

Value Versus Growth Stocks and the Value Premium: The Indian Experience (2012-2016)

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Abstract: *The purpose of this paper was to extend previous research by empirically investigating whether the value premium exist in top 100 companies listed in Bombay Stock Exchange of India. As there are relatively few researches conducted for examining the performance of undervalued and overvalued securities classified as value and growth stocks, the study broadens the scope by providing empirical evidence of the value Premium in Indian Context.*

This study used the Exploratory Factor Analysis to find the determinants of stock returns and OLS Regression framework to find whether Earnings Growth Rate of the company explained the variation in E/P (Reverse of Price-Earnings Ratio) for the financial year 2012 to 2016.

The study showed results supporting to the previous results which says that value premium exist in the Indian market as in the year 2015-2016 the top performers were undervalued stocks. The regression results for the remaining years were found to be insignificant so no further analysis has been made for the subsequent years of analysis. The findings of this research provide empirical validity of use of E/P rate in identifying mispriced stocks in the Indian context. Undervalued stocks can provide better returns compared to overvalued stocks. The publicly available E/P rate possesses information content and warrants an investor's attention at the time of his portfolio formation or revision.

Keywords: *Value Stock, Growth Stock, E/P Rate, P/E Rate, undervalued, overvalued.*

1. INTRODUCTION

Does a value strategy outperform growth strategy has been a matter of empirical investigation for the last several years. One of the most controversial issues of discussion among researchers for many years is the superior performance of value stocks over growth stocks or glamour stocks which are in conflict with the previously championed hypothesis of Efficient Markets. Many academic researches provide conclusive evidence on this issue in different country contexts. As per the financial literature, the difference in return produced by these two investment strategies is the value premium. The fundamental analysts make strategies to earn premium.

“Buying low, selling high” is a popular phrase among the investing community. Similarly, various groups of investors employ growth/value investment strategies in an attempt to improve the performance of their portfolio of investments. The value stock was prominently supported by Benjamin Graham beginning in the 1930s, who is recognized as the father of fundamental security Analyst. Growth stock strategy was promoted by well known professional investor David L Babson and T Rowe Price (1951). This paper intends to find the value premium in Indian context as few studies have been conducted by examining the performance of individual growth stocks and individual value stocks.

2. THEORETICAL BACKGROUND

From the existence of the stock exchange in 1602, investors try to outperform the market and to produce returns above average market returns. In Efficient Market hypothesis, it would not be possible to obtain superior returns as information is reflected in the stock prices immediately (Fama, 1970). This theory makes it impossible for investors to earn superior profit from buying and selling shares no matter what investment strategy investors apply. Various scholars revealed contradictory results on the efficient market theory and appointed towards inefficiency (Basu, 1977; Lakonishok et al, 1994, Chan & Lakonishok, 2004; Athanassakos, 2009; Rasul, 2013; Hoekjan, 2013; Saji & Harikumar, 2015; Folkinshteyn et al, 2016) in which it would provide investors the possibility to obtain higher capital gains and to acquire abnormal returns. Various techniques and strategies are applied by investors to achieve this superior gain (Chan & Lakonishok, 2004; Deb, 2012; Rasul, 2013; Hoekjan, 2013; Saji 2015; Folkinshteyn et al, 2016).

Allocation to the securities can be classified in many ways such as large cap, mid cap, technological, non-technological, cyclical, defensive, Value and Growth stocks. Value and Growth stocks are popular since decades. (Bourguignon & De Jong, 2003). Graham and Dodd (1934) were the first to make distinction between value and growth stocks (glamour stocks). The actual recognition to growth stock is given by (Price Jr.

