Behavioural Change of Individual Investors during the Financial Crisis

[1]Cyril, [2]Madhura George

ABSTRACT--*Investment is the surplus money which one can capitalize in stocks, bonds, and real estate in anticipation of earning dividends or interest. Present consumption is sacrificed to get a return in the future. The sacrifice that has to be borne is certain but the return in the future may be uncertain. This attribute of investment indicates the risk factor. Investment has various attributes like time, quantity risk etc. However the most important attribute is the external environment which consists of economical market conditions, legal and political scenario of the place. This paper examines the process of investment decision-making in the context of financial crisis in a pioneering attempt to shed some light on crisis-induced changes in investment pattern by the individual investors. The objective is to study the kind of investments and riskiness of investment avenues during the financial crisis as considered by the various groups of individual investors. In addition, the study surveys the possible alternative avenues of investment for the individual investors when faced with crisis in the preferred portfolio. The study makes use of the statistical tools such as chi-square, correlation and paired sample test to test the hypotheses that are used in the study. In general, the study shows that financial crisis alters pattern of investment of the investors from the normal market conditions. The effect is more in the case of investors who invest in stock markets which mostly consists of self-employed investors. However, the majority of the individual investors prefer to invest in chit funds and bank deposits rather than other investment avenues. This research is based on the primary data collected through survey method. Besides I have taken few sights from various other secondary sources of data like journals, research articles magazines etc.*

Keywords*-- behaviour, financial crisis, investment, pattern of investment, stock market.*

I. INTRODUCTION

Investment is a process of saving money for the purpose of increasing the amount of money. Investment benefits the investor based on the return which he gets on the investment through interest. Investment behaviour refers to savings made by investor in property, commodity, stock, financial instruments, for the purpose of getting return for the investment made over a period of time. Research is based on study of investment behaviour of individuals like private sector employee, government employee, business and retired. An investor's savings differ because of difference in income level. Investment behaviour means the interest of individual to invest in bank deposits, mutual funds, gold, equity and real estate Investor behaviour differ few investors prefer to save even if the income is less and other investor believe that present needs have to be met first and don't think about the future.

[1] *Asst. Professor, Department of Commerce and Management, St. Josephs College, Bengaluru, cyril@sjc.ac.in; Mobile: 90600 60593*

[2] *Asst. Professor, St. Josephs College of Law, Bengaluru*

II. REVIEW OF LITERATURE

In general, a crisis makes individual investors aware of the true risk of investing in stocks, decreasing their return expectations and risk tolerance, increasing their risk perceptions, and leading them to de-risk their investment. However this paper challenges such predictions. Although the financial crisis temporarily decreases individual investors' return expectations and risk tolerance, and increases their risk perceptions, these variables quickly recover. Furthermore, investors continue to trade and do not de-risk their investment portfolios during the crisis. Investors also do not try to reduce risk by shifting from risky investments to cash. Instead, investors use the depressed asset prices as a chance to enter the stock market (Hoffmann Arvid & Post Thomas 2012).

The current paper is organized around the objective, to investigate how individual investors' perceptions, as well as their trading and risk-taking behaviour, evolved over the course of the crisis and to understand how the levels and dynamics (month-to-month revisions) of investors' perceptions explain their behaviour, and ultimately affect investment performance. Combining monthly survey data with matching trading records, it has been examined how individual investor perceptions change and drive trading and risk-taking behaviour during the 2008–2009 financial crisis. The study finds that the investor perceptions fluctuate significantly during the crisis, with risk tolerance and risk perceptions being less volatile than return expectations. During the worst months of the crisis, investors' return expectations and risk tolerance decrease, while their risk perceptions increase. Towards the end of the crisis, however the investor perceptions recover. Overall, it is found that the individual investors continue to trade actively and do not de-risk their investment portfolios during the crisis. Alternatively, the large amount of information investors receive during a crisis may induce frequent changes in their perceptions, as well as a larger divergence of such perceptions or disagreement amongst various investors (Hoffmann, Post and Pennings 2011).

