IOSR Journal of Business and Management (IOSR-JBM)
e-ISSN: 2278-487X, p-ISSN: 2319-7668
PP 132-136
www.iosrjournals.org

Back Testing On Returns of Indian Listed Companies Using 'Intelligent Investor Defensive Equity Strategy' Of Warren Buffett

Ms. Maithili Prashant Dhuri
Assistant professor, IES MCRC

Abstract:
Purpose: *The purpose of this study is to analyse Intelligent Investor defensive equity strategies of Warren Buffett with respect to Indian listed companies.*
Design / Methodology*: For study purpose, researcher considered 8 listed companies based on select parameters. Data is analyzed using financial ratio and t- test.*
Finding: *The Study found that defensive equity strategy portfolio did not give higher compound annual growth rate (CAGR) than benchmark CAGR rate.*
Practical Implication: *This study will guide investors and how to do investments with less risky stock and maximizing profit.*
Keywords: *CAGR, Market return, Defensive stock, Multi bagger stock, Intelligent Investor*

I. Introduction:

Earning money is necessity, at same time growing your money and creating wealth is most important. Many of us create wealth by doing long term and short term investment. Most prefer investment classes are corporate bonds, fixed deposits, commercial papers and real estate. Investors do investment on principle of risk and return, while return should always take care of purchasing power money with respect to inflation then only wealth creation will be created. 10 years investment return by various asset classes are as follow:

Investment	**Returns (%)**
National saving certificates (NSC)	8.80
PPF (current rate)	8.80
Government saving bond	8.00
Bank fixed deposit	7.50
Gold (average last 15 years)	13.66
Sensex (average last 15 years)	13.97

According to Economics Times article of, "moving investment of middle class family" the researcher has following observations:

1. Household saving increased to 0.7% of GDP in FY16 where in FY 15 it was 0.4%.
2. Investments in fixed deposit in FY06 was 7.9%, in FY15 was 4.9% and in FY 16 proportion of deposits dropped to 4.7% of GDP.
3. In FY14 investment done in tax free PPF was 8.7% which has fallen to 8% in FY16.
4. Mutual fund outflow in FY01 was Rs. 27,070 cr. whereas mutual fund inflow in 2016 was Rs.1.43 lakh cr.
5. Sensitivity index Sensex moves upward 32%.

Hence, investment class preference of investor is shifting toward modern financial product in security market. Whereas key challenges in security market investment are as follow:

1. Knowledge of security market
2. Understanding of financial product
3. Market volatility
4. Understanding risk appetite

On same line some investors overcome above mentioned challenges, study and monitor capital market for investments. "Security Analysis" book by Benjamin Graham (1934) defined intelligent investor based on stock value principle.

Benjamin Graham promoted the idea of value investing – to buy stocks when the price is lower than their true value and then to hold those stocks until the price returns to the true value, thus earning a return on the investment. The Intelligent Investor, in principle, value investing opposes the assumption that the stock market is "efficient."

Intelligent investors are of two types:

1. Enterprise investor: Enterprise investors are active and higher risk averse investors. Investors fundamentally study stock and analyse intrinsic value of stock. Based on the study, they will invest in undervalued and growing stocks.

   Defensive investor: Defensive investors are passive and low risk adverse investor. They invest in large capital companies, which are low volatile and earn higher return. Defensive investors invest in stable companies which gives yearly dividend.

Based on the characteristics of defensive investor, Warren buffet designed stock selection parameter for defensive investor as follows:

- Company's Minimum Revenue INR 1000 Cr
- Strong Financial Condition
  - Current assets should be at least twice of current liabilities
  - Long term debt should be less than working capital
- Earnings Stability
  - 10 years of positive earnings
- Dividends
  - 20 consecutive years of dividend payments
- Earnings Growth
  - At least a 33% gain of earnings over the past 10 years using three-year averages.
- Moderate Price/Earnings Ratio
  - Not more than 15 times average earnings of past 3 years
- Moderate Ratio of Price to Assets
  - Price to book value should be less than 1.5 or
  - Price/earnings ratio times 1.5 should not exceed 22.5

Even the defensive investor should be willing to sell stocks that have appreciate significantly and can be replaced with more attractively valued securities.

