMP Mar-2017	Investment Value as on Mar-12	Investment Value as on Mar-17 (Including Dividend)	Five year Return (%) 2017
Tatamotors	10,000	37	272.33	465.85	10,000	17236.45	72%
Titan	10,000	44	228.55	462.75	10,000	20713.44	107%
Britannia	10,000	17	593	3,374.00	10,000	57732	477%
Petronet	10,000	120	84.02	201.58	10,000	24789.6	148%
Coalindia	10,000	30	343.9	292.65	10,000	9376.5	-6%
NMDC	10,000	63	161	133.1	10,000	8709.75	-13%
Srtransfin	10,000	17	600.75	1,078.00	10,000	18496	85%
BHEL	10,000	59	171.43	108.57	10,000	6498.85	-35%
Lupin	10,000	19	529.5	1,445.20	10,000	27601.3	176%
Adani Ports	10,000	78	129.5	339.6	10,000	26590.2	166%
Total					**1,00,000**	**2,17,744.1**	
Average							**118%**

Analysis:
Table-3 depicts the portfolio performance of select S&P BSE 100 companies for the period of five years. it was observed that despite being in the top ten list, public sector companies such as Coalindia, NMDC, and BHEL have failed to generate superior returns in the long-run. However, all the private sector companies have been successful in delivering superior equity returns. To be specific Rs, 1, 00,000 invested in the year 2012 has generated more than double the investment value in five years. i.e. had the investor invested Rs, 1,00,000 in the select companies in the year 2012, at the end of fifth year the investment value would have been Rs, 2,17,744.1 with an average portfolio return of 118%.

FINDINGS:

Followings are the major findings of the study

1. The study finds that companies with high sustainable growth rate cannot deliver superior returns in the Short-run. This is evident from Table 1 that out of ten companies only three companies have posted positive returns and majority of the companies failed to generate positive returns during one year investment tenure.
2. It is evident from the study that in the long-run companies with high sustainable growth rate can deliver superior equity returns. This is evident from Table 2 and Table 3 that portfolio consisting of companies with high sustainable growth rate have generated superior returns in third and fifth year. To be specific the average portfolio return for third and fifth year are 96% and 118% respectively. This provides an evidence that high sustainable growth rate can deliver superior equity returns.
3. The study further reveals that despite having high sustainable growth rate investors in public sector companies such as Coal India, NMDC and BHEL were deprived of making superior equity returns. The possible reason for this can attributed to the fact that public sector enterprises are under government control, any change in the existing policies can have either positive or negative impact on the earnings of the concerned firm.

SUGGESTIONS:

The following suggestions are offered in the light of our findings

1. On observing the findings of the study investors are here by suggested to invest in companies with high sustainable growth rate.
2. The study provides evidence to the investors that in order to reap superior equity returns, investors need to increase their time horizon of investment and stay invested for a maximum period of five years and a minimum period of three years.
3. Lastly, investors in public sector companies are here by suggested to closely follow the recent developments with respect to changes in existing policies of public sector enterprises. Since, these changes can adversely affect the earning capacity of the public sector companies.

LIMITATIONS:

1. The analysis of portfolio performance is restricted to one year, three year and five years. The study would have given more conclusive evidences, had the analysis be conducted for 10 years and 20 years.
2. The study considers sustainable growth rate as qualifying criteria for companies to be included in the portfolio. The study ignores the other criteria such as economic value added, enterprise value added, and market value added.

CONCLUSION:

Investors in equity market continuously look for the profitable investment strategies and expect their portfolio to deliver superior equity returns. In this regard the paper makes an attempt to evaluate whether companies with high sustainable growth rate can deliver superior returns or not. The findings of the study reveal that companies with high sustainable growth rate can deliver superior equity returns in the long-run. However, in the short-run the companies fail to generate superior equity returns.

