Innovations

Retail Investor's perception: An Indian Derivatives Market perspective

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Abstract

The analysis of retail investors' buying patterns will reveal intriguing patterns regarding the evolution of the derivatives market over the past few years. Due to the broad use of behavioral finance principles in the capital market, researchers are becoming increasingly interested in studying these topics. As fuel for the investors' preference-based behavioral analysis model, the need to comprehend the derivatives market is expanding every day. The goal of this study is to provide the researcher with a quantitative model that highlights the different elements that affect how investors behave in derivative markets. Additionally, this study compares the frameworks that are currently in use and suggests a quantitative model that would help organizations grow their enterprises to the highest possible level.

Key words: *Derivatives market, Investor perception, Retail market.*

Introduction

Behavioral finance is a relatively new area of finance that examines how psychology and finance interact. This knowledge is useful for understanding how people make financial decisions (Al-Ajmi and Saudagaran 2011). It is a useful tool for foretelling how investors would perceive and interpret specific stock market abnormalities. With behavioral finance, the impact of human behavior on asset pricing and market movements is thoroughly investigated. Humans are emotionally diverse creatures who normally react differently depending on the situation (Debasish and Mohanta, 2011). Data analysts have studied how people make financial decisions and discovered that these decisions are influenced not just by their intellect but also by their emotions, prejudices, and/or desires (Rao, 2007).

Relationship between Derivatives and Behavioral Finance

The instruments that are crucial for managing risks at the organizational level and creating solutions for the hazards that develop as a result of the high level of market volatility are derivatives. By moving money from areas of surplus to areas of deficit, derivative markets play a crucial role in fostering economic efficiency (Kuemmerle, 1999). A variety of future options, forward contracts, and swaps are used to transfer the funds provided by numerous direct savers and businesses to the borrowers and investors. The broad types of participants in this system include:

- Hedger
- Speculator
- Arbitrageur

Literature Review

The work of Pasha (2013) is highly commendable with respect to the insights delivered based on the investors' opinions upon derivatives. The study was made on Indian respondents where fifty-five percentages of the medium investors who responded were new to derivatives and they considered them to be high-tech products. Thirty-eight percent of respondents were familiar with derivatives and they did not consider them to be complex and high-tech products. The remaining seven percentages of investors did not respond to the question. The study highlighted the unfamiliarity that was prevailing among the small and medium scale investors who were of the opinion that derivatives were speculative and high-end products. Tripathi(2014)investigated the Investors' perception about derivative trading and found out that the Indian traders were keen on investing in insurance and real estates which were the options that offered maximum returns with minimum risks. Nagaraju(2014)examined perception towards derivative markets and the instruments. The study is highly recommended for overcoming the fear about derivatives as it focuses on making the investors aware of the fact that derivatives are helpful for shifting the risks to other parties and hence there is no point in doubting the potential of derivative markets. Gautam and Kavidayal(2016)studied that the initial impact of the derivative trading was seen with respect to liquidity in the respective market. The study revealed that experienced traders of derivatives consider it as a risky tool and they play safe as they think it as a source of earning less returns. Individual investors require training on the working model of the various derivative instruments that are available. The investors need to be aware of nuances of derivative trading. In addition to this, the younger generation of derivatives traders were smarter as they were knowledgeable about the risks in the market who wished that the pace of innovation of the resources were increasing on a daily basis. This study revealed the current status of volatility in the market imposing the lack of training and misuse of the resources by few advisors thereby enhancing the research with various factors like transaction cost reduction, awareness of investors coupled with training, legal transactions by financial advisors and extending timings of trade suggesting that it would improve the derivative markets' scenario.

Venkatesha and Hiriyappa (2017) documented a detailed report on details that the investors should be aware of. It has been comprehended from the study that the investors were aware of the derivative market and the risks associated with it as well as the maximal profit it offers. The study on the Indian market proves efficient which tends to continue with the same rate as individual investors are being motivated to take up derivative markets, which reflects on the national economy. Furthermore, the study pointed out that the derivatives were a risk Hedging tool where the culture of spot marketshad a direct impact on the derivatives. This has been observed that the awareness on derivatives trading among the general public was commendable over the last few years. Moreover, the author(s) opine that the government shall be responsible for creating awareness among the individual investors combined with educating them by various modes such as webinars and/or online training programs training the people on the terms and conditions of the derivative instruments. It was stated that the risks such as market risk as well as credit risk were considered to be the major risk factors.

Rawal and Chowdhury(2018) reflected that the ultimate priority of people of all age was to earn additional income for satisfying the needs of their family in addition to a few investments for future planning and their preference for societal welfare and stocking wealth were considered least. The study also stated that there existed no correlation between the age group and the investors' behavior. The policy of behavior adopted by the retail investors doesn't consider the age. In addition to it, the gender balance between men and women lies at equilibrium in this study. The conservatism policy was adopted by few respondents amidst the survey and close to one percentage of people responded rudely due to the risks they had faced in the market scenarios. It was concluded that maximum population preferred Stock market as a better source of income and they rely upon stockbrokers and research organizations for getting knowledge on current trends. There was a group of people who preferred television and internet for source of knowledge. Furthermore, this study highlighted that the investors who earned more in stock market invest more when compared to those who earned less in stock markets. This study recommended that the demographic factors need to be analyzed by the representatives before implementation of strict rules and regulations.