II. Literature review:

Benjamin Graham (1934) wrote book on ," security analysis" which is based on value investment. Gregor Elze (2011)[1], studied Value investor anomaly and his study found that as compared to market values investor stock outperformed. Based on Benjamin Graham (1934) intelligent investor characteristics Warren buffet designed intelligent investor strategy. Dan POPESCU[2] (2010) studied, "Warren Buffett: The intelligent Investor". Researcher concluded that Warren Buffett remains in the economic history as the most typical capitalist that American have ever had and his behavior could be successfully followed by the Romania Business. Robert Novy-Marx[3] (2016) studied, defensive equity strategies of New York stock exchange (NYSE) for study period of last 50 years. Researcher conducted study for small cap, mid cap, large cap and giant cap stock. Study found that performance was not at all anomalous, however, after properly controlling for size, relative valuations, and, most critically, profitability. While investors would have benefited from a defensive equity over the period, these benefits derive effectively from an unprofitable small growth exclusion, which could have been implemented more efficiently, and at lower cost, directly.

Therefore, from above literature review researcher concluded that intelligent investor with defensive strategy gave higher return with moderate risk. This return can be at par of multi bagger stocks return. Multi bagger concept is introduced by Peter Lynch (1988). According to multi bagger concept if investor portfolio consist of 10 equity returns equal to 100% means your portfolio is 10 bags. In this study researcher analyzed that equity defensive strategy portfolio is outperformed with respect to S&P BSE500 Index. Similarly, researcher analyzed if defensive equity stock are multi bagger or not.

III. Research Methodology:

This study is based on quantitative research method. Scope of study is limited to BSE listed companies over study period of AY 2012-2017. Sample size of 8 companies selected according to Warren Buffet's intelligent investors defensive equity strategy parameters. Researcher analyzed if defensive equity stock are multi bagger or not. For analysis purpose researcher have considered CAGR instead of market return since CAGR is growth return over holding period. Researcher considered S&P BSE500 index CAGR and multi bagger stock ratio as benchmark rate since S&P BSE500 index is combination of small cap, mid cap and large cap companies. Companies selected for study were as follows:

1. Birla Corporation Ltd.
2. Graphite India Ltd.
3. GATI Ltd.
4. Vardhman Textiles Ltd.
5. Bilcare Ltd.
6. Pioneer Investcorp Ltd.
7. Oil India Ltd.
8. Finolex Cables Ltd.

The study was based on secondary data and data was collected from database such as ACE KP, and BSE. Researcher used financial ratio, such as CAGR, market return, current ratio, adjusted P/E, Price to book value, debt/asset ratio for analyzing purpose for testing hypothesis T –test been used by researcher. This study did not consider macroeconomic factors, such as policy change, political environment etc.

Hypothesis for study:

Hypothesis1

$H_0$1: Defensive equity strategy portfolio do not have multi bagger stock

$H_1$1 Defensive equity strategy portfolio do have multi bagger stock

Hypothesis2

$H_0$2: Defensive equity strategy does not give higher CAGR as compared to Benchmark CAGR (S & P BSE500 index)

$H_1$2: Defensive equity strategy gives higher CAGR as compared to Benchmark CAGR (S &P BSE500 index)

Data Analysis:

Based on defensive equity strategy parameters following stocks were selected for study purpose:

Company Name	Industry	Current Ratio(x)	Adjusted PE (x)	Price / Book Value(x)	Debt to Assets	Sales (Cr)
Birla Corporation Ltd.	Diversified	2.45	9.10	0.97	0.28	2286.9
Graphite India Ltd.	Electrodes & Welding Equipment	2.36	6.86	1.04	0.19	1912.45
GATI Ltd.	Logistics	2.54	4.89	1.05	0.28	1,187.40
Vardhman Textiles Ltd.	Textile	2.26	11.59	0.64	0.46	4,648.79
Bilcare Ltd.	Plastic Products	2.85	5.55	0.43	0.34	3641.79
Pioneer Investcorp Ltd.	Finance – Investment	2.28	9.91	0.38	0.33	9,054.83
Oil India Ltd.	Oil Exploration	4.20	6.74	0.70	0.00	9,863.23
Finolex Cables Ltd.	Cable	2.32	4.85	0.60	0.14	2186.36

Table1-Company selected according to Defensive Equity Strategy

Compounded annual growth rate give true return of investment over holding period.

