



## How "Herding Effects" acts behind recent chit fund scams (With a survey of Investment Avenue in Asansol Durgapur Industrial area)

## KEYWORDS

proactivity, investors, financial belief, behavioral finance

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**ABSTRACT** Making investment decisions is important and distinct concepts. It differs from person to person. Behavioral finance is the study that seeks to identify such dimensions of financial decision-making. Our study aims to gain knowledge about key factors that influence investment pattern and investment decision. Keeping in mind paper aims: (1) To study the profile of investors in terms of demographic variables. (2) Applying the behavioral finance to identify the possible behavioral factors influencing the investment decisions of individual investors at Asansol-Durgapur Industrial area. (3) Seeks to understand correlation between perception of investors' financial belief and financial need. Spearman's correlation between these two variables (Belief & need) shows ( $R=0.452$ ). Data was collected through self-constructed questionnaire (cronbach alpha= .56) Financial planners and financial institutions get a clear picture before launching an investment instrument. General people also aware about the factors act behind chit fund scams and also for other scams.

### Introduction

Stock market movement represents the economic health of an economy of that country. Similarly, Investor behavior also influences financial environment of an area or even a country. Risk and return expectation of investor depends various demographic factors including age, gender, income, occupation etc.

Risk may be considered as a chance of variation in return. Quantitative analysis tells us what happened in the past, but risk of any investment lies in the future investment. Return is measured by growth of money over time. Returns are not known in advance. Hence we apply educational guess to maximising return and minimising risk.

Individual's expectation of return influenced by environmental (e.g. parental, peer etc.) & personal influence (perception, education etc). Risk tolerance differs from person to person. On the other hand, investment is a serious decision because future depends on it. A little ignorance or emotional activity makes a mistake.

### Chit fund game and after-effects

Like great recessions, in India, big monetary loss-game through chit-fund is common. In 1980 Sanchiyata (a chit fund group) made a big scam.

Recently, in Durgapur industrial area, a chit-fund company, promising a return of 24% per annum in the name of "System" misleads a no of people. Interestingly, among new investors, someone conforming feel proud for seeing in foresight higher return and the whole group investing it, though they knew it may not correct. [When India's GDP is approx more or less 8% and bank FD interest is maximum 9.75% how a chain business provide such a huge return.] It had broken down suddenly in 2011.

Same case happen in bigger form in "SHARDA" scam in 2013. They also provide monthly Rs.2000/- per lakh through MIS (Monthly income scheme). At the same time Post-office MIS rate was only Rs.667/- per lakh. So, The phenomena are not a new one. These bubble rapidly grow up and vanish.

### Survey to find investors' decision

In June 2013-Nov2013, a no of 238 respondents were asked from around the Asansol - Durgapur Industrial area of West

Bengal to find out just how proactive they are in relation to investment decision.

In this survey, Asansol-Durgapur Industrial area, it is found that some investors might be excessively optimistic, some excessively pessimistic, whereas others are 'smart-money' investors, free of cognitive errors and misleading emotions.

### Literature review:

Investors often update their beliefs in a way, which is influenced by various biases. Investor also affected by their feelings and emotions. Hsee and welch (2001) "risk-as -feelings -model" to highlight the role of emotions that effect the final outcome of a decision.

Considering Behavioral variables, Investors can be formulated in four groups. These are Heuristic Theory, Prospect Theory, Market theory & Herding Effect.

Investor's Representativeness, Overconfidence, Anchoring, Gambler's fallacy, Availability bias etc described by Heuristic Theory. Similarly, Loss aversion, Regret aversion, Mental accounting etc described by prospect theory. Market theory considered with Price changes, Market information, past trends of stocks, Fundamentals of underlying stocks, Customer preference etc. Herding effects are buying and selling decisions of other investors, Choice of stock to trade of other investors, Volume of stock to trade of other investors etc.