Babson, 1951) value and growth stocks can be defined in different ways, while the simplest definition of value and growth stocks is: *value stocks* are those stocks that trade at low prices compared to the fundamentals of the listed company (e.g. EPS, , cash flow, book value, dividends) whereby *growth stocks* are those stocks that trade at high prices in relation to the fundamentals of the listed company (Basu 1977; Fama & French, 1993; 1998; Lakonishok et al, 1994; Deb, 2012; Rasul, 2013; Hoekjan, 2013; Folkinshteyn et al, 2016)

The subject of value and growth stocks has been extensively examined during the 1990's and 2000's. Various scholars, including Lakonishok et al (1994), Fama & French (1998; 2007), Bauman & Miller (1998) and Black & McMillian (2004; 2006); Rasul, 2013; Hoekjan, 2013; Folkinshteyn et al, 2016, studied the subject of value and growth stocks in relation with return, risk, and overall performance. Results of these studies show that value stocks generate higher total returns in terms of accounting measures and risk adjusted measures also known as value premium than growth stocks in national as well as international markets. The reason behind this will be discussed in the literature review.

3. REVIEW OF LITERATURE

Firstly, in section 3.1, classification of stocks in financial markets will be reviewed and insights of why investor classifies stock are given. In section 3.2, what mechanisms were used to classify stocks as either growth stock or Value Stock is reviewed. In section 3.3, the performance of value and growth stocks in various settings will be reviewed.

3.1. CLASSIFICATION OF STOCKS

In general, people consciously or unconsciously make classifications to provide better understanding of similar entities (Barberis & Shleifer, 2003). Categorization makes the problems of choice simpler and allows to process vast amounts of information reasonably efficiently (Mullainathan, 2000). This principle of classification also exists in the world of investing to get superior returns than average market returns also known as Style Investing (Graham & Dodd, 1934; Barberis & Shleifer, 2003). The motivation of investors to get involved in style investing is explained by Barberis & Shleifer (2003). The style of investing approach shares common characteristics. These characteristics can be based on markets (large-cap securities), legal (government securities), or fundamentals (commodities). Some style approaches have a permanent status (U.S. treasury securities) while others are of short duration (rail-road securities) In the stock market, various style investing approaches exist. Popular style categories include large-cap versus small-cap stocks and technology versus non-technology stocks, value or growth stocks). The reason behind the popularity of these stock styles is the fact that value and growth act as an umbrella for other style investing approach. The style can further be classified as

either value or growth. But what are value and growth stocks, why are they important and how can they be classified?

3.2. DEFINITION OF VALUE STOCK AND GROWTH STOCK

The concept of value investing was first explained by Benjamin Graham, who is commonly known as the 'Father of Value Investing'. According to him the stock market is only efficient in the long run and therefore an intelligent investor can benefit from overpriced or underpriced valuations in the market (Graham & Zweig, 2006). For this Graham preferred stocks with relatively low fundamentals (earnings, book value, cash flow, dividend etc) in relation to price and various other characteristics - all of which define the value of a stock. Thomas Rowe Price is known as the 'Father of Growth Investing'. His investment style can be described by a strong focus on well-managed firms operating in industries that are considered to show growth and strong expansions. He was interested in firms showing increased earnings, cash flows, book value, dividends, as they are expected to grow at a faster rate than the economy.

Value Stocks are defined in various studies in which the market price is relatively low in relation to EPS (Fama & French 1992; Basu 1997; Rasul, 2013;), Cash Flow per share (Fama & French 1992, Lakonishok, Shleifer & Vishny 1991), Book Value per Share (Fama & French 1992 Hoekjan, 2013; Folkinshteyn et al, 2016;), DPS (Blume 1980 & Rozeff 1984, Fama & French 1992).

Value stocks, according to Graham & Dodd (1934), are stocks whose price-to-earnings, price-to-book, and/or price-to-cash flow is/are low relative to the market average. This definition is shared by multiple scholars (Basu, 1977; Lakonishok et al, 1994; Fama & French, 1998; Bourguignon & De Jong, 2003; Chan & Lakonishok, 2004; Athanassakos, 2009; Hoekjan, 2013; Folkinshteyn et al, 2016). This definition is shared by multiple scholars (see e.g., Capaul et al, 1993; Lakonishok et al, 1994; Fama & French, 1998; Leladakis & Davidson, 2001; Bourguignon & De Jong, 2003; Chan & Lakonishok, 2004; Cahine, 2008; Athanassakos, 2009; Vorwerk, 2015; Hoekjan, 2013; Folkinshteyn et al, 2016).

