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Analysing impact of behavioral finance factors of investment decision

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Abstract
Behavioral finance encompasses research that drops the traditional assumptions of expected utility maximization with rational investors in efficient markets. Behavioral finance argues that some financial phenomena can plausibly be understood using models in which some agents are not fully rational. The research identifies the extent of behavioral factors affecting the investment decision. The individual investor's related factors are classified into 3 parts for the study and important factors on which an individual investor would take their investment decision will be identified under this research.

Keywords: behavioral finance, investment decision, market theory, Overconfidence and anchoring

1. Introduction
Specifically, behavioral finance has two building blocks: cognitive psychology and the limits to arbitrage. Cognitive refers to how people think. There is a huge psychology literature documenting that people make systematic errors in the way that they think: they are overconfident, they put too much weight on recent experience, etc. Their preferences may also create distortions. Behavioral finance uses this body of knowledge, rather than taking the arrogant approach that it should be ignored. Limits to arbitrage refers to predicting in what circumstances arbitrage forces will be effective, and when they won't be. Behavioral finance uses models in which some agents are not fully rational, either because of preferences or because of mistaken beliefs. Behavioural Finance is a new field of study and not much research has been carried out in this field, this would entail a study of investors' psychology; the difference in the results may be too vast to be compared. Thus there is a need to study the trend of the individual investors against the seasonal components and irregular movements through empirical analysis so that the important factors of the research are i.e. investors situated in the Udaipur city, where financial literacy may be lower than metros, can be analysed.

2. Literature Review
Gwily (2009) [14] argues that incompetence in the market that prompts practitioners to make use of forecasting techniques is caused by traders using simple, heuristical forecasting rules in preference to basing their expectations on an analysis of the fundamentals. Behavioral finance seeks to understand and forecast systematic financial market implications of mental decision processes (Odaen, 1998) [21]. The argument of behavioural economics is that the level of difficulty in the real world makes it unfeasible for agents to fully understand the markets in which they trade (Gwily, 2003). A basic question that arises from the literature is whether managers dealing with irrational market or whether rational market dealing with irrational managers or both (Subrahmanyam, 2008) [26].
Behavioral finance considers how different psychological behaviour affects how individuals or groups act as investors, analysts, and portfolio managers (Brown & Reilly, 2004) [23]. Heuristics can be defined as the use of experience and practical efforts to answer questions or to get better performance. Raines & Leathers (2011) [22] argue that when faced with uncertainty, people rely on heuristics or rules of thumb to personally assess risks of alternatives, which reduces the difficult tasks of assessing probabilities and predicting values to simpler judgmental operations.

2.1 Market Factor

The theory of limited arbitrage shows that if irrational traders cause deviations from fundamental value, rational traders will often be powerless to do anything about it. In order to say more about the structure of these deviations, behavioral models often assume a specific form of irrationality. For guidance on this, economists turn to the extensive experimental evidence compiled by cognitive psychologists on the systematic biases that arise when people form *beliefs,* and on people's *preferences.* Market Factor mean with changes of stock price, market information and past trends of stocks that influence the individual's investment decisions. The market factors also influences the investors from behaving rationally.

2.2 Overconfidence

People are overconfident about their abilities. Entrepreneurs are especially likely to be over confident. Overconfidence manifests itself in a number of ways. One example is *too little diversification*, because of a tendency to invest too much in what one is familiar with. Thus people invest in local companies, even though this is bad from a diversification viewpoint because their real estate (the house they own) is tied to the company's fortunes.

Think of auto industry employees in Detroit, construction industry employees in Hong Kong or Tokyo, or computer hardware engineers in Silicon Valley. People invest way too much in the stock of the company that they work for. Men tend to be more overconfident than women. This manifests itself in many ways, including trading behavior. Barber and Odean (2001) [1] recently analyzed the trading activities of people with discount brokerage accounts. They found that the more people traded, the worse they did, on average. And men traded more, and did worse than, women investors.

Ross (1987) [25] argues that much overconfidence is related to a broader difficulty in making sufficient allowance for the uncertainty in one's own view point. Overconfidence may give details why investment professionals hold vigorously managed portfolios with the purpose of being able to choose the winners (Johnson *et al*. 2002) [15]. Managers overvalue the chance of success in particular when they think of themselves as experts (March & Shapira, 1987) [19]. Overconfidence according to Ritter (2003) [24] manifests itself when there is little diversification because of a have a proficiency to invest too much in what one is familiar with. Selecting common stocks that will break the market is a difficult task. Unavoidability is low; response is noisy. Thus, stock selection is the type of task for which people are most overconfident (Barber and Odean, 2001) [1].

