A STUDY ON THE INVESTORS PERCEPTION TOWARDS DERIVATIVES

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Abstract:

Since risk is inherent in financial instruments, Risk management and hedging against uncertainty became very important for individual investors and firms. Derivatives emerged as promising investment avenue to the Indian retail investors to overcome risk. The present study attempts to understand the perception of retail investors towards derivatives. In this descriptive study, 80 samples were collected through structured questionnaire on snowball sampling method. Data analysis through SPSS and statistical techniques such as percentage analysis, Chi-Square test and Kendall's tau-b were calculated to draw the inference. The major findings of the study are that investors depend on friends/peers and financial advisors for relevant information. The Preference for different derivative investment is not associated with occupation, and also found that education determines the investment selection. The study suggests financial advisors and brokers and media to disseminate timely information and create awareness. Investors are advised to carefully watch the transactions because the experience in the derivative market makes an investor to successfully manage the risk. The results confirm the findings of the early studies.

Key words: *Derivatives, risk, investors, perception.*

1. INTRODUCTION

Globalization and liberalization facilitated drastic increase in the international business resulting in a rapid volatility in interest rate and exchange rate. As a result, stock prices have exposed the retail investors and corporate to growing financial risk. Thus, risk management and hedging against uncertainty have become very important for individual investors and firms. The financial market is broader and includes bonds, foreign exchange, real estate, commodities, and numerous other asset classes and financial instruments. Derivatives serve as an effective tool for mitigating the risk due to uncertainty and volatility in underlying asset. They offer various types of risk protection and allow innovative investment strategies. India has emerged as one of the most successful developing economy in terms of a vibrant market for derivatives. The launch of equity derivatives market has been extremely positive by global standards. Being an important class of financial instruments, Derivatives are central to today's financial and trade markets. The derivative market has grown impressively by 24 percent per year in the last decade and has seen the highest growth of all financial market segments in recent years. It has become a major central contributor to the stability of the financial system and an important factor in the functioning of the real economy. Derivative market is predominantly a professional wholesale market with banks, investment firms, insurance companies, and corporate as its main participants. The predominant growth of derivative market caused gain to some and pain to others due to adverse result of investing in it. Thus, it is one of the important and potential areas for research in the field of investment and risk management.

1.1 Derivatives Defined

Derivatives can be defined as "a security or contract designed in such a way that its price is derived from the price of an underlying asset". It can also be defined as financial instruments whose returns are derived from those of other financial instruments. Their performance depends on the performance of other instruments.

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These do not have independent existence without underlying product or commodity. Derivatives do not have their own value and rather they derive their value from some underlying product or commodity.

1.2 Importance of Derivatives:

Firstly, The main function of Derivatives are of Risk Management which involves designing of financial contracts to produce gains or adjusting the losses or gains that arise due to movement in the financial prices. Secondly, it facilitates enterprises by reducing the risks and increasing the profits. Third, Derivatives are very important as they provide price information that help producers, consumers, and investors in decision making. Finally, the transactional efficiency of business can be improved as Derivatives increases market liquidity, and increased market liquidity reduces transactional costs.

1.3 Risks associated with Derivatives

There are four kinds of risks associated with derivatives. They are Credit risk, Market Risk, Operational Risk, and Legal Risk. Credit risk is the possibility of loss that arises on account of a counter party's failure to meet its financial obligation. Market Risk arises due to adverse movements of price of commodity or a financial asset. Operational Risks may arise due to human error, system failure, inadequate control of frauds etc. finally; Legal Risks may take form of an action by a court or by a regulatory body, such as SEBI, results in invalidation of a financial contract.

2. REVIEW OF LITERATURE

Many studies worldwide reflect the inherent attributes of derivatives and attitude of investors and firms in general.

P. M. Deleep Kumar and G. Raju (2001) showed that more than half of individual shareowners in India belonged to just five cities. The distribution of share ownership by States and Union Territories show that just five States accounted for 74.7 per cent of the country's share ownership population and 71.7 per cent of the aggregate value of the shareholdings of individuals in India. They demonstrated that among the five States, Maharashtra tops the list with Gujarat as a distant second followed by West Bengal, Delhi and Tamil Nadu. The study also argued that introduction of derivatives is the first step to hedge the risk of unfavorable movement in the market. They opine that this would lower transaction cost and provide depth and liquidity to the market.