Growth stocks are generally defined as those stocks that are trading at high prices relative towards a stocks' fundamentals (e.g. earnings, book value, cash flow and dividends). (Graham & Dodd, 1934; Capaul et al, 1993; Fama & French, 1998; Leladakis & Davidson, 2001; Bourguignon & De Jong, 2003; Rasul, 2013; Hoekjan, 2013; Folkinshteyn et al, 2016).

Basu (1977) and Campbell (1998) found Price to Earnings (P/E) ratio as a predictor of equity returns. Chan, Hamao & Lakonishok (1991) found that four financial variables – earnings yield, size, book to market ratio and cash flow yield – are significant in variation of stock returns. Lakonishok,

Shleifer & Vishny (1994) give evidence only for B/M effect. Leledakis and Davidson (2001) stand for the predictability of returns by ratios of sales to price and debt to equity. Athanassakos (2009) shows P/E ratio as a better predictor of average equity returns than Price to Book (P/B) ratio. Saji (2012) provides evidence on the significance of earnings growth and beta factor in predicting stock returns in market downturns. Sehgal and Tripathi (2007) examined value effect (better returns) in the Indian stock market, identified operating profitability, size and financial leverage as the three important sources of variations in stock returns in the country.

On reviewing the literature, it is evident that the academic community has consensus as to the significance of corporate performance in valuation of stock returns, but their findings indicating the underlying reasons for such performance are much conflicting. So this study, which investigates further evidence on this issue, deserves special significance.

Cahine (2008) argues that using only one multiple, to classify stocks, would not generate appropriate results. This was also acknowledged by Black & Fraser (2004).

3.3. PERFORMANCE OF VALUE VERSUS GROWTH STOCK IN DIFFERENT SETTINGS

3.3.1 International Markets

Capaul et al (1993) documents that global value stocks tend to outperform global growth stocks in U.S. a Europe and Japan and the US contributed the least which was 1.35% only whereas in the study of Fama, US contributed the maximum. This was also acknowledged by Harris & Marston (1994). The reason for this could be Capaul et al (1993) used only one multiple; Fama & French (1998) used various multiples to classify stocks.

Black & Fraser (2004) argued that the standard deviations, a measure of volatility, are significantly lower in the United States than compared to other countries such as Japan, Norway, and Spain. Similar results were found by Bauman et al (1998). Cahine (2008) found that value stocks generate higher returns than growth stocks in the Euro-markets. Surprisingly, undervalued value stocks, which are value stocks provided higher value premiums than growth stocks (.618 over .324 percent).

3.3.2 Developed Markets

Basu (1977) in his study for the period between 1956 and 1971 found U.S. stocks with low P/E tend to offer investors 7.0 percent higher returns than stocks with high PE. Athanassakos (2009) states the following; "Value investing works and can help investors beat benchmarks and achieve superior long term performance. He did his study in the Canadian Market. Chan & Lakonishok (2004) also contended that value stocks are likely to generate higher returns than

growth stocks over a wide range of historical periods and market conditions.

Similar results were found by De Bondt & Thaler (1985); Leladakis & Davidson, 2001; Bourguignon & De Jong, 2003; Rasul, 2013; Hoekjan, 2013; Folkinshteyn et al, 2016).

3.3.3. Emerging Markets

Fama & French (1998) also analyzed possible value premiums in emerging markets. From the 16 emerging markets observe, he found evidence of a value premium that was remarkably high (14.13 percent) compared to developed international markets. Chen & Zhang (1998) documented similar results when emerging markets in Asia were studied. This result could be because of volatility as emerging markets tend to be more volatile than developed markets.

Yen et al (2004), conducted his study in Singapore and found that although value stocks have the tendency to outperform growth stocks in Singapore between 1975 and 1997, the value premium was only significant for the first two years. Brown et al (2008) examined the Asian emerging markets and documented the existence of a value premium in Hong Kong (0.72 percent), Singapore (0.42 percent) and Korea (0.42 percent), but a value discount in Taiwan of 1.26 percent.