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ANNEXURE

Security Code	Security Name	No. of Shares Traded	EPS	DPS	REPS	Retention ratio	ROE	Sustainable Growth Rate
500570	TATAMOTORS	368376	42.14	4	38.14	0.91	52.58	47.59
500114	TITAN	128269	6.77	1.75	5.02	0.74	48.19	35.73
500825	BRITANNIA	155396	16.71	8.5	8.21	0.49	54.33	26.69
532522	PETRONET	128156	14.1	2.5	11.6	0.82	30.04	24.71
533278	COALINDIA	228665	23.41	10	13.41	0.57	40.09	22.96
526371	NMDC	203317	18.33	4.5	13.83	0.75	29.76	22.45
511218	SRTRANSFIN	223455	57.84	6.5	51.34	0.89	23.97	21.28
500103	BHEL	350046	19.3	6.4	12.9	0.67	31.13	20.81
500257	LUPIN	127750	19.43	3.2	16.23	0.84	24.35	20.34
532921	ADANIPORTS	127890	5.5	1	4.5	0.82	24.69	20.20
524715	SUNPHARMA	229927	12.83	4.25	8.58	0.67	28.02	18.74
532720	M&MFIN	273288	12.53	2.8	9.73	0.78	23.16	17.98
532134	BANKBARODA	367583	25.53	3.4	22.13	0.87	20.72	17.96
532648	YESBANK	345626	27.87	4	23.87	0.86	20.89	17.89
532461	PNB	543477	29.63	4.4	25.23	0.85	20.35	17.33

Security Code	Security Name	No. of Shares Traded	EPS	DPS	REPS	Retention ratio	ROE	Sustainable Growth Rate
532215	AXISBANK	826109	20.42	3.2	17.22	0.84	20.29	17.11
500180	HDFCBANK	120082	22.36	4.3	18.06	0.81	18.9	15.27
500247	KOTAKBANK	389003	12.37	0.6	11.77	0.95	15.51	14.76
500112	SBIN	654329	22.86	3.5	19.36	0.85	16.69	14.13
500010	HDFC	110573	36.99	11	25.99	0.70	19.92	14.00
532755	TECHM	113343	21.48	2	19.48	0.91	14.76	13.39
500295	VEDL	558454	31.01	4	27.01	0.87	15.09	13.14
532155	GAIL	161431	26.27	8.7	17.57	0.67	19.08	12.76
500312	ONGC	201975	21.93	9.75	12.18	0.56	22.72	12.62
500440	HINDALCO	276939	17.74	1.55	16.19	0.91	11.82	10.79
507685	WIPRO	103535	11.4	6	5.4	0.47	22.67	10.74
500477	ASHOKLEY	478386	2.13	1	1.13	0.53	19.55	10.37
532898	POWERGRID	1553549	7.13	2.11	5.02	0.70	14.68	10.34
500470	TATASTEEL	248445	55.49	12	43.49	0.78	12.85	10.07
532955	RECLTD	218392	14.37	7.5	6.87	0.48	20.71	9.90
532174	ICICIBANK	500239	12.06	3.3	8.76	0.73	13.62	9.89
532500	MARUTI	631586	58.17	7.5	50.67	0.87	10.9	9.49
500325	RELIANCE	428087	33.11	8.5	24.61	0.74	12.57	9.34
532555	NTPC	1403869	11.9	4	7.9	0.66	13.92	9.24
500253	LICHSGFIN	187260	18.23	3.6	14.63	0.80	10.48	8.41
532810	PFC	300149	11.59	6	5.59	0.48	16.98	8.19
532454	BHARTIARTL	295263	11.25	1	10.25	0.91	8.58	7.82
500113	SAIL	734679	8.7	2	6.7	0.77	9.23	7.11
500800	TATAGLOBAL	702417	5.76	2.15	3.61	0.63	10.24	6.42
500228	JSWSTEEL	134266	2.28	0.75	1.53	0.67	9.32	6.25
532822	IDEA	492071	2.19	0	2.19	1.00	5.72	5.72
500875	ITC	993207	5.34	4.5	0.84	0.16	35.38	5.57
500390	RELINFRA	118521	60.34	7.3	53.04	0.88	5.38	4.73
532868	DLF	513134	7.07	2	5.07	0.72	4.75	3.41
530965	IOC	163830	8.7	5	3.7	0.43	7.23	3.07
500510	LT	2492847	-0.05	0	-0.05	1.00	-0.79	-0.79
524804	AUROPHARMA	114293	-2.12	1	-3.12	1.47	-5.19	-7.64
517334	MOTHERSUMI	168507	1.32	2.25	-0.93	-0.70	11.34	-7.99
500104	HINDPETRO	148792	1.15	8.5	-7.35	-6.39	1.34	-8.56
500400	TATAPOWER	762295	-4.42	1.25	-5.67	1.28	-7.25	-9.30
500547	BPCL	193645	3.6	11	-7.4	-2.06	5.45	-11.20

Note: Out of BSE-100 Index, 51 companies were filtered on the basis of high volume of trade. High volume is taken into consideration if the number of shares traded is more than 100000. Further the sustainable growth rate of earnings is calculated for the above companies.