According to Bolhuis and Goodman, Journal of finance and planning, (2005), (18,1, 62-69) overconfident investors trust their intuition and gut feeling excessively and indulge into taking into too much risk or excessive trading. Cognitive bias like anchoring is influenced investor behavior. i.e. decisions are made based on some recent observation and fixed a scale in mind. Behavioral finance are cognitive psychology (how people think) and the limits to arbitrage (when markets will be inefficient). Martin Sewell-2007 (<http://www.behavioralfinance.net/>.)

Prospect theory by Kahneman and Tversky (Prospect theory :An analysis of decision making under risk; Econometrica,47, 2 , 263-291 (1979) . Prospect theory describes how individuals evaluate losses and gains differently and base decision on perceived gains rather than perceived losses.

According to N Barberis and M Huang (Journal of finance, 56, 1247-1292) Mental accounting is the process by which people think about and evaluate their financial transactions. Thaler (1980) describe mental accounting as a process by which investor think about and evaluate their investment.

Mistaken beliefs arise because people are bad Bayesians. Modern finance has as a building block the Efficient Markets Hypothesis (EMH). The EMH argues that competition between investors seeking abnormal profits drives prices to their "correct" value. [Jay R. Ritter (Pacific-Basin Finance Journal Vol. 11, No. 4, (September 2003) pp. 429-437.)]

Psychology plays most important role of behavioral finance and underlies much of our crisis.

These groups reflect a total picture of almost behavioral factors can impact the investors' decisions. Therefore, the groups can be used in order to recognize the behaviors of individual or even institutional investors too.

**Objectives of the study**

The study focuses on achieving the following objectives:

- Applying the behavioral finance to identify the possible behavioral factors influencing the investment decisions of individual investors at Asansol-Durgapur Industrial area.
- Identifying the impact levels of behavioral factors on the investment decisions and performance of individual investors at Asansol-Durgapur Industrial area.
- Seeks to understand correlation between perception of investors' financial belief and financial need
- What are the behavioral variables influencing individual investors' decisions at Asansol-Durgapur Industrial area?

**Significances of the research**

**To the individual investors:**

This study is a good reference of investment behavior for the investors to consider and analyze the factors influence investment decision before making decisions of investment.

**To the security organizations:**

The study provides them with a good background for their guiding their investors and giving more reliable consultant information to the investors.

**To the field of behavioral finance:**

This study is done with hope to confirm the suitability of using behavioral finance for different markets.

**Data collection method**

With a self-completion questionnaire, respondents answer questions by completing the questionnaire themselves. This method is chosen for quick and easy way to collect. The 5-point Likert measurements are used in this research to limit the bias evaluation of respondents. It was putting respondent's view within a range from 1 to 5 point. There are 3 categories. 1 to 2 - less interested, 3 to 4 - moderate interested and 5 - highly interested in each questions. Mean values are less than 2 shows that the variables have very low impacts and 3 shows that the variables have moderate impacts and Mean values are 4 to 5 shows that the variables have high impacts.

**Respondent selection**

Questionnaires are sent to respondents using stratified random sampling.

**Descriptive Statistics:**

Descriptive Statistics (mean, standard deviation, std error mean) are used to describe respondents' personal information. Descriptive statistics are also used to describe the influence level of behavioral variables on the investment decision of investors. However, only behavioral variables correlation

by spearman's correlation coefficient and Cronbach's alpha test are put into the consideration of the description.

**Recently many chit funds are detected. Based on those, we draw three hypotheses:**

**HYPOTHESIS**

H<sub>0</sub>= Investment performance depends upon investors' belief and need both

H<sub>1</sub>= Investment performance depends upon investors' belief factor only

H<sub>2</sub>= Investment performance depends upon investors' need only

**Analysis and interpretation**

**Preferred Investment Avenue in Asansol-durgapur industrial area.**

Analyzing different characteristics of the respondents include age, occupation, Qualification & income, according to gender in table-1. No of respondents were 238. About 70% Male and rest 30 % were female respondents. In the chosen Industrial area, largest investors group (44.96%) is between 40 to 60 years, while 36.97% are belongs to 25 to 40 years group. Below 25 years group is only 15.13 %. Approximately 3% of respondents are above 60 years group.

