

**A STUDY OF IMPACT OF RECESSION  
ON INDIVIDUAL INVESTORS' BEHAVIOUR**

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**ABSTRACT**

*Recession is situation of adverse effect on every aspect of the economies. It was started in US in December 2007 and affected the whole economies of the world. Our Indian economy has also faced the various problems due to recession. Indian Stock Market plummet down in very appalling manner due to the upshot of recession. Keeping this thing in mind we make an attempt to study the changes in individual investor's behaviour due the changes in the situation of Indian Stock Market. Our purpose is to describe and conduct a research on what factors, investing characteristics, and decision-making processes affected individual investors during the recession period and the following period of volatile trend. This paper is divided into three parts. Part one represents introduction, review of literature, research methodology and objectives of the study. Part two reviews various facets of changes in individual investor behaviour due to effect of recession. The analysis in this paper is qualitative as well as quantitative. This study is based on information obtained from primary as well as secondary sources. This study has also focused the aspect of that whether the Indian Stock Market will be able to recover if same downfall happens again. Finally third part includes findings and conclusion of the study.*

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**Key words:** *Behaviour, changes, effect, investors, recession*

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**INTRODUCTION**

A recession is a contraction in the business cycle or it's a general slowdown in economic activity over a period of time. There is a downfall in Gross Domestic Product (GDP), employment, investment spending, household incomes, business profits during recession but there is a rise in bankruptcies and the unemployment rate. To control the recession governments generally adopting

expansionary macroeconomic policies, such as increasing money supply, increasing government spending and decreasing taxation.

According to economic statistician Julius Shiskin recession means "two down quarters of GDP". He has given this definition of recession in an article in New York Times in the year 1975.

According to some other economists recession exists when "there is an increase in unemployment by 1.5% within 12 months". They also referred different shapes of recession such as V-shaped, U-shaped, L-shaped and W-shaped recessions. In the US, V-shaped, or short-and-sharp contractions followed by rapid and sustained recovery, occurred in 1954 and 1990–91; U-shaped (prolonged slump) in 1974-75, and W-shaped, or double-dip recessions in 1949 and 1980-82. Japan's 1993-94 recessions was U-shaped and its 8-out-of-9 quarters of contraction in 1997-99 can be described as L-shaped. Korea, Hong Kong and South-east Asia experienced U-shaped recessions in 1997-98, although Thailand's eight consecutive quarters of decline should be termed L-shaped.

The National Bureau of Economic Research (NBER) defines an economic recession as: "a significant decline in the economic activity spread across the country, lasting more than a few months, normally visible in real GDP growth, real personal income, employment (non-farm payrolls), industrial production, and wholesale-retail sales."

### **STOCK MARKET AND RECESSIONS**

Every recession has an impact in the form of decline on stock markets. Due to the recession of 2007 Stock markets of China had a downfall from 4383 in 2008 to 1863 in 2009, USA market fall down from 4.25 in 2006-07 to 0.25 in 200-09 and Japanese market from 15341 in 2007 to 7682 in 2009. Indian Stock Market was also not untouched with the effect of 2008 recession. As an effect of recession SENSEX falls down from 20873 in Jan, 2008 to 9862 in Jan, 2009. There are various studies on the effect of recession on stock markets has been conducted by various persons. One of them is Seigel's, who mentioned about the Stocks for the Long Run that since 1948, ten recessions were preceded by a stock market decline, by a lead time of 0 to 13

months (average 5.7 months), while ten stock market declines of greater than 10% in the DJIA were not followed by a recession. The real-estate market also usually weakens before a recession. However real-estate declines can last much longer than recessions. Since the business cycle is very hard to predict, Siegel argues that it is not possible to take advantage of economic cycles for timing investments. NBER has also taken a few months to determine if a peak or trough has occurred in the US.

During an economic decline, high yield stocks such as fast moving consumer goods, pharmaceuticals, and tobacco tend to hold up better. However when the economy starts to recover and the bottom of the market has passed (sometimes identified on charts as a MACD), growth stocks tend to recover faster.

There is a view termed the halfway rule according to which investors start discounting an economic recovery about halfway through a recession. In the 16 U.S. recessions since 1919, the average length has been 13 months, although the recent recessions have been shorter. Thus if the 2008 recession followed the average, the downturn in the stock market would have bottomed around November 2008. The actual US stock market bottom of the 2008 recession was in March 2009.

Nourial Roubini of US said that recession 2008 has U-shape rather than other shapes in his presentation at CII conference on 22<sup>nd</sup> March 2009 at Delhi. He has divided the U-shape recession according to time scale into three parts such as:

Decline - December 2007 to January 2009 U Recovery - November 2009 onwards  
Recession stability - March 2009 to November 2009

(1) Left side of U represents the situation of recession when it was started and there was a rapid decline from December 2007 to January 2009, (2) Middle level of U-shape represents March to November, 2009 which was the peak time of recession effect, (3) And right side of U-shape represents the recovery time from recession which was November 2009 onwards.