However contradictory results were found by Beneda (2002) documented that, on average, the long-term holding period returns, up to 18 years, on growth stocks are likely to produce higher returns than value stocks in the U.S.

3.3.4. Indian Market

Deb (2012) for the period of 1996 to 2011 value premium did exist in Indian stock market, premiums is visible for both absolute performance measures like average returns and buy and hold returns and risk adjusted performance measures like Jensen's Alpha, Treynor ratio, Sharpe's ratio and Fama measure.

Saji (2012) found empirical evidence in Indian context on the relative performance of value strategy using Price Earning (P/E) ratio during the period of market downturns. The empirical results of the study supported the implication of value strategy in wealth management during crisis times. Similar results were found by Chhaya (2015).

Saji & Harikumar (2015) conducted his study in 32 IT companies for the period of 2000–2010 listed in BSE and found undervalued stocks can produce better returns compared to overvalued stocks, and their success has been both persistent and impressive. It is the first study conducted in Indian context wherein the returns of individual undervalued and overvalued stocks were compared not the portfolios.

On reviewing the literature, it is obvious that the academic community has consensus on the outperformance of growth strategies by value strategies, but the underlying reasons for the performance are controversial. Most of the studies related to value premium are done by creating the portfolios; only few studies were done by finding the value premium in Indian context is done by examining the performance of individual and overvalued securities. So this study is conducted to find the answer of question, **does value premium exist in Indian market by examining the performance of individual securities classified as value stock and growth stock.**

Need and Significance of the Study:

Unlike most prior studies, which focus on the value premium on portfolio basis, this study focuses on it at the individual stock level. Only few studies have done in Indian Context (Saji&Harikumar,2012). This definitely makes the investors more familiar with the firm-specific characteristics, which will lead to better stock valuation in market conditions.

4. DATA AND METHODOLOGY

From the research design perspective, the present study is related to a study by Harikumar and Saji (2015). The study involved a two-step empirical procedure: an exploratory factor analysis (EFA) and a regression modeling under ordinary least square (OLS) method. The present study aims to cover a period of 5 years from FY 2011-12 to FY 2015-16. The Top 100 Indian companies based on Market capitalization listed on Bombay Stock Exchange comprises the universe of the study. It is collectively known as the S&P BSE100 Index.

4.1. Sample Frame

All the financial firms were also excluded e.g. Banking and Insurance companies because they are governed by regulations specific to their industries. Thus the total sample came out to be 75 companies. Out of them only 54 companies were considered, the stock of which had been continuously traded in the stock market during the period of study. The required data was collected from the PROWESS database maintained by the Centre for Monitoring Indian Economy (CMIE).

4.2. Data Analytical Tools

4.2.1. Exploratory Factor Analysis:

To determine the potential predictor of stock returns, 12 exploratory financial variables were taken. The variables

included are EPS, Earnings growth, Return on Equity (ROE), Return on Capital Employed (ROCE), Debt to Equity ratio, Beta (market risk premium), Earnings Price (E/P) ratio or Earnings yield, Book Value per share (BV), Price to Book value ratio (P/B), Market Capitalization (MC), Dividend yield and Average Stock Return (AR).

4.2.2. Regression Analysis:

The variables used to examine the impact of expected earnings growth rate on E/P rate.

S. NO.	Type of variable	Measuring the Variables	Reference studies
1	<u>INDEPENDENT VARIABLE</u> Expected earnings growth	Arithmetic mean of the last five years (including the year of estimation) earnings growth rate	Harikumar and Saji (2015)
2	<u>DEPENDENT VARIABLE</u> Expected E/P Rate	Earnings/ Market Price	Harikumar and Saji (2015)

5. DATA ANALYSIS AND FINDINGS

5.1. Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis (EFA) was applied to investigate the dimensions that would have caused correlations among the observed fundamental variables of the company. To identify the critical factors, factor extraction method of Principal Component Analysis (PCA) was opted. For factor analysis to work there should be some relationship between the variable, so a Pearson coefficient of Correlation matrix of selected variables was prepared and then a test proposed by Kaiser-Meyer-Olkin (KMO) (1974) and Bartlett (1937) was applied to see whether the sample variables were adequate for factor analysis. The results of KMO-Bartlett's test and coefficient of correlation are shown in Tables 1 and 2 respectively. The correlation matrix represents the extent to which the selected 12 financial variables are correlated pair-wise in a matrix. Out of 66 cells below the diagonal, there are only 22 correlation coefficients (the numbers that go from the upper right corner to the lower left) above or equal to 0.25, which are also statistically significant (at 1 % level and 5%) and different from zero.