Peter Carr and Dilip Mandan (2001) formally considered derivatives securities as potential investment vehicles. They viewed derivatives as tactical vehicles for efficiently re-allocating funds across broad asset classes, such as cash, fixed income, equity and alternative investments. They studied that under reasonable market conditions, derivatives comprise an important, interesting and separate class, imperfectly correlated with other broad asset classes. They concluded that if derivatives are not held in our economy then the investors confine their holdings to the bond and the stock and the optimal derivatives position would be zero.

Warren Buffet (2002) argued that derivatives call for money to change hands at some future time, with the amount to be determined by one or more reference items, such as interest rates, stock prices, or currency values. He argues that large amount of risk, particularly credit risk, become concentrated in the hands of relatively few derivative dealers, who in addition trade extensively with one other. He said that the troubles of one could quickly infect the others. He also said that the derivatives instruments would almost certainly multiply in variety and number until some event makes their toxicity clear. He sarcastically opines that derivatives are financial weapons of mass destruction, carrying dangers that, while now latent, are potentially lethal.

Jennifer Reynolds-Moehrle (2005) examined in their study that how market participants changed the way they process earnings information after learning of the implementation of hedging activities. For the study they used a sample of derivative user and non-user firms, this study empirically

compares earnings predictability, forecast revision behavior, and the earnings response coefficients before and after the disclosure of hedging activity. From particular study they came to know that analysts' forecast accuracy increased and that unexpected earnings are incorporated into subsequent earnings forecasts to a greater extent subsequent to disclosure of sustained hedging activity. Additionally, the findings indicated an increase in the earnings-return relation in the hedging activity period

Randall Dodd and Stephany Griffith-Jones (2006) studied that derivatives markets serve two important economic purposes: risk shifting and price discovery. Derivatives markets can serve to determine not just spot prices but also future prices. In the research, interviews with representatives from several major corporations revealed that they sometimes prefer to use options as a means to hedge. They also argued derivatives have a potential to encourage international capital inflows.

K. Ravichandran (2007) showed in their study that the younger generation investors are willing to invest in capital market instruments and that too very highly in Derivatives segment. Even though the knowledge of investors in the Derivative segment is not adequate, they tend to take decisions with the help of the brokers or through their friends and were trying to invest in this market. He also argued that majority of the investors want to invest in short-term funds instead of Long-term funds, they prefer wealth maximization instruments followed by steady growth instruments. Empirical study also shows that market risk and credit risk are the two major risks perceived by the investors, and for minimizing that risk they take the help of news paper and financial experts. He argued that Derivatives acts as a major tool for reducing the risk involved in investing in stock markets for getting the best results out of it. Further, advised the investors to be aware of the various hedging and speculation strategies, which could be used for reducing their risk. He concluded that Awareness about the various uses of derivatives can help investors to reduce risk and increase profits, and though the stock market is subjected to high risk, the loss can be minimized to an extent by using derivatives.

Vinay Mishra and Harshita Bhatnagar (2009) documented that Derivatives are considered to be extremely versatile financial instruments, as they help to manage risks, lower funding costs, enhance yields and diversify portfolios. The contributions made by derivatives have been so great that they have been credited with having changed the face of finance in the world. Derivatives markets are an integral part of capital markets in developed as well as in emerging market economies. These instruments assist business growth by disseminating effective price signals concerning exchange rates, indices and reference rates or other assets, thereby, rendering both cash and derivatives markets more efficient.

David Nicolaus (2010) studied that retail derivatives allow retail investors to pursue sophisticated trading, investment strategies and hedging financial instruments. Retail investors' motivation for improving the after tax return of their household portfolio is a major driver of the derivatives choice of the products and that provide only little equity exposure for the investor. The derivatives form the divergent belief of retail investors about the future price level of the underlying as these can be tailored to specific demand of the investor. He argued that the potential role of search costs and financial advice on the portfolio decisions of retail investors, the flexibility of retail derivatives and low issuance costs are likely to emphasize the existing frictions in financial retail markets such as an increase of strategies and heuristics used by retail investors to cope with the complex decision situation in financial retail markets.

S. Saravanakumar, S. Gunasekaran and R. Aarthy (2011) in their study emphasize that the derivative instruments like, futures, options, swaps offer investors in the capital market to hedge against the adverse conditions in the stock market. Through the empirical results of

their study, they proved with hypothesis testing that there is no relationship between the income of the investor and terms of investment; no relationship between the occupation of the investor and investment decision. They showed, however, that there is a relationship between the age of the investors and margin funding in share trading.

Himanshu Barot & V.K. Sapovadia (2012) found in their empirical study that the investors are losing their capital as they are not only able to hedge but also due to lack of enough knowledge about derivatives products and strategy; they are just following advise by brokers, friends and relative. Study also argues that cash segment is more preferred than derivatives segment in the investors group.

