A study on Stock Specific factors and individual investor's behaviour in India: An Empirical Study

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ABSTRACT *The efficient market hypothesis (EMH) states that market is efficient. The assumptions of EMH about the individual investor's behaviour for rationality of human being called into questions. The current study provides evidences of which are the stock specific factors are considered by retail investors at the time of making investment. Retail investor is not rational and they do not give equal weight age to all fundamental factors.*

Keywords: *Retail investor, stock specific factors, efficient market hypothesis.*

Introduction

According to Robert Neal and Simon Wheatley, (1998) it is the common belief among the people about the stock market that the best time for buying stock is when individual investors are under the mood of selling and best time for selling is when individual investors are under the mood of buying the stock. This citation in their article for investor behavior provides deep understanding and the base for the development of this paper.

The Efficient Market Hypothesis (EMH) has been a dominating theory among Economics and financial theories, which suggests that market prices fully reflect all relevant information (Fama, 1970). It has been used widely to theoretical models but experiential studies of equity shares prices show disagreement on fundamental of the price-discovery process (Lo, 2007) as per efficient market hypothesis. The EMH subsequently faced both theoretical and empirical challenges and gradually loses its importance just as other once-fully supported economic theories must encounter at some stage. The assumptions of EMH about the individual investor's behaviour are often called into questions like rationality of individual investors, irrelevance of irrational investors and perfectly working arbitrage.

The part of the excess volatility in stock prices that has not been explained is one of the most important anomalies in finance (Campbell and Shiller, 1988; Shiller, 2003). It also represents one of the biggest challenges to the efficient market hypothesis. Shiller (2003) advocates an irrational investor's behavior as the possible explanation for this anomaly. The high stock market valuation peaking in 2000 followed by the largest correction in history is an example of this anomaly and is referred to a stock market bubble. Over the past eras psychologist and behavioural scientist have acknowledged vigorous and logical violation of principles of Bayesian learning

Literature Review

Accoering to Ashiq Ali et al. (2003) those stocks having characteristic of return volatility, higher transaction costs, and lower investor sophistication are highly influenced by the book to market (B/M) value of share which is in line with the market mispricing description for the anomaly

Hartone (2004) suggested if progressive earnings information arises after adverse dividend information, a significantly positive effect is observed on equity prices. Likewise, if affirmative dividend information is followed by adverse earning information, a significantly negative impact is observed in equity pricing.

With the help of varimax algorithm of orthogonal rotation of factor analysis Merikas et al. (2011) have examined 26 factors influencing individual investor's behaviour in the Greek stock exchange. They found that investor mostly considers "expected corporate earning", "condition of financial statement" and "firm status in the industry".

Stock specific factors

1) Recommendations of financial community

Individual investor considers recommendations (tips) given by financial analyst, brokers and experts of financial markets (stock market gurus) while making investment decision (Singhvi, 2001; Hussein, 2006; Aregbeyen and Mbadiugha, 2011). Previous researchers (Sultana and Pardhasaradhi, 2012; Kliger and Kudryavtsev, 2010) have documented the strong positive association between stock price reactions and analyst recommendations for upgrade when supplemented by positive market returns. Krishnan and Booker (2002) has analyzed the impact of analyst's recommendations on investment decision by individual

investors to work out at a short term judgment to hold or sell the equity shares and his results revealed that it reduces the disposition error i.e. selling winner stock early and holding loss making stock for long time.

2) Psychological factors:

Psychological variables like gut feeling, intuition and rumors (Kiymaz Halil, 2001) are affecting individual investor's investment decision (Singhvi, 2001; Hussein, 2006; Alleyne and Broome, 2010; Aregbeyen and Mbadiugha, 2011).

3) Who else is buying?

At the time of making investment, individual investors consider the action of institutional investors and other big investors to confirm their own decision of buying the stock. It is irrational and also harmful to the individual investor. Institutional and corporations buy large quantity of shares and when they decide to sell, the stock price reacts adversely. Moreover it is not possible to forecast the best timing for sell so individual investor should not create their buying position in stock based on significant percentage of share purchased by Institutional investor. This factor includes two variables Major Institution currently buying the stocks and Insider Buying (Singhvi, 2001; Bennet et al. 2012).