TABLE 1: COEFFICIENTS OF CORRELATION

	EPS	EARNINGS GROWTH	ROE	ROCE	D/E	BETA	E/P	B/V	P/BV	MARKETCAP	YIELD	AVG STOCK RETURNS
EPS	1	-.101	.377**	.300*	.008	-.188	.185	.487**	.000	.222	.155	-.077
	-.101	1	-.094	-.105	-.034	-.126	-.155	-.106	.100	-.037	-.256	.085

ROE	.377**	-.094	1	.974**	-.290*	-.525**	-.248	-.248	.816**	.193	.094	.390**
ROCE	.300*	-.105	.974**	1	-.335*	-.507**	-.274*	-.244	.851**	.228	.104	.383**
D/E	.008	-.034	-.290*	-.335*	1	.327*	.150	.240	-.254	-.144	-.045	.048
BETA	-.188	-.126	-.525**	-.507**	.327*	1	.478**	.371**	-.491**	-.183	.099	-.099
E/P	.185	-.155	-.248	-.274*	.150	.478**	1	.511**	-.498**	.067	.577**	-.235
BV	.487**	-.106	-.248	-.244	.240	.371**	.511**	1	-.322*	.120	.067	-.172
P/BV	.000	.100	.816**	.851**	-.254	-.491**	-.498**	-.322*	1	.061	-.148	.551**
MARKETCAP	.222	-.037	.193	.228	-.144	-.183	.067	.120	.061	1	.152	-.075
YIELD	.155	-.256	.094	.104	-.045	.099	.577**	.067	-.148	.152	1	-.171
AVGSTOCK RETURNS	-.077	.085	.390**	.383**	.048	-.099	-.235	-.172	.551**	-.075	-.171	1

TABLE 2: KMO And Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.571
Bartlett's Test of Sphericity	Approx. Chi-Square	429.973
	Df	66
	Sig.	.000

The KMO statistic reported in Table 2 is 0.571 which represents the ratio of squared between the variables to the squared partial correlation between those variables. The KMO statistic varies between 0 and 1. Kaiser (1974) recommended values greater than 0.5 as acceptable. It is indicated that the sample is good enough for sampling.

The Bartlett's measure tests the null hypothesis that the original correlation matrix is an identity matrix. If the correlation matrix were an identity matrix, all correlation coefficients would be zero. We expect some relationships between the variables in the analysis. Bartlett's test is highly significant ($p < 0.001$), and therefore, factor analysis is appropriate for this study.

TABLE 3: TOTAL VARIANCES EXPLAINED

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.959	32.995	32.995	3.959	32.995	32.995	3.417	28.474	28.474
2	2.210	18.413	51.408	2.210	18.413	51.408	1.755	14.628	43.102
3	1.281	10.671	62.079	1.281	10.671	62.079	1.754	14.618	57.720
4	1.198	9.980	72.060	1.198	9.980	72.060	1.721	14.339	72.060
5	.876	7.301	79.361						
6	.776	6.465	85.826						
7	.681	5.678	91.505						
8	.419	3.489	94.993						
9	.307	2.555	97.548						
10	.232	1.935	99.483						
11	.047	.389	99.872						
12	.015	.128	100.000						
Extraction Method: Principal Component Analysis.									