### **EFFECT OF RECESSION**

- Increase in unemployment: Due to the effect of recession 2008 the unemployment in Japan rose from 3.80 in 2008 to 4.10 in 2009 and in USA it raised from 4.90 in 2008 to 7.60 in 2009.
- Continuous downfall in the profitability position of the
- Downfall in the standard of living of the people.
- Downfalls in exports and increase in imports.
- Increase in No-performing assets of the banks.
- Downfall in industrial outputs
- Lack in demand of goods
- Downfall in GDP of the economies
- Loss of jobs has a negative impact on the stability of families, and individuals' health and well-being.

### **LITERATURE REVIEW**

Kahneman et al (1979) originally described “Prospect Theory” and found that individuals were much more distressed by prospective losses than they were happy by equivalent gains. Some economists have concluded that investors typically consider the loss of \$1 twice as painful as the pleasure received from a \$1 gain. Individuals will respond differently to equivalent situations depending on whether it is presented in the context of losses or gains.

Statman (1984) argued that firms pay dividends simply because investors exercise better self-control with their expenditures if they get a ‘check in the mail’ in the form of a dividend than if they have to take a conscious action (sell shares), because the latter may allow faster liquidation of the portfolio than is desirable. Researcher stated that time variations in dividend policy can be effectively explained by the empirical proxy for dividend desire. The desire can be captured by empirical differences between market to book ratios of dividend paying and non-paying firms.

Shiller (1993) reported that many investors do not have data analysis and interpretation skills. This is because, data from the market supports the merits of

index investing, passive investors are more likely to base their investment choices on information received from objective or scientific sources.

Phillip (1995) reported that there is a change in financial decision-making and investor behaviour as a result of participating in investor education programmes sponsored by employees. And further stated that a serious national campaign to promote savings through education and information could have a measurable impact on financial behaviour.

Stein (1996) discussed the important issue of how to budget capital in a world where investors are irrational. In his model, investors miss-assess the cash flow of the firm by a random amount. Researcher showed that if the manager's goal is to maximise the current stock price, then the discount rate should not be the CAPM rate but a rate that adjusts for the error made by the investor (which can be obtained from misevaluation proxies such as book/market). On the other hand if the goal is to maximise long-run value, the hurdle rate equal to traditional CAPM cost of capital, with the proviso that the beta used in the CAPM formula uses the unobserved rational beta that can be measured using accounting numbers and cash flows, as opposed to returns.

SEBI-NCAER survey (2000) was carried out to estimate the number of households and the population of individual investors, their economic and demographic profile, portfolio size, and investment preference for equity as well as other savings instruments. This was a unique and comprehensive study of individual investors, for, data was collected from 3,00,000 geographically dispersed rural and urban households. The findings of the study are: Households preference for instruments match their risk perception; Bank Deposit has an appeal across all income class; 43% of the non-investor households (estimated around 60 million households) apparently lack awareness about stock markets; and, compared with low income groups, the higher income groups have a higher share of investments in MFs signifying that MFs have not truly become the investment vehicle for small investors; the number of households owning units of mutual funds is more (9%) than the investor households owning investments in shares and debentures (8%).

Shanmugham (2001) conducted a survey of 201 individual investors to study the information sourcing by investors, their perception of various investment strategy dimensions and the factors motivating share investment decisions. The results of the study showed that, psychological and sociological factors dominated economic factors in share investment decisions.

Johnsson et al (2002) conducted a research on how private as well as institutional investors have changed their investment behaviour as a consequence of the speculative bubble during the period from fall 1998 to March 2000. The purpose was to establish what factors lie behind the speculative bubble and further investigate whether the investment objectives and factors influencing investment decision-making are different today than during the speculative bubble. The empirical research was based on a questionnaire directed towards active private investors in Sweden, more specifically members of the Aktiespararna Association, and institutional investors mainly resident in southern Sweden. The results obtained suggested that the behaviour of market participants during the speculative bubble was to some extent irrational and that the composition of investments has changed as a consequence of the speculative bubble.

Stein et al (2004) stated that the negative relation between returns and past volume is driven by optimistic investors generating volume, and their optimism getting reversed in subsequent periods. Due to short-selling constraints, pessimism does not adequately get reflected in stock prices. They found that stocks with higher dispersion of analyst earnings forecasts earn lower returns than other similar stocks. Researchers also suggested that this happens because while dispersion implies high optimism and pessimism, the latter does not get into prices because of short-selling constraints. Thus the negative relation between future returns and dispersion can obtain because the high optimism inherent in high dispersion gets reversed out in subsequent stock prices.

Suto et al (2005) found that fund managers tend to sell with a shorter horizon than is optimally desirable. Furthermore, their research demonstrated that fund managers show herding behaviour. Regarding these results, the researchers point out that one

explanation for such behavioural characteristics is the pressure placed on fund managers by their clients. Further they found that Japanese institutional investors occasionally predict optimistically (or bullishly) on market returns, and that this behavioural tendency is more apparent when their predictions are based on the domestic market. Their analyses indicated that fund managers in the US tend to be more myopic, show stronger herding behaviour, and demonstrate higher risk aversion than their counterparts in Germany.