4) Financial Characteristics of Stock

Baker and Haslem (1974) documented that the individual investors giving more importance to announced dividends, expected returns and the firm's financial stability.

Gompers, Ishii and Metrick (2003) found that book value of the firm, Dividend per Share, Earnings per Share and Price Earning Ratio are significantly influencing the price of equity.

Hartono (2004) suggested that if positive earnings information occurs after negative dividend information, it has significantly positive impact on stock prices. Similarly, if positive dividend information is followed by negative earning information it has significantly negative impact on stock prices.

Financial characteristics include Financial ratios like Dividend per Share, Dividends Yield Ratio, Interest Coverage Ratio, Earning per Share, Turnover Ratio (Receivables, Inventory and Account Payables), Current Assets to Current Liability Ratio, Debt to Equity Ratio, Return on Investment, Return on Equity, Quality of Assets, Return on Assets and Cash flow per Share (Singhvi, 2001; Hussein, 2006; Bennet et al. 2013).

5) Quality of Management

Management capability is considered as very important factor while choosing stock for investment by investors. Investors consider track record of CEO, their expertise and quality of management (Singhvi, 2001; Merikas et al. 2003; Aregbeyen and Mbadiugha, 2011).

6) Past Price Performance and Sector Attractiveness

This factor contains variables like past price performance including any recent price overreaction and stock as well its sector viewed hot by Individual Investors (Singhvi, 2001).

7) Expected Events Surrounding the Stock and Book Value

This factor includes variables related to the different event happening surrounding the stock and stock characteristics that individual investor believing, it has impact on stock price so they consider it at the time of investment. This factor comprises the variables expected stock split, potential takeover target, merger and acquisition in the corporate sector and Book Value of share (Singhvi, 2001).

Research Design

Research design entails the detailed plan for executing the research study (Thyer 1993).

Research study

In this study, the researcher had adopted descriptive research.

The Universe (Population of Interest)

In the current study, the population comprises of Individual investors of India who invest in equity shares.

Sampling Element

Sampling element comprises a single member of the population. In this research individual investor who invests in Indian stock market is considered as sampling element.

Sample

For this study, sample consists of 539 respondents who are selected for further analysis.

Sampling technique

Non-probability snowball sampling.

Methods of data collection

As the population was very large, practically it was not possible to collect data from every parts of the country. So majority of data was collected from Gujarat and remaining state's data was collected through online survey.

Descriptive Analysis: Table 1

Variable	Range	Frequency	%
Gender	Male	517	95.9
	Female	22	4.1
Age	18 to 25	69	12.8
	26 to 35	238	44.2
	36 to 45	136	25.2
	46 to 55	56	10.4
	56 to 65	33	6.1
	66 and above	7	1.3
Highest Educational qualification	Up to Primary	10	1.9
	Up to secondary	67	12.4
	Higher secondary	216	40.1
	Graduate	194	36
	Post Graduate	47	8.7
	Other	5	0.9
Annual Family Income (In Rupees)	Less than 2,00,000	88	16.3
	200001 to 400000	166	30.8
	400001 to 600000	132	24.5
	600001 to 800000	95	17.6
	800001 to 10,00,000	29	5.4
	1000001 and more	29	5.4
Occupation	Service	298	55.3
	Business	120	22.3
	Profession	83	15.4
	Retired	32	5.9
	Other	6	1.1
Marital status	Single	75	13.9
	Married	464	86.1

Table 2 Cronbach's alpha for the Stock Specific Variables

No. of Questions	Cronbach's alpha value
45	0.904

Alpha value with 0.6 or below in general signals unsatisfactory level (Malhotra, 2009) but under the current study the test value was higher than the required value that shows good internal consistency among items and tools developed for study is reliable and hence researcher can proceed further.

In case of normality, sample size play an important role of improving statistical power by decreasing sampling error (Hair et al. 2009). Normality can have serious impact in the case of small samples (less than 50 samples) but the impact successfully reduces when sample number surpasses 200 cases or more. Here in

this research as sample size are 539, thus researcher can be less concerned about non normal variable and it is assumed that normality does exist.