TABLE 4: Rotated Component Matrix

	Component			
	1	2	3	4
ROE	.906			
PBV	.905			
ROCE	.904			
AVGSTOCK	.694			
DIVIDEND			.850	
EP		.674		
EARNING		.619		
EPS			.856	
BV			.783	
DE				.712
BETA				.618
MARKETCAP				

After testing the appropriateness and adequacy of sample, the study undertook factor analysis with the 12 fundamental variables. Table 3 shows the proportion (%) of variance explained by each factor, and indicates that the four factors overall account for 72.060 per cent of the total variance. Factors 3, labeled as the valuation factor, are most relevant as the study is intended to verify the existence of value premium in the Indian context. Valuation factor indicates how well the securities are valued in the market, and what determines its valuation and the valuation outcome. Earnings yield (E/P rate), earnings growth, and dividend were positively loaded on valuation factor, as we can see from Table 4.

TABLE 5: Regression Estimates

BASE YEAR	CONSTANT	BETA COEFFICIENTS	STANDARDIZED COEFFICIENTS	R2	F STATISTICS
2011-12	0.055	9.881	0.016	0.19	0.013(.909)
2012-13	6.225	0.054	0.051	0.17	0.135(.715)
2013-14	0.053	4.385	0.000	0.019	0.000(.999)
2014-15	0.45	3.68	0.042	0.017	0.093(.762)
2015-16	.050	0.050	0.300	0.73	*5.148(.027)

As expected sign of the relationship between earnings growth and E/P is the same (positive) as in the factor analysis. The regression results show the explanatory power of expected growth rate of earnings in determining the variations in E/P rate. The value of R2 is 73 per cent.. The F statistic, tests the null hypothesis that all the coefficient are zero (expected earnings growth shall not be able to explain the earning price relationship of a particular year) is found to be significant at 5

Positive loading means that the variables were positively correlated with the factor. Growth in earnings leads to larger increase in Earnings per Share (EPS) of firms in relation to the market price of its share (increase in earnings yield/decrease in P/E ratio). An increase in this factor indicates that the company has high earnings per share, but the market price of its share is low which means that the investment in it has good potential for growth in terms of capital appreciation in future. An increase in this factor have a positive effect on the share price, in that way enabling the investors to have increased returns from their investments.

Based on the findings of factor analysis, the variables—earnings growth and E/P rate—were considered as the prime determinants for tracking the price or returns of stocks in the Indian context. The validity of this hypothesis was further verified under a simple OLS regression framework.

Regression Analysis

For proceeding further, first we have to fit a single factor regression model explaining the causal relationship between the E/P and the expected earnings growth of a firm

$$Y_i = a + bix_i + uiv$$

a and u_i are constant and error term (which assumed to be zero) respectively

Y_i = Expected E/P rate

X_i = Expected earnings growth

b_i = Impact of expected earnings growth on E/P rate

per cent level in one out of the five years considered for the study. Only in the year 2015–2016, the expected earnings growth is significant in explaining the E/P rate of that year. In all other years, the regression coefficient of expected growth of earnings on E/P rate is found to be insignificant at 5 per cent level. These results confirm the significance of earnings growth in estimating E/P of firms in the Indian market conditions.

The study found the significant relationship of earnings growth and E/P rate, Now the study will estimate the E/P (Normal E/P) and compare the same with the actual E/ If the actual E/P for a particular stock is greater than its estimated P/E, he might conclude that the stock is underpriced, and if

actual P/E is smaller than the Normal P/E, he will consider it as overpriced. If the actual P/E equals the Normal P/E, his claim is correct pricing of stock at the given market conditions.

TABLE 6: Actual E/P Rate and Expected E/P Rate of Stocks: A Comparison AndRisk- Return Profile of Overvalued And Undervalued Stocks