2.3 Anchoring

Tversky & Kahneman (1979) [16] recognized the systematic biases in judgment and their applied implications linked with three common biases: representativeness, accessibility and adjustment, and anchoring. Anchoring take place as investors assume that present prices are about right, putting too much load on recent experiences (Raines and Leathers, 2011) [22]. Gwily (2009) [14] observed that various agents make portfolio choice based on hope that are not rational in conventional sense, but based on one or two simple heuristic rules. Agents keep switching between the rules depending on how profitable the rule was in the earlier time. This according to him suggests some form of condition quo bias as recommended by Tversky & Kahneman (1974). Investors often fail to do sufficient research because there is simply too much data to assemble and analyse. Instead, they take action based on a single factor figure that should have little or no bearing on their decision, while ignoring more important information (Chandra, 2008) [2].

3. Results

While meeting the respondents, convenient method is adopted, because the respondents are not easily available to debate and discuss on the questionnaire and to respond. However, it is planned in a meticulous way and collected 500 samples as per target. The response rate is expressed as the return rate calculated as a percentage of the total number of questionnaires. Out of the total 600 questionnaires only 500 were returned. The response rate was therefore 83%. Table 3.1 presents a detailed description of the sample distribution. While one of the objectives of this was to understand the sample characteristics and other is to conduct analysis in the demographic context to understand the variation in the behavior manifestation by people with different demographic background. Each respondent was requested to complete and return the questionnaire within two weeks. Follow-up telephone calls were conducted to ensure a higher return rate.

Table 3.1: Sample distribution

	Count	Percentage
Gender		
Male	293	59%
Female	207	41%
Age		
Less than 30 years	190	38%
31-40	145	29%
41-50	111	22%
More than 50 years	54	11%
Marital status		
Married	403	81%
Divorced	4	1%
Single	93	19%
Education qualification		
Primary certificate	57	11%
Secondary certificate	64	13%
Degree certificate	184	37%
Post graduate/PhD	191	38%
Others	4	1%
Employment		
Self Employment (farming)	16	3%
Self Employment (business)	281	56%
Formal Employment	193	39%
Both formal and Self Employment	10	2%
Income (monthly)		
Less than 5000	31	6%
5000-20000	98	20%
20000-50000	136	27%
50000-100000	107	21%
100000-200000	72	14%
More than 200000	56	11%

3.1 Impact of Market Factors

Table 3.2: Variable list for Market Factors

Market Factors	Scale Items	Variable Name
Independent Variable	I consider carefully the price changes of stocks that I intend to invest in.	MF1
	Market information is important for my stock investment.	MF2
	I put the past trends of stocks under my consideration for my investment.	MF3
Dependent Variable	Market factor impact your investment decision	MFID

The following hypothesis was developed:
H1 (null): The attributes configuring Market factors have no influence on investment decision.
H1 (alternate): The attributes configuring Market factors have influence on investment decision.

To identify key variables in multivariate regression analysis has been used with SPSS-19 software and results were shown in table 3.3 as under:

Table 3.3: Multivariate Regression Analysis for Prospect Factors

Descriptive Statistics			
	Mean	Std. Deviation	N
MFID	3.4340	.72574	500
MF1	4.298	0.816	500
MF2	2.880	1.115	500
MF3	4.816	0.427	500

Correlations					
		MFID	MF1	MF2	MF3
Pearson Correlation	MFID	1.000	.258	.383	.212
	MF1	.258	1.000	.280	.354
	MF2	.383	.280	1.000	.428
	MF3	.212	.354	.428	1.000
Sig. (1-tailed)	MFID	.	.000	.000	.000
	MF1	.000	.	.000	.000
	MF2	.000	.000	.	.000
	MF3	.000	.000	.000	.