For analysis purpose CAGR and multi bagger stock ratio was calculated as below.

Company Name	Industry	Stock price 2012	Stock price2017	CAGR (%)	Multi Bagger
Birla Corporation Ltd.	Diversified	300.75	1150.05	25.05	3.8239401
Graphite India Ltd.	Electrodes & Welding Equipment	72.55	709.6	46.24	9.7808408
GATI Ltd.	Logistics	37.95	135.55	23.64	3.571805
Vardhman Textiles Ltd.	Textile	245.55	1367.55	33.14	5.5693341
Bilcare Ltd.	Plastic Products	221	62.9	-18.90	0.2846154
Pioneer Investcorp Ltd.	Finance – Investment	16.1	47.95	19.95	2.9782609

Oil India Ltd.	Oil Exploration	466.35	372.2	-3.69	0.798113
Finolex Cables Ltd.	Cable	57.4	707.4	51.98	12.324042
S & P 500 Index		7581.57	14217.3	11.05	1.8752448

Tabel-2 CAGR and Multi bagger ratio of selected companies

The Table. 2 data analyzed with help of one sample t test using SPSS 16 and result for hypothesis 1 are as follows:

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Multibagger	8	4.8914	4.21102	1.48882

One-Sample Test

	Test Value = 1.88					
	T	Df	Sig. (2-tailed)	Mean Difference	90% Confidence Interval of the Difference	
					Lower	Upper
Multibagger	2.023	7	.083	3.01137	.1907	5.8321

Since P value of one sample t- test was > 0.1 at 90% level of significance the null hypothesis is rejected, and alternative hypothesis is accepted. Out of 8 sample size 6 companies stocks are multi bagger. In defensive equity strategy portfolio lowest multi bagger is Bill care Ltd i.e. 0.28 and strongest is Graphite India Ltd i.e. 9.78.

The Table. 2 data is analyzed with the help of one sample t test using SPSS 16 and result for hypothesis 2 is as follows:

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
CAGR	8	22.1762	23.78238	8.40834

One-Sample Test

	Test Value = 11.05					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
CAGR	1.323	7	.227	11.12625	-8.7563	31.0088

Since P value of one sample t- test was > 0.05 at 95% level of significance the null hypothesis is accepted. It is observed from Table-2, out of 8 sample size 6 companies stock earned higher CAGR than benchmark but standard deviation of portfolio is very high i.e 23.78 which shows that portfolio is very volatile and considerably high amount of risk associated with it. According defensive equity strategy parameters all stocks were fundamentally strong intrinsic value then also stock like Oil India Ltd and Bilcare Ltd. made huge losses. According to FY 2013-14 annual report of Billcare Ltd. company have done huge amount of fixed asset investment approximately 20% of capital which leads company to working capital loan. As a result company made huge losses, approximately 45%. Oil commodity market is melting down globally which is reflecting in Oil India's stock prices. If we square of position of this two loss making stock portfolio average CAGR return could be 33.33%, which is 3 times of benchmark rate.

IV. Conclusion:

Defensive equity strategy stocks individually have higher CAGR return than benchmark but there will be lot of volatility in the portfolio. Even intelligent investor does investment on large companies and stable health of companies but external and internal cause decline of financial health of companies need to be monitor continuously. If any equity stock making losses investor must replace that stock with another stable financial equity stock. Even defensive intelligent investor need to analyze market information to create wealth.

References:

[1]. GregorElze 2011," Value investor anomaly: return enhancement by portfolio replication—an empiric portfolio", Springer
[2]. Dan POPESCU," 2010,"WARREN BUFFETT,THE INTELLIGENT INVESTOR" Bulletin of the Transilvania University of Brașov • Vol. 3 (52) Series V: Economic Sciences
[3]. Robert Novy-Marx 2013, The other side of value: The gross profitability premium. Journal of Financial Economics 108, 1–28.

Database

1.Ace Kp
2.BSE