Empirical studies show that multinational firms continue to invest in their host country and even increase investment after a financial crisis. An analysis on the data during the crisis shows producing durable goods generally suffered much more than those producing nondurable goods. As the future outlook of the economy appeared more uncertain, consumers cut back on their consumption of durable goods (e.g., cars and computers), which in turn affects the investment in such crisis. An analysis on the paper shows three facts: (i) FDI flows from overseas parent companies contracted, but intra-company debt and reinvested earnings were affected much more than equity FDI. (ii) Expenditures of affiliates and in the U.S. economy overall dropped by similar percentages. And (iii) affiliates in industries that are more dependent on external finance may have relied more on internal capital markets, which helped them to cushion the reduced investment (Contessi,, Silvio and Li Li, 2012; Seranmadevi & Kumar 2019).

The most crucial challenge faced by the investors is perhaps in the area of taking investment decisions (Senthil & Padma, 2019). Every investor differs from the others in all aspects due to various factors like demographic factors, socio-economic background, marital status, educational attainment level, age, gender etc. An educated person's decision making towards investment differs from an uneducated one. A young bachelor, for instance, prefers to invest in risky avenues; whereas an matured person with a family dependability prefers less risky and stable income generating avenues. Similarly, rural /urban background of individuals, availability of information, accessibility of avenues, and investment companies/colleagues also influence individuals in developing their perceptions (Harikanth, 2013).

III. STATEMENT OF THE PROBLEM

Financial crisis in general affects everyone who is exposed to the market risk. However, the individual investors in particular go through a period of change in their investment pattern so as to cope up with the financial crisis. Such a change in the pattern of investment by small scale individual investors due to financial crisis is difficult to measure. The reason being most of these investors tend to invest in less risky avenues such as banks and chit funds. Hence it is questionable how far this financial crisis affects these individual investors. To what extent do these investors change or alter their pattern of investment or to find out whether the financial crisis affects the individual investors at all?

IV. NEED AND IMPORTANCE OF THE STUDY

India being one of the developing countries in the world has been globally connected and glowing continuously despite the odds. It has been growing amidst the crisis period ever since it was freed in 1947. However it has to be noted that the financial crisis in particular hinders the growth of the country in terms of money in the economy. Investors play a major role in this regard in shaping the economy (Ramesh, 2019). But very little facts are known about the investment behaviour these investors during these periods(Gireeshan, 2015)... Many of the researchers, who have conducted the research on the financial crisis, is based on the brokerage collected from the individuals who invest in stock markets. India being a poor country, large portion of the population consists of small investors who invest in portfolios other than the stock market. Infact hardly any researches have been conducted in this regard (Gireeshan, 2014). Hence there is a greater need to study the impact of financial crisis on these individual investors. Besides, India has been affected by various crises like the Great depression, Asian crisis and 2008 crisis, but many of previous researches have been conducted based on the Asian crisis or the earlier crises. Hardly few studies have been conducted on the effect of financial crisis that affected the economy in 2008 on the individual investors. Hence there is a greater need to study such impact on these individual investors

V. SCOPE OF THE STUDY

- The study has been conducted on the investment pattern of individual investors.
- The maximum amount invested by the individual respondents does not exceed ten lakh rupees.
- The study focuses on the change in the pattern of investment of the individual investors who are based on residents of Bangalore, Karnataka state.
- The study mainly confines to change in the pattern of investment during the period of financial crisis.
- The study examines on the alternative investment options preferred by the individuals during the crisis period.

VI. OBJECTIVES OF THE STUDY

The following objectives have been formulated to analyse the impact of financial crisis on pattern of investments of the individual investors.

a. To study the type of investment preferred by the investors.

b. To analyse the riskiness of investment avenues during the financial crisis as considered by the various groups of individual investors.

c. To examine the possible alternative avenues of investment for the individual investors when faced with crisis in the preferred portfolio.

d. To verify the change in the pattern of investment decisions of individual investors during the financial crisis.