NAME OF THE COMPANY	ACTUAL E/P	ESTIMATED E/P	OVERPRICED/UNDERPRICED	RETURNS (%) (2016-2017)	RANK
Reliance Industries Ltd.	0.081037277	0.054401515	Underpriced	393	1
Indian Oil Corpn. Ltd.	0.094517958	0.097466037	Overpriced	344	2
Hindalco Industries Ltd.	0.022366361	0.032227206	Overpriced	260	3
A C C Ltd.	0.02221235	0.040982716	Overpriced	181	4
Exide Industries Ltd.	0.052438385	0.052832997	Overpriced	175	5
N T P C Ltd.	0.071890726	0.050545282	Underpriced	159	6
Ambuja Cements Ltd.	0.014369881	0.036466161	Overpriced	158	7
Hindustan Petroleum Corpn. Ltd.	0.138312586	0.059492339	Underpriced	157	8
A B B India Ltd.	0.011742602	0.059476624	Overpriced	138	9
Bharat Forge Ltd.	0.034674064	0.050344322	Overpriced	137	10
Hindustan Zinc Ltd.	0.105932203	0.049573767	Underpriced	137	10
Larsen & Toubro Ltd.	0.045724737	0.050243757	Overpriced	128	12
Maruti Suzuki India Ltd.	0.039323634	0.05401091	Overpriced	118	13
Nestle India Ltd.	0.018301611	0.045017958	Overpriced	114	14
Dabur India Ltd.	0.021349274	0.054898517	Overpriced	113	15
Tata Steel Ltd.	0.159744409	0.048415347	Underpriced	94	16
Titan Company Ltd.	0.022810219	0.045529467	Overpriced	86	17
Power Grid Corpn. Of India Ltd.	0.081766149	0.054065846	Underpriced	79	18
Reliance Infrastructure Ltd.	0.113765643	0.055828769	Underpriced	74	19
N M D C Ltd.	0.080064051	0.03747892	Underpriced	64	20
Cummins India Ltd.	0.032041012	0.048660021	Overpriced	55	21
Zee Entertainment Enterprises Ltd.	0.022983222	0.058822929	Overpriced	46	22
Godrej Consumer Products Ltd.	0.01594642	0.052939772	Overpriced	45	23
Tata Chemicals Ltd.	0.059311981	0.048697287	Underpriced	45	23
Dr. Reddy'S Laboratories Ltd.	0.026315789	0.044940332	Overpriced	40	25
Mahindra & Mahindra Ltd.	0.042158516	0.050749188	Overpriced	34	26
Oil & Natural Gas Corpn. Ltd.	0.089206066	0.049257186	Underpriced	33	27
Adani Ports & Special Economic Zone Ltd.	0.055340343	0.057113853	Overpriced	28	28
Ultratech Cement Ltd.	0.023798191	0.051161797	Overpriced	28	28
Asian Paints Ltd.	0.01900057	0.05410087	Overpriced	18	30
H C L Technologies Ltd.	0.052493438	0.046669117	Underpriced	18	30
AurobindoPharma Ltd.	0.037174721	0.038524097	Overpriced	12	32
Housing Development & Infrastructure Ltd.	0.088573959	0.054201047	Underpriced	6	33
Divi'S Laboratories Ltd.	0.042337003	0.041396412	Underpriced	-5	34
Wipro Ltd.	0.057208238	0.049150874	Underpriced	-8	35
Tech Mahindra Ltd.	0.070175439	0.062861769	Underpriced	-10	36
BhartiAirtel Ltd.	0.057240985	0.040328433	Underpriced	-20	37

NAME OF THE COMPANY	ACTUAL E/P	ESTIMATED E/P	OVERPRICED/UNDERPRICED	RETURNS (%) (2016-2017)	RANK
Lupin Ltd.	0.042753313	0.054203695	Overpriced	-22	38
Hero Motocorp Ltd.	0.053734551	0.056923744	Overpriced	-24	39
Marico Ltd.	0.022172949	0.041191498	Overpriced	-44	40
Bajaj Auto Ltd.	0.051894136	0.053351008	Overpriced	-47	41
Tata Consultancy Services Ltd.	0.046210721	0.054596811	Overpriced	-52	42
Tata Power Co. Ltd.	0.038880249	0.043222211	Overpriced	-52	42
G A I L (India) Ltd.	0.048402711	0.043847669	Underpriced	-53	44
Glenmark Pharmaceuticals Ltd.	0.06557377	0.054250507	Underpriced	-72	45
I T C Ltd.	0.03742515	0.050092945	Overpriced	-76	46
D L F Ltd.	0.021829295	0.037138701	Overpriced	-77	47
Cipla Ltd.	0.033311126	0.053468465	Overpriced	-90	48
Colgate-Palmolive (India) Ltd.	0.025348542	0.037973838	Overpriced	-98	49
United Breweries Ltd.	0.012309207	0.051586006	Overpriced	-100	50
Hindustan Unilever Ltd.	0.021640338	0.052138183	Overpriced	-103	51
Idea Cellular Ltd.	0.065703022	0.047745861	Underpriced	-144	52
MothersonSumi Systems Ltd.	0.018875047	0.046751858	Overpriced	-161	53
Cadila Healthcare Ltd.	0.060938452	0.033296147	Underpriced	-164	54