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	MF2	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	MF1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
a. Dependent Variable: MFID			

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.383[a]	.147	.145	.67097	.147	85.781	1	498	.000
2	.414[b]	.172	.168	.66191	.025	14.737	1	497	.000
a. Predictors: (Constant), MF2 b. Predictors: (Constant), MF2, MF1									

ANOVA[c]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.619	1	38.619	85.781	.000[a]
	Residual	224.203	498	.450		
	Total	262.822	499			
2	Regression	45.076	2	22.538	51.442	.000[b]
	Residual	217.746	497	.438		
	Total	262.822	499			
a. Predictors: (Constant), MF2 b. Predictors: (Constant), MF2, MF1 c. Dependent Variable: MFID						

Coefficients[a]											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.434	.112		21.720	.000					
	MF2	.321	.035	.383	9.262	.000	.383	.383	.383	1.00	1.00
2	(Constant)	1.979	.162		12.218	.000					
	MF2	.283	.036	.338	7.936	.000	.383	.335	.324	.921	1.08
	MF1	.175	.046	.163	3.839	.000	.258	.170	.157	.921	1.08
a. Dependent Variable: MFID											

The final Regression model with 2 independent variables (MF1 and MF2) explains almost 16.8 percent of the variance in Market factor items. Also, the standard errors of the estimate have been reduced. The two regression coefficients, plus the constraints are significant at 0.05 levels. The impact of multi colinerarity in the 2 variables is not substantial. They all have the tolerance value less than 1.

The ANOVA analysis provides the statistical test for overall model fit in terms of F Ratio. The total sum of squares (45.076) is the squared error that would accrue if the mean of Market items has been used to predict the dependent variable. This reduction is deemed statistically significant with the F ratio of 51.442 and significance at level of 0.000. With the above analysis it can be conclude that only three variables i.e., MF2, and MF1explains influence of the Market factors on investment decisions.

3.2 Impact of Overconfidence and Gambler's fallacy Factors

Table 3.4: Variable list for Overconfidence and Gambler's fallacy Factors

Overconfidence and Gambler's fallacy Factors	Scale Items	Variable Name
Independent Variable	I believe that my skills and knowledge of stock market can help I to outperform the market.	OF1
	I am normally able to anticipate the end of good or poor	OF2
Dependent Variable	Overconfidence and Gambler's fallacy Factors impact your investment decision	OFID

The following hypothesis was developed:

H2 (null): The attributes configuring Overconfidence and Gambler's fallacy factors have no influence on investment decision.

H2 (alternate): The attributes configuring Overconfidence and Gambler's fallacy factors have influence on investment decision.

To identify key variables in multivariate regression analysis has been used with SPSS-19 software and results were shown in table-3.5 as under:

Table 3.5: Multivariate Regression Analysis for Overconfidence and Gambler's fallacy

Descriptive Statistics

	Mean	Std. Deviation	N
OFID	3.1260	.82916	500
OF1	3.3500	.76986	500
OF2	2.8780	1.22724	500

Correlations

		OFID	OF1	OF2
Pearson Correlation	OFID	1.000	.298	.009
	OF1	.298	1.000	-.076
	OF2	.009	-.076	1.000
Sig. (1-tailed)	OFID	.	.000	.418
	OF1	.000	.	.046
	OF2	.418	.046	.
	OF1	500	500	500
	OF2	500	500	500

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	OF1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: OFID

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.298[a]	.089	.087	.79225	.089	48.566	1	498	.000

a. Predictors: (Constant), OF1

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.484	1	30.484	48.566	.000[a]
	Residual	312.578	498	.628		
	Total	343.062	499			

a. Predictors: (Constant), OF1
b. Dependent Variable: OFID

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.050	.158		12.950	.000					
	OF1	.321	.046	.298	6.969	.000	.298	.298	.298	1.000	1.00

a. Dependent Variable: OFID

The final Regression model with 1 independent variable (OF1) explains almost 8.7 percent of the variance in Overconfidence and Gambler's fallacy factor items. Also, the standard errors of the estimate have been reduced. The regression coefficients, plus the constraints are significant at 0.05 levels. The impact of multi colinerarity in the variable is not substantial. They all have the tolerance value less than 1. The ANOVA analysis provides the statistical test for overall model fit in terms of F Ratio. The total sum of squares (30.484) is the squared error that would accrue if the mean of Overconfidence and Gambler's fallacy items has been used to predict the dependent variable. This reduction is deemed statistically significant with the F ratio of 48.566 and significance at level of 0.000. With the above analysis it can be conclude that only three variables i.e., OF1 explains influence of the Overconfidence and Gambler's fallacy factors on investment decisions.