VII. HYPOTHESIS

H_o: Alternative investment preference by the individual investors is independent of years of experience

H_o: Investment pattern of Individual investors of India shows no change during the global financial crisis

VIII. RESEARCH METHODOLOGY

This research paper is descriptive in nature. It examines the pattern of investment by the individual investors during the financial crisis. This study scrutinizes various other variables that are expected to influence on the investment decisions. Primary were collected through questionnaires and telephonic interviews to get the actual facts from individual investors. Random sampling method was used to collect the data from 100 respondents. Chi-square, correlation and paired T-test were used to test the hypothesis.

IX. LIMITATION OF THE STUDY

- The main limitation of the study is that it has been studied by taking few variables that influence the investment decisions of the individuals.
- The study analysis the change of investment pattern during the period of financial crisis only.
- Time constraints another limitation as it is difficult to analysis within few months

X. ANALYSIS AND INTERPRETATION

The current financial market offers various investment avenues that are made available to the individual investors to be grabbed. However, due to constraints and past experience that one may encounter; each investor chooses (Table 1) one's own preferred investment avenues in their investing career.

Table 1: Preferred Investment Areas by Individuals

Bank Deposits	Stocks & Mutual fund	Real Estate	Others

Received: 21 Dec 2019 | Revised: 18 Jan 2020 | Accepted: 05 Feb 2020

46	32	18	4

Source: Primary survey

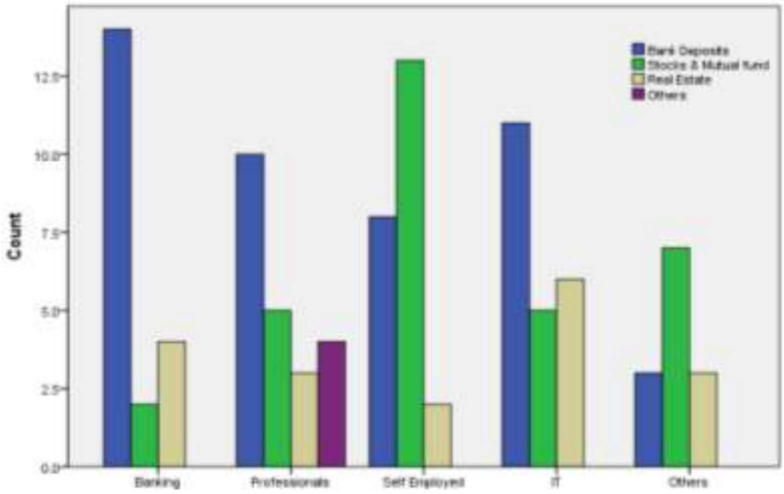
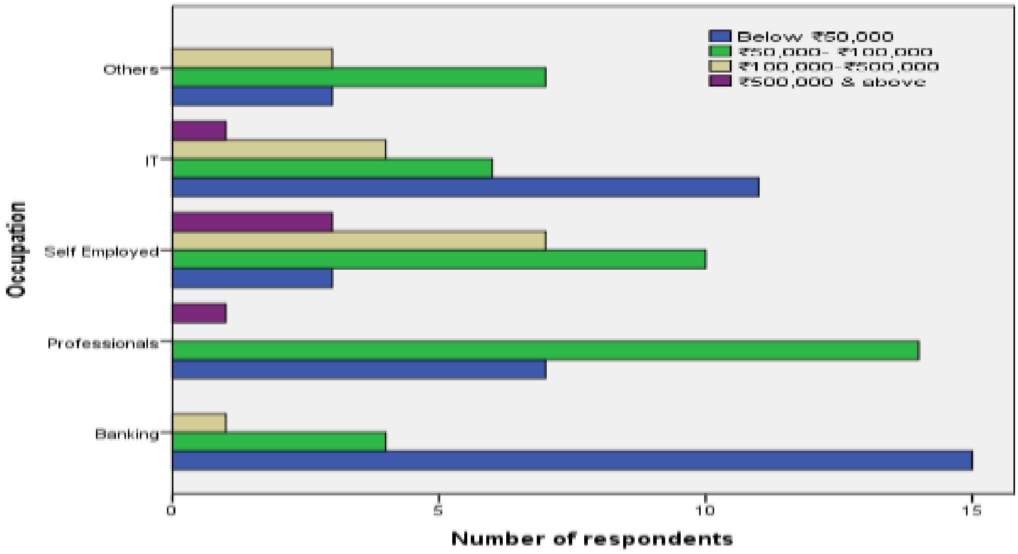