Respondents were asked about their occupation. As can be seen in table-1, there were notable differences between the professions of investors. The percentage of professionals (i.e. Doctor/Engineers) 34.03 % and in Business category it is 34.45%. In academican category it is 16.81%. Interestingly, in this category, females' percentages (38.03 %) were far better than male (7.78%) i.e. In Asansol-Durgapur Industrial area highly preferred category is academican category chosen by females..

Other category consists of technician, programmers etc. & Govt. office staffs are also considered in this category (14.71%). 34.45% of investors were self-employed/entrepreneurs engaged in business.

Participants were also asked about their educational status. Among the investors Graduates were 48.74% while post-graduates were 18.49%. Doctorates were 1.68% only.

About Income status largest income group is 3Lakh-5Lakh p.a. (50%). Females are notably better than male in this demographic area.

**Table-1 No of respondents in various categories in Asansol Durgapur Industrial Area**

**% are given within ()**

Category	Group	Total Respondents Number (%)	Male Number (%)	Female Number (%)	Total
Age	Below 25 years	36 (15.13)	25 (14.97)	11 (15.49)	238 (Male= 167 + Female= 71)
	25-40 years	88 (36.97)	75 (44.91)	13 (18.31)	
	40-60 years	107 (44.96)	62 (37.13)	45 (63.38)	
	Above 60 years	7 (2.94)	5 (2.99)	2 (2.82)	
	Total	238	167 (70.17)	71 (29.83)	

Occupation	Professionals (Doctors/Engineers)	81 (34.03)	72 (43.11)	9 (12.68)	(Male= 167 + Female= 71) 238
	Academicians (Professor/Teachers)	40 (16.81)	13 (7.78)	27 (38.03)	
	Businessman	82 (34.45)	60 (35.93)	22 (30.99)	
	Others (Includes service in Public and Private sector)	35 (14.71)	22 (13.17)	13 (18.31)	
	10 pass +	11 (4.62)	9 (5.39)	2 (2.82)	
Qualification	Engg. Diploma	63 (26.47)	58 (34.73)	5 (7.04)	(Male= 167 + Female= 71) 238
	Graduate	116 (48.74)	79 (47.31)	44 (61.97)	
	Post Graduate	44 (18.49)	26 (15.57)	22 (30.99)	
	Doctorate	4 (1.68)	4 (2.40)	0	
	1L-3L	21 (8.82)	18 (10.78)	3 (4.23)	
Income (Per annum)	3L-5L	119 (50.00)	107 (64.07)	58 (81.69)	
	5L-9L	91 (38.24)	36 (21.56)	9 (12.68)	
	9L-14L	7 (2.94)	6 (3.59)	1 (1.41)	

**Table-2 Income and their investment in Asansol-Durgapur Industrial area**

**Proportion of Investment in (%)**

Group : earning 3 Lakh per annum [ total=21] (invest 43% of their earning)										
Gender	Stocks (Equity share)	Bond/ Deventure	Mutual Fund	Real Estate	Gold	Post office (NSC /KVP)	Provident Fund	Insurance	Private Micro-finance	Bank
Male	7.87	0.00	7.87	31.50	7.87	9.45	9.45	18.90	2.36	4.72
Female	7.81	0.00	7.81	31.25	7.81	9.38	14.06	15.63	1.56	4.69
Group : earning 5 Lakh per annum [total=119] (invest 65% of their earning)										
Gender	Stocks (Equity share)	Bond/ Deventure	Mutual Fund	Real Estate	Gold	Post office (NSC /KVP)	Provident Fund	Insurance	Private Micro-finance	Bank
Male	7.27	3.63	10.90	14.53	5.45	4.43	27.25	21.80	1.09	3.63
Female	7.30	3.65	9.12	14.60	7.30	4.38	27.37	20.07	0.73	5.47
Group : earning 9 Lakh per annum [total=91] (invest 70% of their earnings)										