Above studies are not much conclusive about the investors' sentiment with regard to investment in derivatives. This may be attributed to the vast scope of activities of the capital market instruments and much dynamism can be witnessed through the volatility. Moreover, Derivatives as a preferred segment of investment are not much popular due to varied reasons among the investors in India, particularly other than the 'five big' cities mentioned in the early studies. Hence, there is much scope for studying the behavior of investors towards Derivatives.

2.1 STATEMENT OF THE PROBLEM

Investment in financial market is generally perceived to be risky. Derivatives have emerged as promising investment avenue to the retail investors of even non-metropolitan cities to overcome risk. Derivative market present wide range of opportunites to the investors to get better return by hedging their portfolio. Many studies show that the investors' level of preference towards derivatives is considerably low. Hence, an attempt is made to study the perception of retail investors towards derivatives.

2.2 SIGNIFICANCE OF THE STUDY

Among the plethora of investment avenues available in Indian capital market, different class of investors prefers different types of financial instruments depending on their risk tolerance level. Their investment decisions are based on various socio-economic factors as well as behavioral factors. Objectives of the saving and investment differ from individual to individual; ranging from safety of principal to capital appreciation and tax savings. To make use of the most promising investment avenue, it is necessary to educate and create awareness about derivatives even among the investors in small cities. This study is significant in terms of its educative attribute to create awareness about the various uses and strategies to reduce risk and minimize the losses.

2.3 OBJECTIVES OF THE STUDY

- To understand the investment selection criteria of investors towards derivatives.
- To examine the perception of individual investors towards derivatives.
- To examine the relationship between investment preference and demographic factors

2.4 HYPOTHESES:

H01: there is no significant relation between occupation and criteria for selecting investments.

H02: there is no association between the occupation and preferred derivative investment.

H03: there is no significant relationship between education and investment preference

2.5 RESEARCH DESIGN

Type of Research: Descriptive.

Data : Primary and Secondary

Primary Data: Structured Questionnaires

Secondary Data : Books, Journals, Papers, and Related previous studies.

Sampling Method : Non-Probability method, Snowball sampling

Sample Units : Karvy, Angel Broking, Sharekhan,

Sample Size : 80

It is justified on the ground that the number of active investors in the study area has been gradually increasing, though not in

large size.

Place of Study: Two districts-Hassan and Mysore of Karnataka. The study area is chosen conveniently as it is the place of researcher's residence.

Time : During December 2013 to August 2014.

Tools Of Analysis: Spss Verison 20

Statistical Techniques: percentage analysis and Chi-Square Test.

3. RESULTS AND ANALYSIS

The primary data was collected through structured, close ended questionnaires developed on the basis of literature review. The data so collected was coded and edited and analysed by using SPSS version 20. The data has been tested for its reliability and normality and it is found that the data fulfils the internal consistency test, Cronbach's Alpha value being 0.603 for 15 items. Respondents were analysed on various demographic basis as shown in Table 1 which is self explanatory. Age category analysis shows that the majority of the respondents are young and belong to age category below 30 years. Respondents, who are senior citizens and retired employees, are few and this shows that senior citizens are risk averse, do not engage in risky investments.

TABLE 1: DEMOGRAPHIC PROFILE

DEMOGRAPHIC CLASSIFICATION		Count	Column N %
AGE	20-29	57	**71.2%**
	30-39	12	15.0%
	40 & Above	11	13.75%
	Subtotal	**80**	**100.0%**
EDUCATION	10+2	20	25.0%
	GRADUATE	24	**30.0%**
	P.G	14	17.5%
	PROFESSIONAL	22	27.5%
	Subtotal	**80**	**100.0%**
OCCUPATION	STUDENT	23	28.7%
	EMPLOYEE	20	25.0%
	ENTREPRENEUR	11	13.8%
	PROFESSIONAL	18	22.5%
	PENSIONER	5	6.2%
	HOUSEWIFE	3	3.8%
	Subtotal	**80**	**100.0%**
ANNUAL INCOME	UPTO 5 LAKH	22	27.5%
	5LAKH TO 10 LAKH	23	28.7%
	10LAKH TO 15 LAKH	21	26.2%
	ABOVE 15 LAKH	14	17.5%
	Subtotal	**80**	**100.0%**

Source: primary data

Table 2: Source of Information on Derivatives

	Frequency	Percent
Brokers/Financial Advisors	26	32.5
Friends/Peers	32	40.0
Advertisements	13	16.3
Banks/Investment Firms	9	11.3
Total	80	100.0

Table 2 exhibits the source of information on derivatives. The table indicates that majority (40%) respondents obtain information from friends/peers followed by brokers/financial advisors.