Hong et al (2005) suggested a model where agents use overly-simplified models to evaluate stocks, ignoring the true, more complex model. They use this notion to explain a variety of phenomena including momentum and asset bubbles. Researcher stated that an agent who believes in a particular model uses this model to make persistent forecast errors while ignoring a persistent but pertinent information signal, which leads to momentum. Further, an agent using a particular model while seeing a sequence of positive earnings, can drastically re-evaluate his beliefs after seeing the sequence being broken, leading to dramatic changes in stock prices.

Hiruma et al (2006) investigated the factors that affect time-discounting rates as well as the impact of time-discounting rates on individual behaviour. They found that a time discounting rate increases when the amount of money that must be paid out is smaller (money amount effect). Furthermore, the researchers stated that the rate is significantly higher if the inter-temporal choice is made at a nearer point in time as opposed to a later point in time (dual discount phenomenon).

Schubert et al (2006) described the notion that men are less risk averse than women as a stereotype that leads to discrimination against women in the labour market and keeps women from assuming managerial positions. This is because a firm's value depends on how much risk it takes, which is in the end determined by the choices that firm managers make. The hypothesis of this study was that there is no significant difference between the risk tolerance of men and women. The results showed that there is a significant difference between the risk tolerance of men and women. Investors' educational level as a measure of individual earning power is hypothesized

as one of the determinants of risk tolerance. The results showed that this variable is highly correlated with investors' income.

Jasim (2008) presented new evidence on the determinants of risk tolerance of individual investors in Bahrain using questionnaire method. On the basis of an analysis of close to 1,500 respondents, the findings indicate that as investors, men have high propensity risk tolerance than women. Investors with better level of education and wealth are more likely to seek risk than less educated and less wealthy ones. The study also reports those investors' risk tolerance declines when they have more financial commitments as well as when they are approaching towards their retirement age or are retired. That is, the effect of investor's age on risk tolerance is complex, in contrast to results reported elsewhere. Bahrainis are also found to be less risk tolerant than non-Bahrainis. One of the most important implications of the results is that the investment industry should not treat investors as one homogeneous group; therefore, men and women as investors should be treated as separate market niches, each with its own needs and requiring targeted marketing strategies. Investment companies and financial service marketers should design investment programs to respond to the particular needs of women investors, men investors, investors with particular education and age levels, wealthy investors, and expatriate investors.

#### **NEED AND SIGNIFICANCE OF THE STUDY**

Indian security market moved to newer heights in the twenty first century and the investors were getting reasonable income from their investments in the stock markets, but as we know that securities markets are volatile. Sometimes they perform more than expected but the next day the price would be crumbling down like a glass house like in the December 2007 recession started from US and it affected the whole world including Indian Stock market, means market is highly volatile and is still in the hands of speculators and gamblers. In this chaos where is the common investor who investing their hard earned money expecting a regular income and security of his investment. This study supports, to an extent, the assumption that even though a majority of the investors during the recession period seem to have realized the seriousness of it they nevertheless continued their investment activities knowing that the risk for a collapse was imminent. This in itself can be characterized as less than

rational behaviour. The prospect theory and heuristics in behavioural finance help to understand some of the possible factors underlying the phenomenon, even though they cannot alone give answers to all the matters surrounding this market. However, a more common understanding of these factors and the way in which psychological factors affect our decision-making should help to minimise the risk associated with the markets.

### **RESEARCH OBJECTIVES**

- To study the individual investor behaviour prior, during and after recession period.
- To study the changes in individual investor behaviour due to the various changes in the market like bullish or bearish situation as an effect of recession.

### **METHODOLOGY**

#### **SOURCES OF DATA**

The primary data is collected with the help of questionnaire to analyse the individual investor behavior prior, during and after recession period and to study the change in individual investor behaviour due to the effect of recession period. And secondary data collected from internet, journals, articles and other publications.

### **RESEARCH DESIGN**

Sampling: Primary data is collected to study the individual investor behaviour through a well designed questionnaire.

#### **SAMPLE DESIGN**

- Sampling Unit: Ludhiana Stock Exchange Investors
- Sampling Size: 150 Investors
- Sampling technique: Random sampling
- Sampling area: Punjab

### **DATA ANALYSIS TOOLS**

Statistical comparisons are made by using Pearson's Chi-Square Test with the help of SPSS.

**ANALYSIS AND INTERPRETATION**

This section represents the various statistical comparisons carried out to help testing the hypothesis such as:

**H<sub>1</sub>:** There is significant difference between the investment strategies used by investor before recession and after recession period.

The first comparison is about the general reflection of the composition and characteristics of investments. This is a comparison between how investors have separated investments in “safe” and a more “risky” category over a period with absolutely different circumstances regarding the market. It is done to find out if there is a difference between the investing strategies used by investor before the recession period and the investments the respondents have made after recession period.