Gender	Stocks (Equity share)	Bond/ Deventure	Mutual Fund	Real Estate	Gold	Post office (NSC /KVP)	Provident Fund	Insurance	Private Micro-finance	Bank
Male	5.22	3.48	5.22	15.65	2.61	3.48	34.78	17.39	1.74	10.43
Female	5.00	3.33	5.00	15.00	3.33	3.33	33.33	16.67	1.67	13.33
Group : earning 14 Lakh per annum [total=7] (invest 68% of their earnings)										
Gender	Stocks (Equity share)	Bond/ Deventure	Mutual Fund	Real Estate	Gold	Post office (NSC /KVP)	Provident Fund	Insurance	Private Micro-finance	Bank
Male	14.39	2.88	4.32	17.27	3.60	4.32	28.78	14.39	1.44	8.63
Female	13.99	2.80	3.50	16.78	4.90	3.50	27.97	13.99	1.40	11.19

Table-2 shows gender wise with income group distribution of invests in (%) under different financial instruments. For analysis, respondents were divided into four earning groups. The result reveals that no significant difference observed between male and female investors.

In Asansol-Durgapur Industrial area, higher proportion of their earnings put in savings. The most preferred Investment instrument is provident fund in middle-income groups (27% to 35%). But stocks preferred in high-income group. They invest about 15% of their total investment in stock market. Second preferred area is real estate. The next preferred area is insurance among all the groups.

This indicates that the investors are proactive in nature, careful about their investment instruments and try to balance inflation.

**Perception of Asansol-Durgapur Industrial area towards their financial belief**

Table-4, presents that perception towards market belief factor highly impacts on the investment decision making of individual investors. This means the individuals given importance to their perception before making their investment. The standardized deviations of these variables, which are relatively high in comparison to the mean values, suggested that there are some differences among the assessments of respondents about the impacts of all behavioral variables on their investment decisions.

**Table-4 The 5-point Likert measurements are used in this research to limit the bias evaluation of respondents towards their financial belief.**

Sl No	Statement	N	Mean	Std Deviation
1	Money makes money	238	4.27	0.91
2	Gamble for investment	238	2.99	1.42
3	Money comes by luck or fate	238	3.64	0.68
4	Striving for wealth affect health	238	3.14	1.16
5	Education is not a criteria to get rich	238	3.50	1.12
6	Investment for societal benefit	238	3.88	0.78
7	Lot of money required for better living	238	3.25	0.83
8	Invest when recommendation from friend / co-worker	238	4.50	0.87

From the above table, towards financial belief, it is clear that in Asansol Durgapur industrial area, "investment recommendation from friend / co-worker" have a high impact (mean 4.50), "Money makes money" also have next high impact (mean 4.27) and Gamble for investment shows low impact (2.99).

From the present scenario, it is clear why "Shardha" chit-fund scam was successful. It is easy to convinced those people who invest money when recommendation comes from

friend/co-worker and also have a belief that "Money makes money".

**Perception of Asansol-Durgapur Industrial area towards their financial need**

These findings propose that all factors of behavior finance have high impacts on individuals' investment towards their personal financial need. There may be some investors strongly focusing on the market variables whenever they decide to invest. However, the standardized deviations of all behavioral variables are not fairly high in comparison to their mean values. There are few items having low impacts on investors' decisions. Such as Gut feeling etc. Bank home loan interest decrease, Gold price fall from Rs.32000/- (April 2013) to (May, 2013) Rs.26000/- are several ones have high influences on the investment decision making.