Table 3: Preferred Investment Avenue

	Frequency	Percent
CASH MARKET	25	31.3
FUTURE MARKET	28	35.0
OPTIONS MARKET	14	17.5
COMMODITY MARKET	13	16.3
Total	80	100.0

Table 3 indicates the preferred investment in derivative market. Majority of the respondents (35%) prefere future market, 31% prefer cash market followed by options market and commodity market.

Table 4: The Most Important Objective of Investment

	Frequency	Percent
WEALTH INCERASE	11	13.8
STEADY GROWTH	24	30.0
REGULAR INCOME	14	17.5
SAFETY OF PRINCIPAL	31	38.8
Total	80	100.0

Safety of the principal is the most important objective and criteria for investment selection. Table 4 shows that 38.8% of the respondents' objective is the safety of the principal, 30% of the respondents expect steady growth followed by regular income and wealth increase.

Table 5: The Most Considered Risk in the Derivatives

	Frequency	Percent
CREDIT RISK	26	32.5
MARKET RISK	38	47.5
TRANSACTIONAL RISK	8	10.0
LEGAL RISK	8	10.0
Total	80	100.0

Source: primary data

According to table 5, market risk is the big worry for 47.5% of the investors, while 32.5% do care much for credit risk and others consider transactional risk and legal risk.

Table 6: Basis Of Mitigating The Risk

	Frequency	Percent
BROKERS/FINANCIAL ADVISORS	25	31.3
FRIENDS/PEERS	40	50.0
MEDIA	6	7.5
BANKS/INVESTMENT FIRMS	9	11.3
Total	80	100.0

While market risk is the main threat to the investors, they resort to friend and peers for advice to mitigate the risk associated with their derivative contracts. 50% of the respondents, as shown in table 6, make arrangement to manage risk on the basis of the advice of their friends, 31.3% of the investors take the suggestions from brokers and financial advisors who are expert in the field. Others depend on banks and media.

Table 7: Main Barrier Preventing Investment in Derivatives

	Frequency	Percent
HIGH MARGIN	42	52.5
LACK OF SUFFICIENT KNOWLEDGE	33	41.3
LACK OF EXPERIENCE	5	6.3
Total	80	100.0

Table 7 indicates the important barrier that prevents the investors from investment in derivatives. Majority of the respondents (52.5%) worry that high margin is the challenge, 41.3% do not try to invest judiciously in derivatives because of lack of sufficient knowledge, while 6.3% have less experience that cause them not to adopt derivative trading.

Table 8: How Much Margin you Expect from Derivatives

	Frequency	Percent
UPOT 5000	32	40.0
5000-10000	29	36.3
10000-15000	5	6.3
15000-20000	14	17.5
Total	80	100.0

Since high margin is the main hurdle for the investors in derivative transactions, majority of them (40%) expect upto Rs. 5000 a comfortable amount which they can afford to. 36.3% expect upto Rs.10000 margin followed by 17.5% can manage upto Rs. 20000 margin.

Table 9: Perceived Growth of Derivative Market

	Frequency	Percent
GROW VERY FAST	30	37.5
GROW MODERATELY	26	32.5
GROW SLOWLY	6	7.5
NO IDEA	18	22.5
Total	80	100.0

The perception of investors towards the growth of derivative market shown in table 9 indicates that 37.5% are optimistic saying that market grows very fast, 32.5% say that it grows moderately, and remaining are pessimistic about the derivative market growth.

Table 10: Preferred Investment in Derivatives

	Frequency	Percent
STOCK INDEX FUTURES	37	46.3
STOCK INDEX OPTIONS	22	27.5
FUTURES ON INDIVIDUAL STOCK	11	13.8
OPTIONS ON INDIVIDUAL STOCK	10	12.5
Total	80	100.0

Table 10 shows the classification of respondents on the basis of their investment preference in derivative market. It shows that 46.3% prefer to play in stock index futures, 27.5% prefer stock index options, while 13.8% prefer futures on individual stock followed by 12.5% who prefer options on individual stock.

3.1. Hypothesis testing

3.1.1 between occupation and important criteria of their investment

The first null hypothesis (H01) of the study states that there is no significant relation between occupation and criteria for investment selection. Chi-square test was calculated by cross tabulating the attributes of these two variables. Table 11 indicates the calculated value of Chi-Square and table 11 shows the Kendall's tau-b that measures the relationship between the cross tabulated variable.