3.3 Impact of Anchoring Factor

Table 3.6: Variable list for Anchoring Factor

Anchoring Factor	Scale Items	Variable Name
Independent Variable	I forecast the changes in stock prices in the future based on the recent stock prices	AF1
	I am normally able to anticipate the end of good or poor.	AF2
Dependent Variable	Anchoring Factors impact your investment decision	AFID

The following hypothesis was developed:
H3 (null): The attributes configuring Anchoring Factors have no influence on investment decision.
H3 (alternate): The attributes configuring Anchoring Factors have influence on investment decision.

To identify key variables in multivariate regression analysis has been used with SPSS-19 software and results were shown in table-3.7 as under:

Table 3.7: Multivariate Regression Analysis for Anchoring Factor

Descriptive Statistics

	Mean	Std. Deviation	N
AFID	3.302	.7488	500
AF1	3.760	0.880	500
AF2	2.826	1.024	500

Correlations

		AFID	AF1	AF2
Pearson Correlation	AFID	1.000	.105	.423
	AF1	.105	1.000	.340
	AF2	.423	.340	1.000
Sig. (1-tailed)	AFID	.	.009	.000
	AF1	.009	.	.000
	AF2	.000	.000	.
	AF1	500	500	500
	AF2	500	500	500

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	AF2	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: AFID

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.423[a]	.179	.177	.67883	.179	108.315	1	498	.000

a. Predictors: (Constant), AF2

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.913	1	49.913	108.315	.000[a]
	Residual	229.485	498	.461		
	Total	279.398	499			

a. Predictors: (Constant), AF2
b. Dependent Variable: AFID

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.520	.174		8.736	.000					
	AF2	.511	.049	.423	10.407	.000	.423	.423	.423	1.000	1.000

a. Dependent Variable: AFID

The final Regression model with 1 independent variable (AF2) explains almost 17.7 percent of the variance in Anchoring factor items. Also, the standard errors of the estimate have been reduced. The regression coefficients, plus the constraints are significant at 0.05 levels. The impact of multi colinerarity in the variable is not substantial. They all have the tolerance value less than 1. The ANOVA analysis provides the statistical test for overall model fit in terms of F Ratio. The total sum of squares (49.913) is the squared error that would accrue if the mean of Anchoring factor items has been used to predict the dependent variable. This reduction is deemed statistically significant with the F ratio of 108.305 and significance at level of 0.000. With the above analysis it can be conclude that only three variables i.e., AF2 explains influence of the Anchoring factors on investment decisions.

4. Conclusion

The advisors can help the clients understand the psychology of trading by individual investors that can lead to poor decisions. Help them understand that these misguided impulses of the intuitive mind are quite natural, but that there is another, better path to follow, governed by more rational approach. They can help clients to understand the consequences of impulsive nature of investment decisions. Financial advisors should know their client very well. Their client relationships should have two components: the technical and the personal. The marketer should consider this fact while framing the marketing strategies and can consider these two dimensions as a basis of segmentation. Advisor should advise the investor to make an investment decision spent enough time and resources to analyse the company. If it is a good company with good fundamentals, a slight price high should not matter much. Once sure about the good company they should not wait to invest. Result also confirms that investors tend to seek more risk after a prior gain and consequently after a loss, they tend to be more risk averse. To overcome the anchoring bias investor should be patient and check once if you are making an emotional decision or a data driven decision. Discuss with trusted resources to take a critical thinking view Check only the underlying fundamentals since great businesses very rarely trade at mouth-watering valuations. Moreover, they will always trade at higher valuations.

Recommendations given to investors are that they should carefully consider before making investment decisions, but should not care too much about the prior loss for their later investment decisions. This can limit the good chances of investment and impact badly the psychology of the investors and lead to unfavourable investment performance. Besides, the investors should not reduce their regret in investment by avoiding selling loosing stocks and selling increasing ones, since this can lead to investors keeping all losing stocks and this impact negatively the investment performance. Also, the investors should not divide their investment portfolio into separate accounts because each element of the portfolio may have a strict relation to the others and the treating each element as an independence can be result a unfavourable investment performance. All the behavioural factors influences the decision making process of 'individual investors. Demographic characteristics such as age, education and income group can be treated as a basis of segmentation of Investment policies.