**Table-5 The 5-point Likert measurements are used in this research to limit the bias evaluation of respondents towards their Personal financial need.**

Sl No	Statement	N	Mean	Std Deviation
1	Attractiveness in Real Estate investment	238	4.37	1.00
2	Attractiveness in Govt. Bond, KVP/NSC	238	4.13	0.78
3	Expected Loss through bear market	238	3.75	0.67
4	Expected Loss in Local Investment	238	3.76	0.97
5	Purchasing of Gold as investment	238	3.88	0.60
6	Minimizing risk & Diversification need	238	3.75	0.83
7	Gut feeling on the economy	238	3.26	1.09
8	Fear factor affect investment need	238	3.88	0.78

From table-5 towards personal need, "Real Estate investment" suggests that the Investors are highly proactive on their investment decisions (mean 4.37). Next preferred investment instrument is Govt bond, NSC/KVP for security (mean 4.13). In Asansol-Durgapur industrial area, Investment in gold (mean=3.88) safe investor & "Fear factor affect investment need" (mean=3.88) indicates at present they become alert before investing.

**Correlation between Investors' Financial Belief vs. Financial need**

Spearman's correlation co efficiency between financial belief and personal financial need (according to rank order) resulting (R=0.452). Considering positive sign of correlation coefficient between these two variables, we can assume that there is a significant relation between these two variables as the directions of those two variables are in the same direction.

As there is a correlation exists between financial belief and financial need,  $H_0$  is accepted.

(i.e. Investment performance depends upon investors' belief and need both)

**Investment performance depends on investors need & Belief**

Here is a diagram of Investment performance model. Investment performance depends on investors' need & Belief.

Need for investment - controlled by investor's own perception. Perception develops from all (parental effects) family environment, savings habit, consumerism etc.

Belief also influenced by perception but environment first. Belief affected by herding, prospect, market theory etc. So, 'Belief' factor influence investment decision also. Financial literacy only can change one's belief.

**How "Herding Effects" acts behind chit fund scams**

From the present research, it is clear that why "Shardha" chit-fund scam was made. From table-4, "Invest when recommendation from friend / co-worker" shows highest impact. By asking investors we also came to know in Asansol-Durgapur industrial area, investors grew their perception from gossiping, local market news and watch what other people do. It is clear that herding effects acts here. We know that Herding effect in financial market is identified as tendency of investors' behaviors to follow the others' actions. Here, if any investment company can convinced a single investor, a big investors' group comes in a grip of that investment company. In this way, all chit fund companies made scams in Asansol-Durgapur industrial area as well as other areas also.

**Guideline for investors**

There are a no. of emotional decision factors such as fear, greed, hope, envy pride, jealousy etc. affect investment decision. Volatile stock market, Scams in small savings to real estate, proves very crucial to building and maintaining a successful portfolio.

Many people think that herding may not good for investment decision. However, it depends on the market. When market is fluctuating and lack of reliable information, investors can also benefit from herding. But when Reliable information is available investors should avoid herding.

Investors should insightful, objective, and informative at their investment and being proactive in using it.

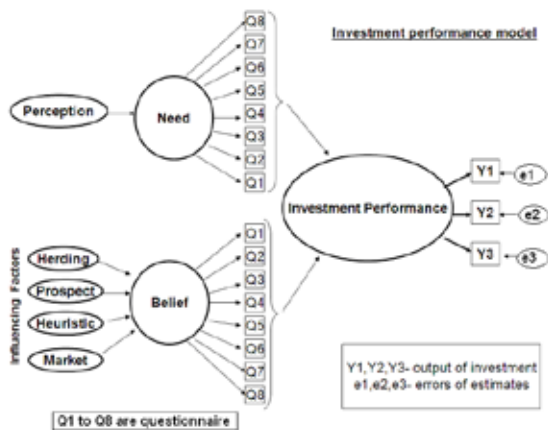
**Conclusion**

In this paper factors influencing the investor behavior at Asansol- Durgapur industrial area were examined. The paper develops a questionnaire. The questionnaire included two categories, namely perception towards financial belief and perception of their personal financial needs. The individual investor prefers to invest in those financial products, which gives risk free returns.