**TABLE 1.  
CHI-SQUARE COEFFICIENT FOR INVESTMENT STRATEGIES**

Chi-square	Value	DF	Significance
Pearson	56.790	25	.04326

**TABLE 2.  
CONTINGENCY COEFFICIENT AND LAMBDA STATISTICS  
FOR INVESTMENT STRATEGIES**

Statistic	Value	ASE 1	Val/ASE 0	Approximate Significance
Contingency coefficient	.50051			.04326
Lambda:				
Symmetric	.11124	.06182	1.61231	
market value today dependent	.11013	.12415	0.71831	
Will market recover	.11111	.11123	1.42371	

dependent				
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The purpose of this comparison was to see that whether there is a connection between investment-strategy-behaviors during the bull market as well as the bear market. The Pearson’s chi-square test in table 1 shows a significance level of 0.043269 (which is less than 0.05) at 95 per cent confidence level. Therefore null hypothesis is rejected and alternate hypothesis is accepted at 95 per cent level of confidence as shown in table 2 which states that there is a significant difference between the investing strategies and the investments the respondents have during and after recession.

**H<sub>2</sub>:** There is significant difference between the respondents believed ability to predict the market and the opinion of whether the market was overvalued or not before the recession period.

The comparison is designed to analyze that is there a difference between the respondents’ believed ability to predict the market and the opinion of whether the market was overvalued or not before the recession period.

**TABLE 3.**  
**PEARSON CHI-SQUARE COEFFICIENT**  
**FOR THE MARKET VALUATION**

Chi-square	Value	DF	Significance
Pearson	8.020	4	.08325

**TABLE 4.**  
**CONTINGENCY COEFFICIENT AND LAMBDA STATISTICS**  
**FOR PREDICTION ABILITY OF THE INVESTORS**

Statistic	Value	ASE 1	Val/ASE 0	Approximate Significance
Contingency coefficient	.10622			.08325
Lambda:				
Symmetric	.11364	.06088	1.72774	
market value today dependent	.11111	.12830	0.82339	
Will market recover dependent	.10043	.11272	1.58621	

The Pearson’s chi-square test in table 3 shows a significance level of 0.08325 (which is more than 0.05) at 95 per cent confidence level. Therefore null hypothesis is accepted and alternate hypothesis is rejected at 95 per cent level of confidence shown in table 4 therefore we cannot prove that there is a difference between the respondents’ believed ability to predict the market and the opinion of whether the market was overvalued before recession period.

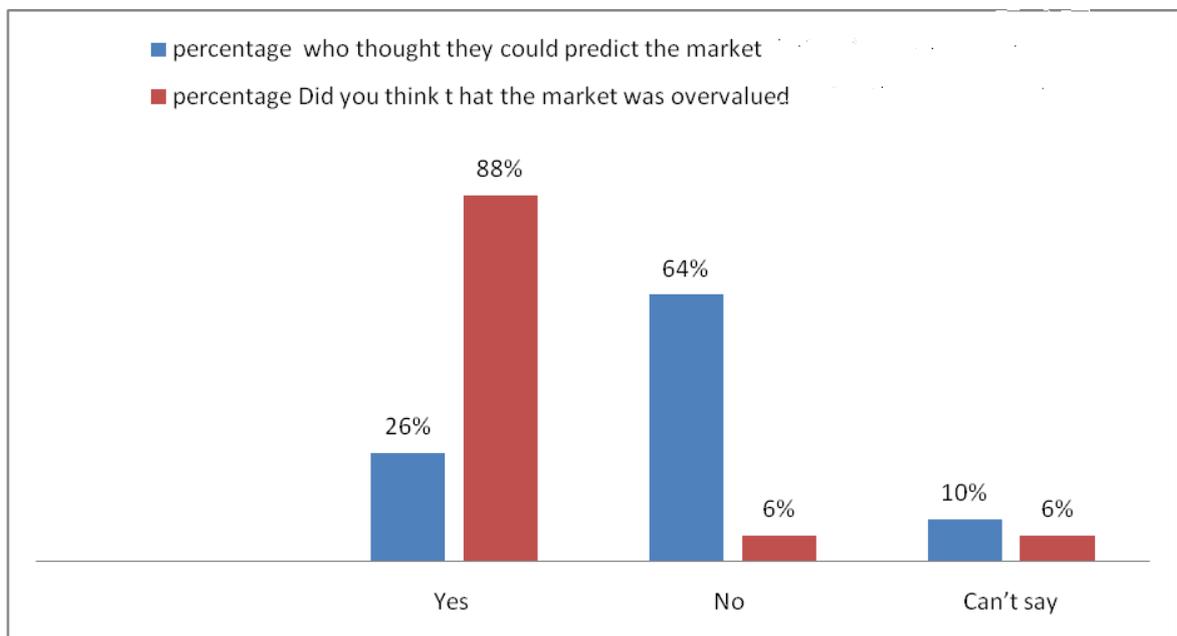


Fig 1:

**Percentage of Investors perception about prediction of the Market**

The above fig 1 represents that 88% of the investors think that market was overvalued. So that investors need to be more carefully about their investment in overvalued market. 64% of the investors believe that market can't be predicted coz it is based on efficient market hypothesis also.