5. References

1. Barber Brad, Terry Odean. Boys will be boys: Gender, overconfidence, and common stock investment. Quarterly Journal of Economics. 2001; 116:261-292.
2. Chandra A. Decision Making in the Stock Market: Incorporating Psychology with Finance. New Delhi-110025, 2008.
3. Chandra B, Chouhan V, Goswami S. Analyzing Trends and Profitability vis-à-vis Working Capital Organizations of India Management (WCM) – A Study of Select Information Technology (IT), Indian Journal of Finance, ISSN: 0973-8711. 2012:a; 6(7):13-26.
4. Chandra B, Goswami S, Chouhan V. Investigating Attitude towards On-Line Advertising on Social Media – An Empirical Study, Management Insight, SMS Varanasi, ISSN: 0973-936X. 2012: b; VIII(1):1-14.
5. Chouhan V, Gorana H. Analysing Consumer Decision making for FMCG products on basis of different culture: a case study of Rajasthan and Gujarat states, American International Journal of Research in Humanities, Arts and Social Sciences. 2014; 8(2):217-222.
6. Chouhan V, Verma P. Measuring validity of performance appraisal tools in Performance Appraisal System, Nirnay the Journal of Decision Science. 2014:b; 6(1):57-64.
7. Chouhan V, Verma Pushpa. Improving effectiveness of Performance appraisal tool: Who thinks that it uses improved techniques?, Business Spectrum. 2014:a; 4(1):71-82.
8. Chouhan V, Naghshbandi N. Measuring Employees Value: A Critical Study on Human Resources Accounting in India. International Journal of Management, Accounting and Economics. 2015; 2(4):277-292.
9. Chouhan V. Global Convergence of Accounting Standard And Indian Perspective, International Journal of Research in Finance & Marketing. 2013; 33(7):15-27.
10. Chouhan V, Chandra B, Goswami S. Predicting financial stability of select BSE companies revisiting Altman Z score, International Letters of Social and Humanistic Sciences. 2014; 15(2):92-105.
11. Chouhan V, Verma Pushpa, Sanghvi Himanshu, Gupta Apurv. Assessing Worker's and Manager's Perception on Judgment Accuracy in Performance Appraisal System (PAS) International Journal of Engineering, Business and Enterprise Applications (IJEBEA). 2013; 5(1):95-99.
12. Chouhan Vineet, Chandra Bibhas, Goswami Shubham, Verma P. Analyzing the Performance Appraisal System of a Public Sector Organization in India: The Case of Rajasthan State Mines and Minerals Limited, IUP Journal of Management Research. 2016; 15(1):48-74.
13. Goswami S, Chandra B, Chouhan V. Analyzing Customer Perception towards Hypermarkets – An Empirical Study. The Alternative-Journal of Management Studies and Research (BIT Mesra). 2012; 2:87-107.
14. Gwily MR. Can behavioral finance model account for historical asset prices? Cardiff Economics Working Papers, 2009.
15. Johnson M, Lindblom H, Platan P. Behaviora Finance: And the change of investor behaviour during and after the speculation bubble at the end of the 1990s. Master's Thesis in Finance, Lund University, 2002.
16. Kahneman D, Tversky A. Prospect theory: An analysis of decision under risk. Econometrica: Journal of the Econometric Society. 1979, 263-291.
17. Khan S, Chouhan V, Chandra B, Goswami S. Measurement of Value Creation Vis-à-Vis EVA:

Analysis of Select BSE Companies, Pacific Business Review. 2012; 5(1):114-131.
18. Khan S, Chouhan V, Chandra B, Goswami S. Sustainable accounting reporting practices of Indian cement industry: An exploratory study. Uncertain Supply Chain Management. 2014; 2(2):61-72.
19. March J, Sharpira Z. Managerial Perspective on Risk Taking. Management Science. 1987, 33.
20. Naghshbandi N, Chouhan V, Jain P. Value based measurement of financial performance. International Journal of Applied Research. 2016; 2(2):365-369.
21. Odaen RA. Behavioral Finance and its Implications for Stock-Price Volatility, Financial Analyst Journal. 1998, 54(2).
22. Raines JP, Leathers CG. Behavioral Finance and Post Keynesian-Institutional Theories of Financial Markets, Journal of Post Keynesian Economics. 2011.
23. Reilly J, Brown J. Management and control of cost and risk for tunneling and infrastructure projects. Tunnelling and Underground Space Technology. 2004; 19(4):330.
24. Ritter RJ. Behavioral Finance: Pacific Basin Finance Journal, 2003, 2(14).
25. Ross L. The Problem of Construal in Social Inference and Social Psychology, Hillsdale, NJ: Erlbaum, 1987.
26. Subrahmanyam A. Behavioural finance: A review and synthesis. European Financial Management. 2008; 14(1):12-29.