Figure 2. Preferred Investment Areas across Different Educational Levels

The above Figure 2 represents the preference of individuals based on their educational level. Interestingly as stated earlier, in most of these categories, respondents prefer bank investment. However, individuals who are self-employed and those who are employed in government and corporate sector give greater preference to invest in stock market. It may be highlighted in this context that these categories of investors are willing to bear greater risk. The investors who are employed in banks, professional institution and IT are risk averters. In other words, they are unwilling to bear risk while they invest. On the other hand, the investors who are self-employed consist of entrepreneurs who are risk takers and expect high returns. This can be further be analysed in terms of other variables like quantity of investment and risk levels.

Quantity of investment:

The investment preference of the investors depends on the quantity on money being invested by them. It also shapes the level of risk and return that is expected by them while investing. As seen in the Figure 3 respondents from banking and IT sectors have been investing below ₹50,000 in a year. On the other hand, professionals and self-employed investors have large amount at their disposal to invest in various baskets of securities. Hence the preferred investment among these categories of investors differs significantly from others. Investors who invest less amount tend to avert risk oriented securities.



Source: Primary survey

Figure 3: Volume of Investment across Various Occupational Groups

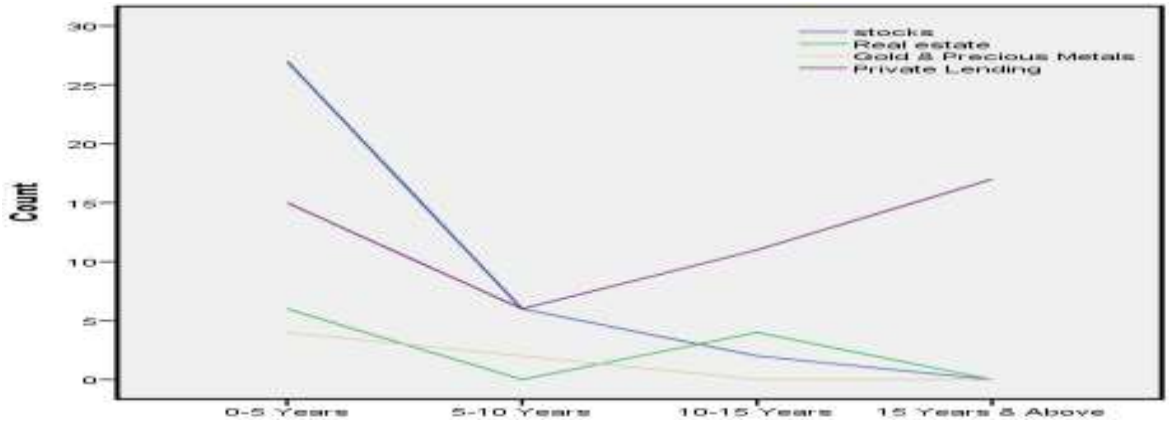
Table 2: Correlation between Quantity of Investment and Risk

Correlations			
		Quantity Of investment	Risk willing to bear
Quantity Of investment during normal market situation	Pearson Correlation	1	.434**
	Sig. (2-tailed)		**.000**
	N	100	100
Percentage of risk willing to bear when market is normal	Pearson Correlation	.434**	1
	Sig. (2-tailed)	**.000**	
	N	100	100
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Primary survey

The correlation between volume of investment and the risk borne by the investor's under Karl Pearson's shows, a positive correlation of 0.434. Since the P value (=.000) < 0.05 (5% level of significance), the null hypothesis is rejected and can be concluded saying there is a relationship between the volume of investment and the risk borne by the individual investors. However the level of relationship among these variables is not significantly high.