**H<sub>3</sub>:** There is significant difference between the respondents' believed ability to predict the market and the respondents' estimated value of the stock market.

The intention with the comparison was to look for a connection between overconfidence and anchoring (Anchoring refers to the decision-making process where quantitative assessments are required and where these assessments may be influenced by suggestions). This is done to examine that whether or not there is a difference between the respondents' believed ability to predict the market and the respondents' estimated value of the stock market.

**TABLE 5.  
PEARSON CHI-SQUARE COEFFICIENT  
FOR VALUE OF THE STOCK**

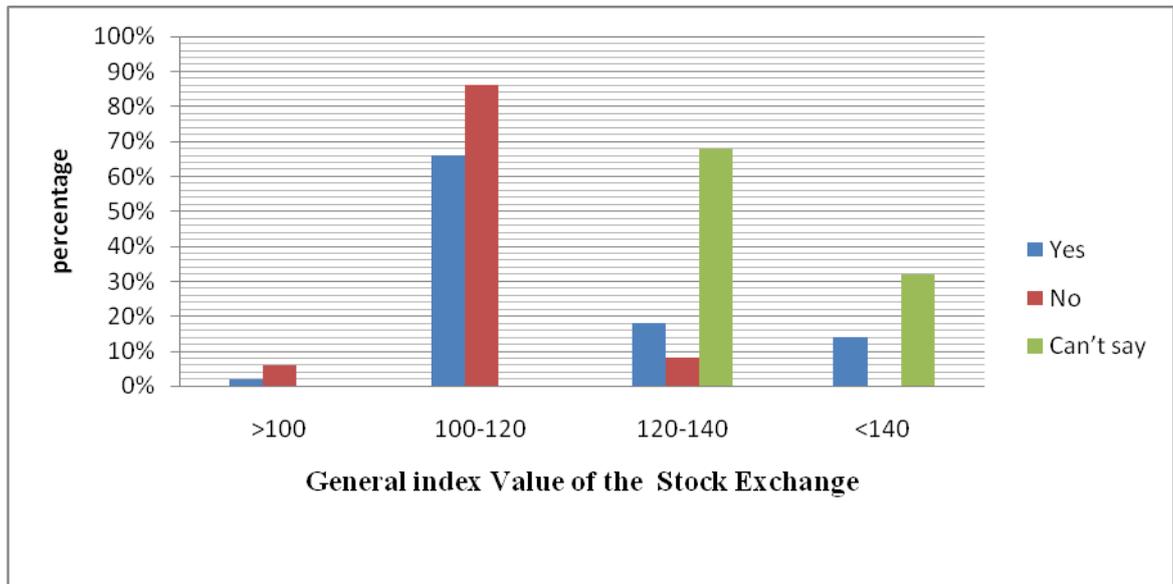
Chi-square	Value	DF	Significance
Pearson	51.041	6	.03732

**TABLE 6  
CONTINGENCY COEFFICIENT AND LAMBDA STATISTICS  
FOR ESTIMATED VALUE OF THE STOCK MARKET**

Statistic	Value	ASE 1	Val/ASE 0	Approximate significance

Contingency coefficient	.60081			.03732
Lambda:				
Symmetric	.26471	.15211	1.59699	
market value today dependent	.28571	.20912	1.18678	
Will market recover dependent	.25000	.14361	1.58114	

The Pearson's chi-square test in table 5 shows a significance level of 0.03732 (which is less than 0.05) at 95 per cent confidence level. Therefore null hypothesis is rejected and alternate hypothesis is accepted at 95 per cent level of confidence. Therefore there is a significant difference between the predictability among the investors and their guesses about the level of the stock market shown in table 6. There seems to have been a large number of careful private investors, 85% of those who thought they could not predict the market shown below in fig 2 are very cautious about what the index of the stock market will be in six months. If this is due to cautiousness or mere lack of knowledge is hard to tell. The investors who answered that they could not say if the market was overvalued during the bull market think the index will be between 21- 40% above the level today shown in the graph below.



**Fig 2:**  
**Percentage of Investors who thought that they could predict the market during the recession period in Relation to the Respondents' Believed Index Level of the Stock market**

**H<sub>4</sub>:** There is significant relation between respondent’s reasons to make changes in their security holdings and the most important reasons for the bear market.

This comparison was to know about investment prospect according to time horizon. It is a more wide-ranging query concerning the composition and characteristics of investments. Is there perhaps a relation between respondents’ reasons to make changes in their security holdings and the most important reasons for the bear market?