The analysis shows that 20 stocks were undervalued and 34 stocks were overvalued in the year 2015-16.

Does the investor produce better returns by identifying undervalued and overvalued stocks based on E/P rate For answering this question, it was assumed that investor had purchase the sample stock on the first day of the accounting period subsequent to the year in which the valuation is done and hold it until the last trading day of that period. By taking the difference in the market values of the stocks on these two dates, plus any dividend declared and paid during the period, the return that he would have made from it, was computed. Such comparison was done only for one period—2015–2016. No significant relations could be established between earnings growth and E/P rate hence, no comparison was made in the subsequent years.

The analysis of Table 5 shows that in 2016–2017, the return profile of undervalued stocks was outstanding compared to its counter group of overvalued stocks. Among the top 20 stocks in terms of producing return during the year, 8 stocks came from the undervalued group of its preceding year, 2015–2016. Out of these 20 stocks, undervalued stock of Reliance Industries Ltd. Ranked as topper by delivering returns at an outstanding scale of 393 per cent. The four undervalued stocks were included among the best ten stocks (in the sample) of the year.

Table 7 displays the average returns on an annual basis produced by undervalued and overvalued stocks for its investors during the four assessment periods, along with the return produced by the broad-based Index S & P BSE SENSEX (market return).

TABLE 7: Checking the equality of Variances

YEAR	MARKET RETURN	MEAN VALUE OF UNDERVALUED STOCKS	MEAN VALUE OF OVERVALUED STOCKS	Levene's Test of Equality of Variances	
				F	SIG
2015-16	21.40	39.15	38.58	.043	.837

It is implicit from the analysis that during the periods of observation (2015–2016), undervalued stocks received returns (on average) at a rate which were much higher than the rate of return given by the market index. However, overvalued stocks were not able to beat the market. The *t*-test checked the statistical significance of the difference in returns of the two groups of stocks. The test procedure demands the checking of the equality of variances of the groups for having inferences that are more useful. The Levene's test of homogeneity of variance based on F statistic was used for this purpose, which accepted the null hypothesis that the variances of the groups under observation were same. The superior performance of undervalued stocks relative to the market, as well as overvalued stocks reinforce the validity of the argument of the investment strategists in the use of E/P ratio as the tool for earning excess returns from stock market investments.

6. CONCLUSION AND DISCUSSION

The quantum of research done on value and growth stocks is very large. Various scholars examined value and growth stocks in different settings. However, there are always some gaps to be discovered in order to contribute and extend the

research on this matter. The study contributes by identifying undervalued and overvalued stocks classified as value stock and growth stock by using E/P Rate. Undervalued stocks will provide higher returns than overvalued stocks if E/P Rate is interpreted properly.

The objective of this paper was to examine the superiority of Value strategy over growth strategy in India. Using data from Indian stock market from 2012 to 2016, the study found that the value stocks outperformed the growth stocks during 2015-16 as positive value premium during the period.

From a statistical point of view, Earnings Growth and E/P rate are the prime determinants of stock return. There is significant impact of earnings growth on E/P Rate and there is a difference in the mean return of value and growth stocks.

Similar evidences are found by, Saji (2014); Saji & Harikumar (2015)

7. LIMITATIONS AND FUTURE SCOPE

There are some limitations in this study. Stock returns were taken directly from the Prowess database which does not consider- impact costs or transaction costs in the form of brokerage fees, account maintenance charges etc. Also study considered only one dimension –the E/P ratio to classify undervalued and overvalued stocks.

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