Received: 21 Dec 2019 | Revised: 18 Jan 2020 | Accepted: 05 Feb 2020



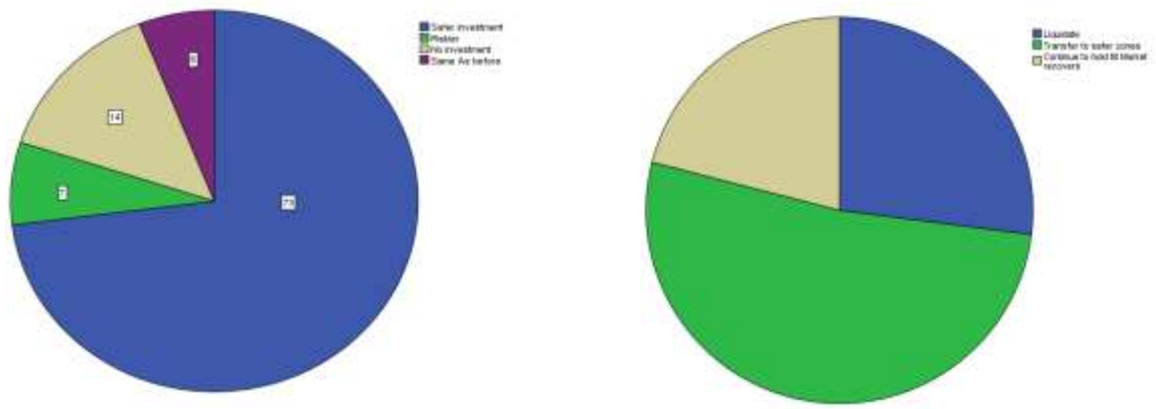
Source: Primary survey

Figure 4: Risky Investment Options Based on Investment Experience.

The above Figure 4 depicts the view of the investors regarding riskiness of investment options the years of investment experience. The individuals who were investing for a longer time have a strong feeling that private lending as the most riskiest investment option as compared to new investors who feel stock market as more riskier, followed by private lending.

Alternate investment options during market crisis.

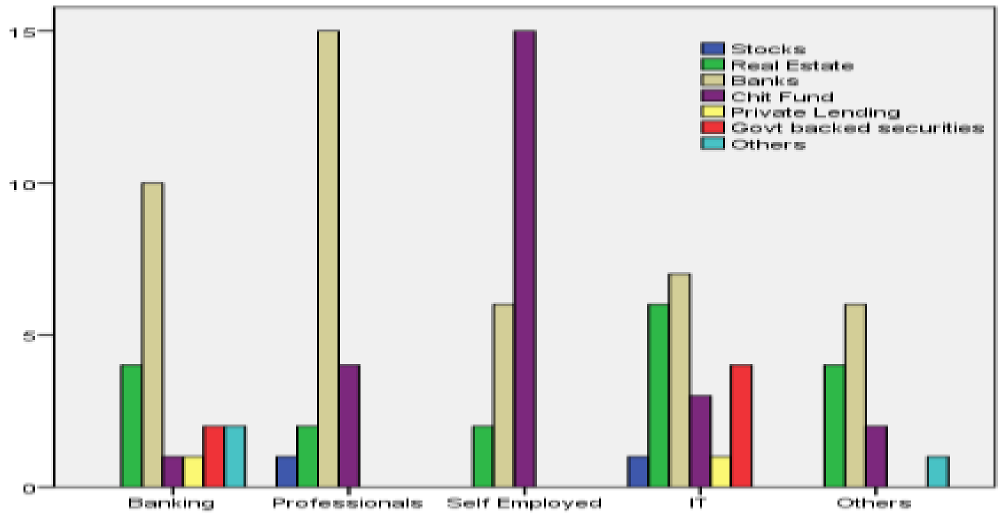
When an investor finds oneself amidst the crisis situation, they resort to number of alternatives means to protect themselves. Those alternate investment areas are being analysed with the following figures.