**TABLE 7.**  
**PEARSON CHI-SQUARE COEFFICIENT FOR SECURITY HOLDINGS IN THE BEAR MARKET**

Chi-square	Value	DF	Significance
Pearson	2.849	4	.13781

**TABLE 8.**  
**CONTINGENCY COEFFICIENT AND LAMBDA STATISTICS FOR CHANGES IN SECURITY HOLDINGS BY THE**

**Investors**

Statistic	Value	ASE 1	Val/ASE 0	Approximate significance
Contingency coefficient	.11542			.13781
Lambda:				
Symmetric	.09603	.08756	1.02371	
market value today dependent	.10342	.09674	1.06905	
Will market recover dependent	.06503	.10032	1.00041	

The Pearson’s chi-square test in table 7 shows a significance level of 0.1378 (which is more than 0.05) at 95 per cent confidence level. Therefore null hypothesis is accepted and alternate hypothesis is rejected at 95 per cent level of confidence. Therefore we cannot prove that there is significant difference shown in table 8. One might think that there would be a connection between how people make changes in their security-holdings today and those reasons they believe were important to the decline of the market. If a respondent believes that the forecasts by analysts were important to the downturn, that respondent would plausibly focus on analysts’ forecasts today in order to be well-informed about important news stories that may affect his security holdings. This seems however not to be the case since we could not establish a significant difference between the two questions.

**H<sub>5</sub>:** There is significant relationship between the respondents’ opinion whether the market was overvalued or not and the respondents opinion on the market value today. The comparison looked at the investor opinion that if there is any relationship between the respondents’ opinion whether the market was overvalued or not, and the respondents’ opinion on the market value today.

**TABLE 9.  
PEARSON CHI-SQUARE COEFFICIENT  
FOR THE OPINION ON THE MARKET VALUE**

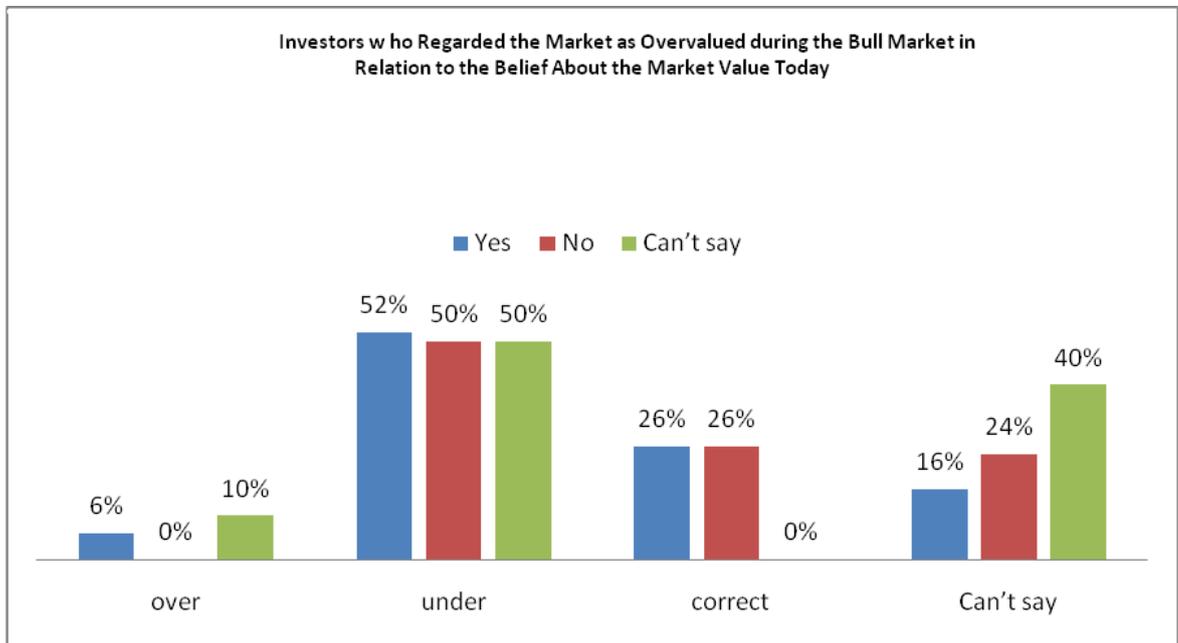
Chi-square	Value	DF	Significance
Pearson	6.221	6	.09835

**TABLE 10.  
CONTINGENCY COEFFICIENT AND LAMBDA STATISTICS  
FOR MARKET WAS OVERVALUED OR NOT**

Statistic	Value	ASE 1	Val/ASE 0	Approximate significance
Contingency coefficient	.23572			.09835
Lambda:				
Symmetric	.10243	.15211	1.59699	
market value today dependent	.11745	.17912	1.18678	
Will market recover dependent	.10121	.14361	1.58114	

The Pearson's chi-square test in table 9 shows a significance level of 0.09835 (which is more than 0.05) at 95 per cent confidence level. Therefore null hypothesis is accepted and alternate hypothesis is rejected at 95 per cent level of confidence. Therefore the Pearson's chi-square test has not traced any difference between the opinion about the market value during the bull market and the market value today shown in table 10. The purpose of this test was to examine whether it was possible to detect a correlation between people who thought that the market was overvalued during the bull market and what they think about the value of the market today. The relation is very insignificant, meaning there is no relation between people who

thought the market was over / undervalued during the bull market and how they value the market today shown in fig 3. This means that people who thought the market was overvalued during the bull market think the market is undervalued today. This seems reasonable to think and is supported by the chart below. We can see that 52% of the investors who thought the markets were overvalued during the bull market regard the market undervalued today.