This research is successful in addressing the purpose of the study also applying the behavioral finance to identify the possible behavioral factors influencing the investment decisions of individual investors at Asansol-Durgapur Industrial area.

**So, it is concluded that Investment decision not only depends upon investor's need but also belief, which influence any investor's investment decision. Financial literacy only can change one's belief.**

- Financial literacy initiative through media may improve perception of financial belief. In Asansol-Durgapur Industrial area, investors grow their concept from gossiping, media and related market news. Hence news media have a significant role for spreading financial literacy.
- Organizations provide financial products should care of these demographic factors.
- Moreover, in many cases investors avoiding reading the terms and conditions of investing vehicle. Also, Terms and conditions are printed in very small letters fonts, which is irritating and troublesome to read. But awareness and reading habit (by glass /through internet) of terms and conditions, i.e. scrutinized before investing is a better solution for an investor.



**REFERENCE**

- 1) Hsee and Welch (2001) risk-as-feelings model. | 2) [<http://faculty.chicagobooth.edu/christopher.hsee/vita/Papers/RiskAsFeelings.pdf>] | 3) Bolhuis and Goodman, Journal of finance and planning, (2005), (18,1, 62-69) | 4) [<http://www.fpam.org.my/fpam/wp-content/uploads/2010/10/4EJ4Q10.pdf>] | 5) [<http://connection.ebscohost.com/c/articles/15616557/reading-between-lines-investor-biases>] | 6) Prospect theory by Kahneman and Tversky (Prospect theory: An analysis of decision making under risk; *Econometrica*, 47, 2, 263-291 (1979)). | 7) [<http://www.hss.caltech.edu/~camerer/Ec101/ProspectTheory.pdf>] | 8) [[http://www.suomenpankki.fi/bofit\\_en/tutkimus/seminaarit/tiistai/documents/2011\\_1711prospect\\_theory.pdf](http://www.suomenpankki.fi/bofit_en/tutkimus/seminaarit/tiistai/documents/2011_1711prospect_theory.pdf)] | 9) [[http://www.princeton.edu/~kahneman/docs/Publications/prospect\\_theory.pdf](http://www.princeton.edu/~kahneman/docs/Publications/prospect_theory.pdf)] | 10) N Barberis and M Huang (Journal of finance, 56, 1247-1292) Mental accounting | 11) [http://forum.johnson.cornell.edu/faculty/huang/review\\_on\\_EP.pdf](http://forum.johnson.cornell.edu/faculty/huang/review_on_EP.pdf) | 12) [http://faculty.som.yale.edu/nicholasbarberis/ma\\_jnl.pdf](http://faculty.som.yale.edu/nicholasbarberis/ma_jnl.pdf) | 13) thaler (1980) mental accounting <http://faculty.chicagobooth.edu/richard.thaler/research/pdf/MentalAccounting.pdf> | 14) [http://www.uibk.ac.at/economics/bbl/lit\\_se/lit\\_se\\_ss06\\_papiere/thaler\\_%281999%29.pdf](http://www.uibk.ac.at/economics/bbl/lit_se/lit_se_ss06_papiere/thaler_%281999%29.pdf) | 15) [Jay R. Ritter (Pacific-Basin Finance Journal Vol. 11, No. 4, (September 2003) pp. 429-437.)] | 16) <http://personal.lse.ac.uk/DASGUPT2/dpvttheory.pdf> | 17) <http://business.missouri.edu/yanx/research/Herding.pdf> | 18) <http://www.imf.org/external/pubs/ft/wp/2000/wp0048.pdf> | 19) Le Phuoc Luong & Doan Thi Thu Ha | <http://umu.diva-portal.org/smash/get/diva2:423263/FULLTEXT02> |