Table 11 :chi-square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	**25.456**[a]	15	**.044**
Likelihood Ratio	23.233	15	.079
Linear-by-Linear Association	4.663	1	.031
N of Valid Cases	80		

a. 18 cells (75.0%) have expected count less than 5. The minimum expected count is .49.

TABLE 12: Symmetric Measures

	Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Ordinal by Ordinal Kendall's tau-b	.184	.082	2.237	.025
N of Valid Cases	80			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

In the table 11 since calculated value of chi-square test in 25.456 which is more than the critical value, and P value is slightly lower than 0.05 (0.044<0.05), the null hypothesis is rejected.

3.1.2Association between occupation and preferred investment avenue

Table 13: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	**22.903[a]**	**15**	**.086**
Likelihood Ratio	21.723	15	.115
Linear-by-Linear Association	.010	1	.920
N of Valid Cases	80		

a. 18 cells (75.0%) have expected count less than 5. The minimum expected count is .41.

Table 14: Symmetric Measures

	Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Ordinal by Ordinal Kendall's tau-b	-.008	.088	-.095	.924
N of Valid Cases	80			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

The second null hypothesis (H02) states that there is no association between the occupation and preferred derivative investment. Table 13 highlights Chi-Square test calculated value 22.903 which is less than the critical value (22.903<24.996), and P value is 0.086 which is higher than 0.05, the assumed level of significance (p>0.05) therefore the null hypothesis is not rejected. So, we can conclude that there is no association between the occupation and the preferred derivatives. Selection of the investment plan is explained by some other socio-economic.

3.1.3.Relationship between Education and preference for derivatives:

Table 15: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	**24.895[a]**	9	**.003**
Likelihood Ratio	29.723	9	.000
Linear-by-Linear Association	5.360	1	.021
N of Valid Cases	80		

a. 9 cells (56.2%) have expected count less than 5. The minimum expected count is 1.75.

Table 16: Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Ordinal by Ordinal	Kendall's tau-b	.242	.102	2.365	.018
N of Valid Cases		80			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

The third null hypothesis (H03) states that there is no significant relationship between education and investment preference. Table 15 shows the chi-Square value calculated to be 24.892 which is higher than the critical value (16.919) at 9 degree of freedom. P value is 0.03 which is less than 0.05 the assumed level of significance. Therefore, the null hypothesis is rejected. So, we can infer that education determines the selection of Investment Avenue.

4. FINDINGS AND SUGGESTIONS

- Majority of the investors depend on friends and peers for information that guides them in their investment endeavor.
- *Market risk is perceived to be the critical* factor and they are more sensitive to it. In order to manage risk, they resort to friends and peers to guide and act accordingly.
- Majority of the investors prefer stock index future.
- For majority of the investors, safety of the principal is the main objective of investment. This indicates the low level of risk tolerance.
- There is no association between the occupation and the preferred derivatives.
- There is no significant relation between occupation and criteria for investment selection. There exist the relation between level of education and investment preference.
- We also find that the important barrier to invest in derivatives determines the attitudes of investors towards the kind of derivatives.

- High margin is the worry for investors

It can be suggested that the investment industry, financial advisors, brokers and media should educate the investors by disseminating the right information at the right time. Awareness programmes may be arranged so that the general public and retail investors get proper guide to know the benefits of derivatives in terms of their ability to counter balance the risks associated with the instruments and contracts. Investors are advised to split their investment in different baskets (portfolio) of investment so that hedging their portfolios they could mitigate the risk instantly.

4.1 LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The basic limitation of the study is the small sample size. A study, covering more cities of Karnataka and taking more sample, replicate more generalised results. As the Study is based on the responses of individuals, bias cannot be ruled out. Only customers of the study units are given the questionnaires, using snowball method. Hence, further studies can be initiated with large samples covering more number of places.

4.2 CONCLUSION

Derivatives are popular only in big cities of Karnataka. Investors are not fully utilizing the derivative segment in the study area. Retail investors are not much aware of the intrinsic quality of derivatives in effective managing of risks. Lack of awareness and insufficient information and the high margin are found to be the most important barriers to the growth of derivatives trading in the retail segment. Proper timely information, careful watching of behavior of other forces, tactful negotiation, and very importantly sufficient experience in the derivative trading certainly help the investors to effectively manage the risk associated with the trading. In this study we found the awareness level, preferred investment in derivatives, factors considered while investing and the association between occupation and preferred investment, and between barrier and preferred investment avenue, education and investment preference. Their perception towards the future of derivative market in India shows optimistic behavior towards derivatives. So, we conclude that derivative market will grow in future, and therefore investors' education and awareness is indeed required in every city.

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