Source: Primary survey

Figure 5: Investment Policy When the Market is Dull and their immediate reaction

Most of the individual investors try to make safer investment policy when market is dull. These safer investments include chit funds, bank deposits, government securities etc. But few of the individual investors take risk to invest in riskier securities which has been analysed already. Interestingly some of them do not invest at all when the market is under depression. When the individual investors find themselves amidst the crisis situation the immediate reaction by them as shown in the figure is to transfer to safer zones. Some other investors liquidate their invested money as soon as they find themselves in the market crisis. It is interesting to note that some others continue to hold their investment till the market recovers.



Source: Primary survey

Figure 6: Alternative Avenues for Investments During the Financial Crisis

The investors who have responded to the study exhibited various alternative options of investments, which one can resort to during the times of market depression. Most of the respondents feel that investment in banking sector will be the most secure investment in times of crisis. Some others specially the self-employed group opted for investment in chit-funds which will not only a secure investment but also promises higher return even under turbulent market situations. However it is to be noted that the respondents also invest in real estate when the financial crisis hits the economy. This shows that not all the investors are affected by the financial crisis, infact investing in real estate and banking will have less shock on the individual's investment portfolio. It can be further analysed to test whether the investment preference is dependent or independent of the years of experience of the investors. Hence the following hypothesis is framed and analysed using Chi-Square test.

Hypothesis Formulated and tested:

H_o: Alternative investment preference by the individual investors is independent of years of experience

We can see here from the Table 3 that Chi-square = 34.277, $p < 0.05$ (at 5% level of significance), we can reject the null hypothesis. This tells us that there is statistically significant association between preference of alternative investments and the years of experience. It can be inferred that investors with more experience tend to opt for particular avenues like chit funds and banks than those who have less experience.

Table 3: Chi-Square test between years of experience and the alternative investments

Test Statistics

	How long have you been investing in Financial market	What is the alternate investment option during the market crisis situation
Chi-Square	39.120[a]	105.660[b]
df	3	6
Asymp. Sig.	.000	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 25.0.		
b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 14.3.		

Source: Primary survey

Effect of crisis on the investments:

The financial crisis certainly affect the return from investments, however, it depends on the extent of the crisis and the area of investment. Investors carefully need to change their pattern of investment during those times to safeguard their funds. However, it is questionable how far this financial crisis affects the individual investors and to what extent do they alter their pattern of investment. The following hypothesis can be tested by using paired sample T test.

H_o: Investment pattern of Individual investors of India shows no change during the global financial crisis

Table 4: Paired Sample Test Between Preferred Investment and the Alternate Investments

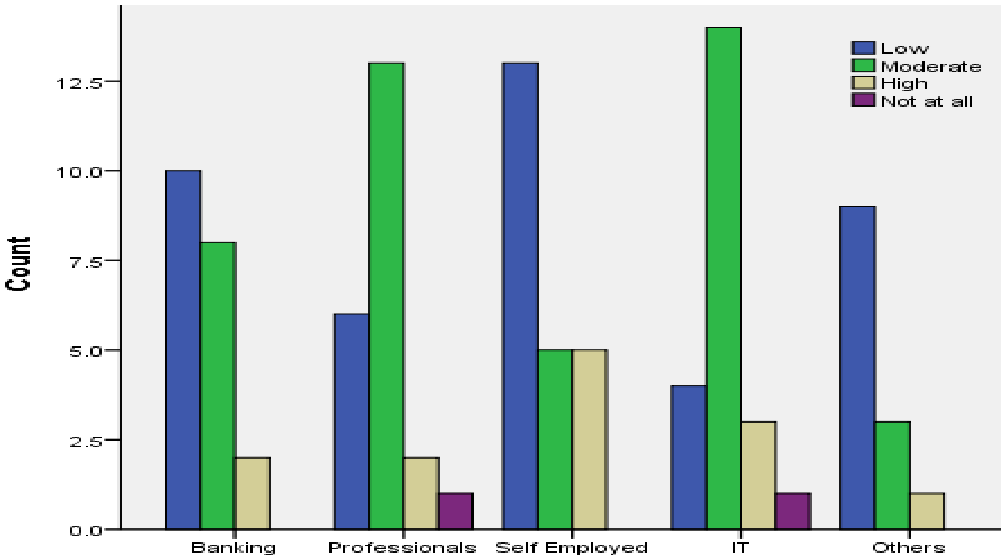
Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference: Lower	95% Confidence Interval of the Difference: Upper			
Pair 1	Individuals preferred investment areas - What is the alternate investment option during the market crisis situation	-1.570	1.472	.147	-1.862	-1.278	-10.666	99	.000