**Fig 3.**  
**Percentage of Investors who regarded the market as overvalued during the bull market in relation to the belief about the market today**

**H<sub>6</sub>:** There is significant relation between the respondents' opinion whether the market will recover if there was a similar economic downturn and the respondents' opinion on the market value today.

The intention of this comparison was to determine that is there possibly a relation between the respondents' opinion whether the market will recover if there was a similar economic downturn and the respondents' opinion on the market value today?

**TABLE 11.  
PEARSON CHI-SQUARE COEFFICIENT FOR ECONOMIC DOWNTURN**

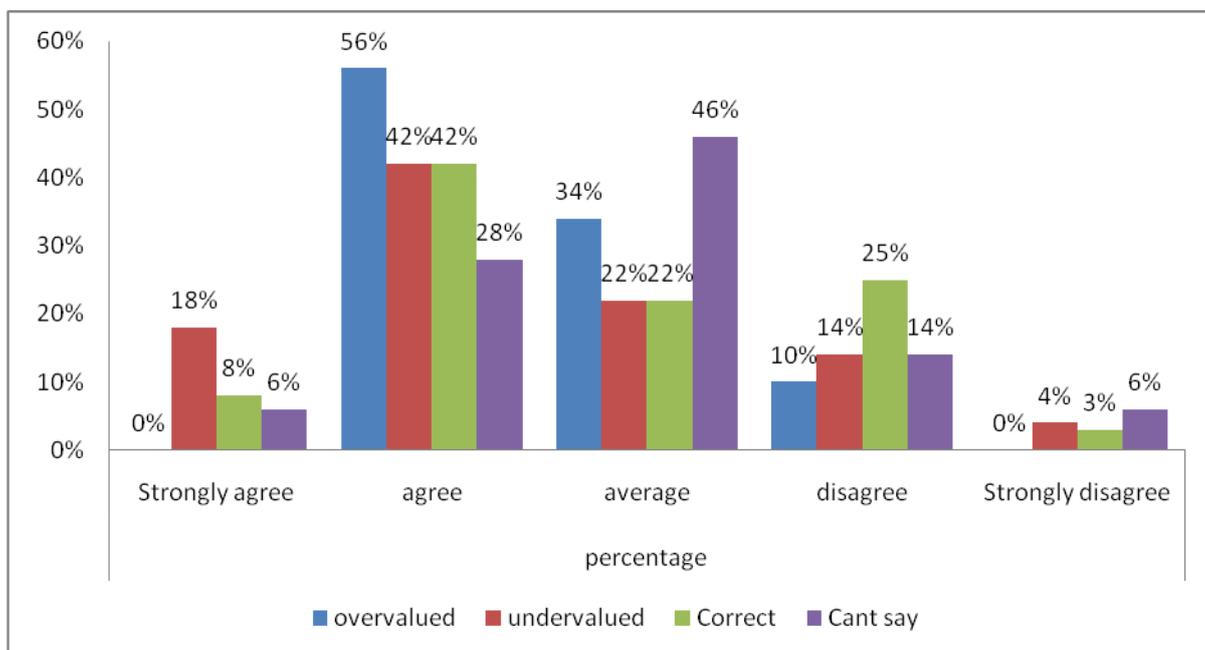
Chi-square	Value	DF	Significance
Pearson	11.780	12	.07463

**TABLE 12.  
CONTINGENCY COEFFICIENT AND LAMBDA STATISTICS FOR  
MARKET WILL RECOVER AFTER ANOTHER ECONOMIC DOWNTURN**

Statistic	Value	ASE 1	Val/ASE 0	Approximate Significance
Contingency coefficient	.32491			.07463
Lambda:				
Symmetric	.18750	.08892	1.99754	
market value today dependent	.21739	.12754	1.56813	
Will market recover dependent	.1604	.07332	2.14586	

The Pearson's chi-square test in table 11 shows a significance level of 0.07463 (which is more than 0.05) at 95 per cent confidence level. Therefore null hypothesis is accepted and alternate hypothesis is rejected at 95 per cent level of confidence. It means that there is no significant relation between the respondents' opinion whether the market will recover if there was a similar economic downturn and the respondents' opinion on the market value today shown in table 12. It obviously does not matter what investors believe about the future of the market and what they think of the value today. A person who regards the market to be undervalued today may plausibly think that the market will recover in a few years to levels that prevailed during the speculative bubble but this seems not to be the case. The reason for us to

think this is the mean reverse-hypothesis that predicts that the market will return to a historical average over time. The respondents seem not to agree with this hypothesis according to this study.