Factor Analysis:

Table 3 KMO and Barkett's Test for Stock Specific Variables

KMO and Bartlett's Test		
KMO Measure of Sampling Sufficiency.		.793
Bartlett's Check of Sphericity	Approximate Chi-Square	3038.508
	Degree of Freedom	210
	Significance	0.000

Total 4 Variance Explained for Stock Specific Variables

Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Comp.	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.479	21.328	21.328	4.479	21.328	21.328	2.467	11.747	11.747
2	2.203	10.492	31.819	2.203	10.492	31.819	2.394	11.399	23.146
3	2.073	9.870	41.689	2.073	9.870	41.689	2.318	11.036	34.182
4	1.573	7.491	49.181	1.573	7.491	49.181	1.968	9.370	43.552
5	1.318	6.278	55.459	1.318	6.278	55.459	1.885	8.978	52.530
6	1.191	5.673	61.132	1.191	5.673	61.132	1.806	8.602	61.132
7	.840	3.998	65.129						
8	.772	3.676	68.806						
9	.711	3.386	72.191						
10	.688	3.278	75.470						
11	.597	2.845	78.314						
12	.585	2.786	81.101						
13	.544	2.589	83.690						
14	.513	2.445	86.135						
15	.474	2.259	88.394						
16	.468	2.231	90.625						
17	.426	2.030	92.655						
18	.421	2.007	94.662						
19	.401	1.911	96.573						
20	.372	1.771	98.344						
21	.348	1.656	100.000						
Extraction Method: Principal Component Analysis.									

Table 5 Revised Rotated Component Matrix for Stock Specific Variables

Rotated Component Matrix						
	Component					
	1	2	3	4	5	6
A46	.788					
A40	.762					
A73	.669					
A53	.644					
A52		.719				
A54		.711				
A58		.613				
A75		.612				
A83		.562				
A80			.693			
A68			.684			
A76			.662			
A70			.631			
A51			.527			
A74				.767		
A77				.682		
A55					.836	
A56					.827	
A48						.790
A49						.692
A50						.656
Extraction Method: PCA (Principal Component Analysis). Rotation Method: Varimax with Kaiser Normalization.						

As shown in revised table 3 that values of KMO and Bartlett's test (0.793, 0.000), Anti Image Matrix (>0.5), Communalities (>0.5), Eigenvalues (>1), Percent of Cumulative Variance Explained (>60 percent) and Factor Loadings (>0.5) are greater than cut off values. Hence, after detailed analysis six factors have been identified. First factor consists four variables (A40, A46, A53 and A73), second factor consists five variables (A52, A54, A58, A75 and A83), third factor consists five variables (A51, A68, A70, A76 and A80), fourth factor consists of two variables (A74 and A77), fifth factor consists two variables (A55 and A56) and sixth factor consists three variables (A48, A49 and A50) based on significant loadings.

Naming of Stock Specific Factors

Based on factors extracted from above process; naming of factors has been done in following sections.

1. First factor refers to four items. It includes 1) Merger and Acquisitions in the corporate sector (0.762) 2) Book value (0.788) 3) Expected stock split (0.644) and 4) Potential takeover target (0.669). The group of variables is concerned with Expected Events surrounding the stock and Book Value. So, this factor has been given name of "**Expected Events Surrounding the Stock and Book Value".** The extracted factor explains 11.75 percent of variance.

2. Second factor consists five variables 1) Dividends yield ratio (0.719) 2) Earning per Share (0.711) 3) Turnover ratio (Receivables, Inventory and Account payables) (0.613), 4) Return on investment (0.612) and (5) Cash flow per Share (0. 562). The group of variables is concerned with financial aspects of company. So, this factor has been given name of **"Financial Characteristics".** The extracted factor explains 11.40 percent of variance.

3. Third factor consists five variables 1) Gut feeling and intuition (0.684) 2) Rumors (0.662) 3) Recommended by friends, family and peers (0.527) 4) Quality of Management (0.693) and 5) CEO Track record and expertise (0.631). The group of variables is concerned with Psychology of Investors and Quality of Management working. So, this factor has been given name of **"Psychological Factors and Quality of Management"**. The extracted factor explains 11.04 percent of variance.