Source: Primary survey

As seen above Table 4 the Sig. Value is lesser than .05 at 5% level of significance, we can reject the null hypothesis and accept the alternative hypothesis, which says Investment pattern of Individual investors of India shows significant change during the global financial crisis . Hence we can conclude saying, there is a statistically significant difference between the preferred investments and the alternative investment areas of the individual investors due to financial crisis.

As seen in the Figure 7 the most of the repsondents feel that the financial crisis has a low effect on the pattern of investment of the individuals. The sef-employed investors are moderately affected because there is a crunch in their revenue sources due to dull market conditions. Hence they find it difficult to maintian the same volume of investments. But in the case of other investors who have fixed sources of revenue feel that market crisis alters their pattern of making investment decisions.



Source: Primary survey

Figure 7: Effect of Financial Crisis on Various Groups of Investors

XI. FINDINGS AND SUGGESTIONS

The detailed study of change in the pattern of investments by the individuals during the financial crisis has led to many valuable findings and has enabled in accomplishing the objectives of the study. Some of the major findings are listed below.

* It is clearly evident from the profile of the investors that majority of the individual investors who opt for investing in various portfolios today, are well educated and presumed to be aware of the market events.

* The majority of the individual investors take the help of friends, family and relatives before investing in various avenues. However, it is found that very few of the investors go by the media advertisements and intuition.

* It is found that these individual investors are likely to opt for bank deposits and chit funds than the other risky areas of investments like exchange traded funds.

* The respondents in general feel that their returns in recent years have been decreased. However, respondents who have been investing below five years feel that there is no change in their returns.

* It is also found that there is a relationship between the volume of investment and the risk borne by the individual investors. However the level of relationship among these variables is not significantly high. Investors investing in large volume tend take comparatively higher risk than those who invest in low volume.

* The preference of the alternative investment avenue during the market crisis also depends on the number of years of experience of the investors. The study shows that there is a strong association between preference of alternative investments and the years of experience of the investors. It can be inferred that investors with more experience tend to opt for particular avenues like chit funds and banks than those who have less experience.

* The study also shows that there is a significant difference between the mean value of volume of investment by the individual investors during the normal market condition and during the market recession period.

After a thorough study on the change in the pattern of investments by the individual investors during the financial crisis, the fallowing things are suggested.

※ The most conducive investment for the individuals during the financial crisis is to invest in chit funds and bank deposits. These will be less volatile to the changes in the financial markets.

※ The individual investors must try to avoid investment in private lending in their portfolio of investment at all times, as it is found to be most riskier majority of the investors.

※ The investors should either go for liquidating or transferring their securities as soon as they perceive the market turbulence, rather than waiting for the market to recover.

※ The volume of investment and the risk that investors are willing to bear has a close relationship. Hence individuals who invest in large volume likely to take higher risk as compared to the small investors.

※ As found in the study even those investors who bear high risk during the normal market conditions, they either liquidate or transfer their securities to safer zones. Hence it is suggested that whenever the individuals are amidst the crisis situation, it is better for them to transfer their securities to safer zones rather than waiting for the market to recover.