**Fig 4.**  
**Respondent’s behavior about the recovery of the stock market**

Among the investors, 56% are very close to strongly agree shown in fig 4 that the market will recover if there was a similar economic downturn who also answered that the market is overvalued today. This seems to be somewhat paradoxical. Investors, who regard the market as overvalued today, when most experts say the market is undervalued, believe the market will recuperate if another economic decline occurs. To judge that the market will make progress in case of bad times implies confidence in the market but to regard the market as overvalued seems to be more due to lack of knowledge about the market value today. Also according to this comparison, the investors seem to have been more heterogenic. This seems reasonable the private investors represent all sorts of people having the slightest interest in the financial markets. Individual investors will probably pick up a few news stories now and then and base their views on these irregular pieces of information. It is interesting to note that 100% of those who answered cannot say if the market is overvalued today have also been very cautious in their opinion whether the market will improve within a few years in case there was another market decline.

### **FINDINGS OF THE STUDY**

As this study is related with behavioral finance so that following are the findings:

- The results obtained from the analysis suggest that the behavior of market participants during the recession was indeed to some extent irrational when considered from a standard finance point of view and that the composition of investments have changed as a consequence of the recession. The results also shed light into the possible reasons underlying the speculation and recession.
- The investment horizon of the respondents indicates that a majority of investors have an investment horizon covering a period over five years. Investments made before the recession were often made with much shorter target periods and therefore the current emphasis on long-term investments may well be a sign of aversion towards similar short-term profit opportunities as experienced before recession period. Furthermore, the slight increase in the monitoring of investments may also indicate a more cautious attitude towards investing today.
- The composition of investments has changed slightly after the recession period. Investors have clearly decreased their share of investments in companies characterized by uncertain but higher expected returns. This category includes the stocks of the companies, which experienced the highest increases in value during bull market before recession and therefore the results enhance the picture of a move towards safer investment categories. The abnormally high returns experienced during the bull market before recession may have encouraged higher risk taking and the decline in the market has reversed this tendency.
- The change in investment strategies was also conformed in the statistical analysis which indicates a significant difference between the investment strategies and the investments the respondents have made since the recession period. Furthermore, the decreased importance of own intuition and information from the media when making investment decisions suggests an emphasis on a more fundamental perspective towards the market today and not just a reliance on analyst recommendations or other more or less vague valuation methods as seems to have been the case during bull market before recession.

- A definite majority of the investors who responded to the questionnaire considered the market to be overvalued before the recession period. Even though the responses were collected following the period of the recession itself, after which the reality of the phenomenon became clear to everybody, it nonetheless gives a clear picture of the investors' comprehension on the existence of the recession. In addition, the statistical analysis carried out shows that majority of investors thought they could not predict the development of the market.
- The answers received, referring to the probability of a repeated market event, suggest that not all investors are conscious about basic probability calculus and its implications on investment decisions according to standard finance. The consecutive increases in stock prices during the period before recession may have contributed to an overly optimistic enthusiasm among investors, which led security prices to overreact. People believed they were following "winner" stocks blinded by the seemingly easy profits and they refrained from contrary financial exposure even though faced with contradictory information. This phenomenon was further enforced by herd behaviour, which respondents themselves admit as an important contributing factor to the overvaluation of the market. The saying that people see what they want to see may in this case very well hold true and lead to heuristic and irrational decision-making.
- A comparison of the investors' believed ability to predict the market and the respondents' estimated value of future market levels also exhibited an interesting result. However, a large proportion of investors who could not say if they were able to predict the market gave higher estimates of future market values than investors who were able to ascertain their skills during the speculation period.
- The responses received concerning the current and future valuation of the stock market as well as the ability of the market to recover if faced by a similar downturn indicate that confidence in the stock market is currently fairly high. Half of the investors consider the market to be undervalued by approximately 21-25%. The value of the Stock Exchange's General Index is estimated at approximately 118 six months from now if the current value of the index were 100. Investors who thought the market was overvalued before

recession think that the market is currently undervalued which is an intuitive result and also conformed through the statistical analysis. This consensus of a future increase in market values is also reflected in the confidence shown towards the market if it was to face a similar downturn today as in 2008. Even though the market decline was steep, it has not eroded the respondent's confidence in the stock market's ability to recover from downturns.

- However, the statistical analysis on whether there is a relation between investors' opinions on the market's ability to recover, if there was a similar economic downturn as it was during 2008, and the investors' opinion on the market value today is somewhat contradictory. There seems to be no correlation between the perceived ability of the market to recover and the current valuation of the market. Approaches based on perfect predictions, completely flexible prices, and complete knowledge of investment decisions of other players in the market, are increasingly unrealistic in today's global financial markets.

## **CONCLUSION**

From this study, we found that though a majority of the investors during the recession period seem to have realized the seriousness of it they nevertheless continued their investment activities knowing that the risk for a collapse was imminent. This in itself can be characterized as less than rational behaviour. The prospect theory and heuristics help to understand some of the possible factors underlying the phenomenon, even though they cannot alone give answers to all the matters surrounding this market. However, a more common understanding of these factors and the way in which psychological factors affect our decision-making should help to minimise the risk associated with the markets. Despite the inevitable losses realized among investors, as a consequence of the global recession, confidence toward the market seems fairly high. From a long-term historical perspective investing in the equity market has been profitable and the understanding of the behavioural factors affecting this market can help to better understand its periodic unpredictability.

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