4. Fourth factor consist two variables 1) Past price performance including any recent price over reaction (0.767) and 2) Hot sector, hot stock (0.682). The group of variables is concerned with Past price performance and sector attractiveness. So this factor has been given name of **"Past Price Performance and Sector Attractiveness".** The extracted factor explains 9.37 percent of variance.
5. Fifth factor consists two variables 1) Insider buying (0.836) and 2) Major institution and corporation is currently buying the stocks of the company (0.827). This group of variables is concerned with who is buying the stock in current situation. So the name of this factor has been given as **"Who else is Buying".** The extracted factor explains 8.98 percent of variance.
6. Sixth factor consists three variables 1) Recommended by the analysts and research reports (0.790) 2) Recommended by the brokers (0.692) and 3) Recommended by the street experts and stock market gurus (0.656). This group of variables is concerned with the recommendations of the financial community. So the name of this factor has been given as **"Recommendations of Financial Community".** The extracted factor explains 8.60 percent of variance.

Table Factor wise Reliability statistics of Stock Specific variable

Sr.No	Factor Name	Var. No		Reliability
1	**Expected Events Surrounding the Stock and Book Value**	A46	Book value	**0.772**
		A40	Merger and Acquisitions in the corporate sector	
		A73	Potential takeover target	
		A53	Expected stock split	
2	**Financial Characteristics**	A52	Dividends Yield Ratio	**0.721**
		A54	Earning per Share	
		A58	Turnover ratio (Receivables, Inventory and Account Payables)	
		A75	Return on Investment	
		A83	Cash flow per Share	
3	**Psychological Factors and Quality of Management**	A80	Quality of Management	**0.675**
		A68	Gut feeling and intuition	
		A76	Rumors	
		A70	CEO Track record and expertise	
		A51	Recommended by friends, family and peers	
4	**Past Price Performance and Sector Attractiveness**	A74	Past price performance including any recent price over reaction	**0.616**
		A77	Hot sector, hot stock	
5	**Who else is Buying**	A55	Insider buying	**0.718**
		A56	Major institutions and corporations is currently buying the stocks of the company	
6	**Recommendations of Financial Community**	A48	Recommended by the analysts and research reports	**0.611**
		A49	Recommended by the brokers	
		A50	Recommended by the street experts and stock market gurus	

Findings:

Based on factor analysis of stock Specific variables six factors are extracted and it is found that the first factor "Expected Events Surrounding the Stock and Book Value" explains 11.75 percent of variance, the second factor "Financial Characteristics" explains 11.40 percent of variance, the third factor "Psychological Factors and Quality of Management" explains 11.04 percent of variance, the forth factor "Past Price Performance and Sector Attractiveness" explains 9.37 percent of variance, the fifth factor "Who else is Buying" explains 8.98 percent of variance and the sixth factor "Recommendations of the Financial Community" explains 8.60 percent of variance.

Conclusion, Implications of the study and suggestions

Human Behaviour has largely been ignored in understanding financial market. It is suggested that understanding investor's behaviour can provide a better explanation of stock price performance.

The present study identifies the factors affecting Individual Investor's sentiments towards equity market in India and which kind of information an investor look at while making investment in stock market. The result of the study is useful to stock broking firms to increase their business. Individual investors are giving importance to the news in media about stock, stories of successful investors in stock market, if everyone else is investing in stock market, information available on internet like blog, merger and acquisitions in stock market, potential takeover target, expected stock split, Dividend Yield Ratio, Earning per Share, quality of management, recommendations by family, friends and peers, recommendations of brokers, recommendations by analysts, recommendations by stock market gurus, past price performance including any recent price overreaction and corporate earnings. If share broking firms will focus on the above variables then they can get the more business without offering reduced brokerage charges.

The findings of the present research will be useful to stock market regulator in understanding the behavior of retail investors. If the stock market regulator can control the rumors, simplify the regulation for merger, acquisition and takeovers, improve confidence level of institutional investors they can strengthen the stock market activity and can increase individual investor's participation in stock market.

The findings of the present research are also useful to the Government. Currently the individual investor's behaviour towards equity market is positive so Government can go for disinvestment in Government companies to fund the new projects for the development of the country.

Future Scope of Research

It would be interesting to do comparative study among different states of India as far as Stock Specific factors and investor's behaviour towards equity market is concerned.

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