XII. CONCLUSION

The investment pattern of individual investors is more complex than rest of the investors. Because they are guided by the other variables such as emotions, perception etc. which have impact on their decisions than the actual market conditions. However, the study shows the individual investors in general take relatively low risk and like to invest in safer avenues. Very few of the investors go for investment in stocks, real estate etc. which are considered to be more risky. Among the individuals, the self-employed investors are more aggressive and take higher risk than the rest of the category. However, the study shows that there is an effect of financial crisis on the individual investors. In general, this also alters pattern of investment of the investors from the normal market conditions. This is analysed by taking the variables such as quantity of investment and the risk borne by the investors. Study shows there is a significant difference between the quantity invested before and during the market crisis period. Similarly there is reduction in the level of risk borne by these individual investors. However, it can be noted that financial crisis has relatively low effect on those investors who take less risk and invest in safer avenues even in the normal market conditions.

REFERENCES

1. Bogach, Olga & Noy, Ilan (2012). The Impact of Financial Crises on Foreign Direct Investment, University of Hawai'I, Manoa.
2. Brunnermeier,, and Oehmke. Complexity in Financial Markets. 2009: n. pag. Print.
3. Claessens, Dornbusch (2001). Why crisis spread and How this can be stopped, Springler Science, New York.
4. Contessi,, Silvio and Li Li (2012). "Foreign Direct Investment in the United States During the Financial Crisis" Economic SYNOPSES, FED
5. Dale W Jorgenson, "Investment Capital Theory and Investment Behavior" (Volume 1)

6. Dorn, Daniel and Weber, Martin (2013). "Individual Investors' Trading in Times of Crisis: Going It Alone or Giving Up?" CEPR, London.
7. Dullian et al (2010) "The financial economic crisis of 2008-2009 and developing countries" United Nations, New York.
8. Harikanth, D., & Pragathi, B., (2013), Role of behavioural Finance In Investment Decision Making.
9. Hoffmann, Arvid & Post, Thomas (2012). "Individual Investor Perceptions and Behaviour During the Financial Crisis" Maastricht University.
10. Hoffmann, Arvid and Post, Thomas and Pennings, Joost (2011). "Individual Investors and the Financial Crisis: How Perceptions Change, Drive Behaviour, and Impact Performance" Maastricht University.
11. Hyuk Choe, Bong-Chan Kho and René M Stulz (1997), Do foreign investors destabilize stock markets? The Korean experience.
12. Karl, P. Sauvant, Wolfgang A. Maschek and Geraldine McAllister (2009). Outward investment from emerging markets in a time of crisis. OECD
13. Krugman, Paul (2011). "Currency crisis" ISBN: 0-226-45462-2, University of Chicago Press.
14. Lenuţa Carp (2012). "The impact of the economic crisis on the dynamics of international FDI" CES Working papers, IV
15. Lipsey, Robert E (2011). Foreign Direct investors in three financial crises. NBER Cambrige, paper no. 8084.
16. Dr.M G Gireeshan ,"LIFE SAVER"International Journal of Pharmacy & Technology [ISSN: 0975-766X], IJPT| July-2015 | Vol. 7 | Issue No.1 | 8408-8411
17. Dr. M G Gireeshan ,"4th generation voting machine" [ISSN 2229-5518]International Journal of Scientific&Engineering Research, Volume 5, Issue 7, July-2014Vol. 24, Issue 06, 2020 ISSN: 1475-7192
18. Mikova, Lilyana and Olofsson, Johan (2013). Investors' Attitudes toward Complexity in Financial Markets, Senior Honors Thesis.
19. Ramesh, S., Senthil Kumar, A., & Sayyed, N. (2019). Impact of Personality Measures and Investors' Biases on Decision - Making Skills of Women Investors in Mutual Funds. *Indian Journal Of Finance, 13*(4), 7-19. doi:10.17010/ijf/2019/v13i4/143124
20. Senthil Kumar A., & Padma Nandanan K., (2019). Determinants of Financial Attitude and Preparedness of Information Technology Professionals Bengaluru City. International Journal of Innovative Technology and Exploring Engineering, 8 (12), 1625-1630. doi: 10.35940/ijitee.L3156.1081219
21. Seranmadevi, R., & Kumar, A. (2019). Experiencing the effect of demonetization on service sectors in India. *Management Science Letters*, *9*(3), 389-398. doi: 10.5267/j.msl.2018.12.010.