Varghese (2017) proposed the structural equation modeling (SEM) which deals with the various factors that were identified to influence the derivative investments. In this study, fourteen independent variables were identified for studying the factors that influences derivative markets followed by the identification of hypothesis and their justification for concluding the impact of the selected independent variables on the dependent variables which are depicted below:

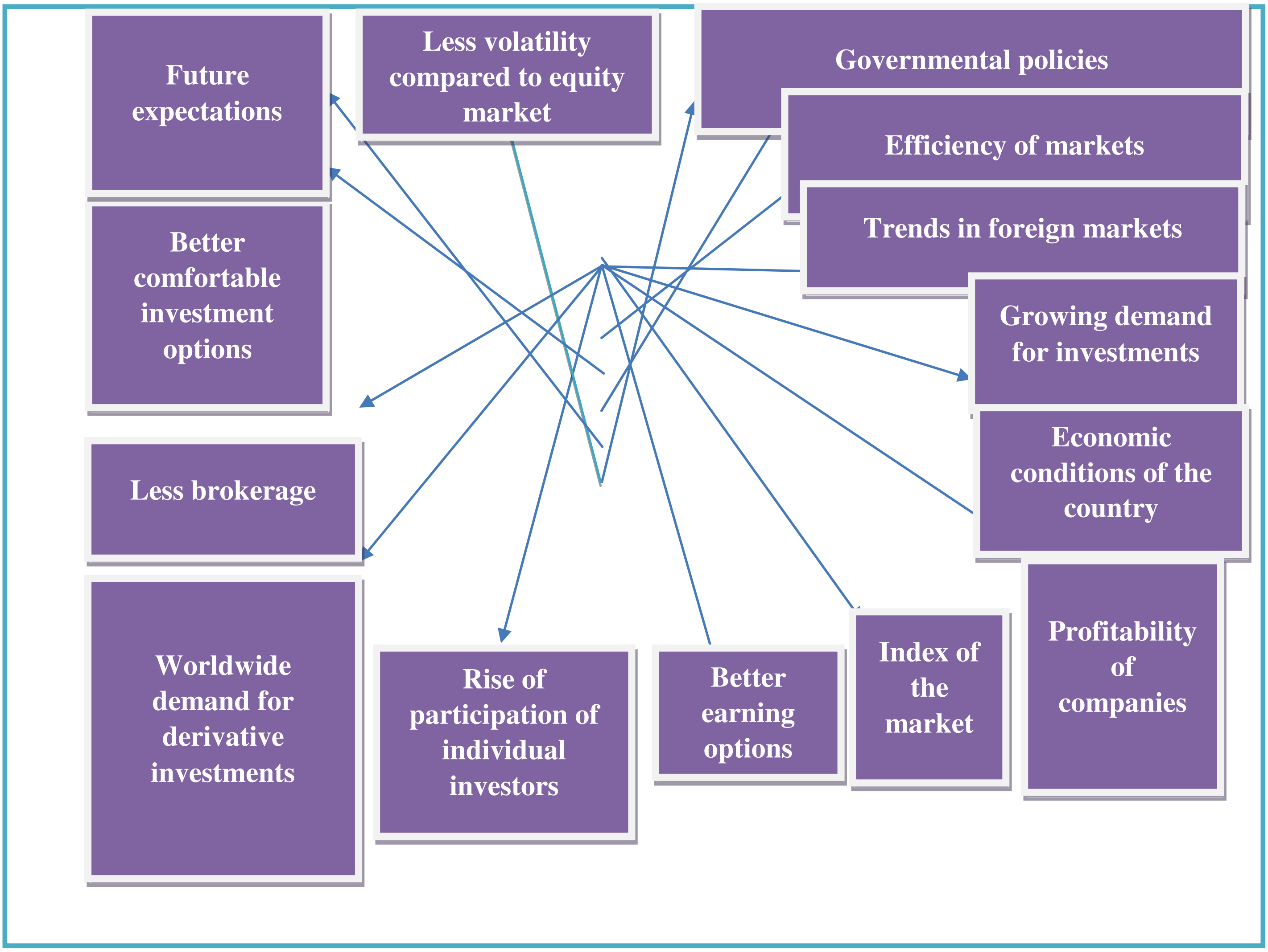

Figure 1: Factors affecting the derivatives market(s).

Bolba et al.(2019) investigated the correlation between the evolution of price in the wholesale energy market and the contracted price of energy in the retail markets. In addition to it, staying updated on the way how the energy market functions at the customer end is essential for factual analysis as the impacts the regulations on finalized price of energy are realistic. However, the uncertainties surrounding the regulations are capable of resulting in disturbances in the market that gets translated as added rates for the customer at the end. It is noteworthy that the suitable time for the customers at the end for scheduling the purchase of energy to the year's second quarter so that in case of any discussion sessions that are needed with the suppliers shall be initiated as early as possible resulting in the modification of prices at the customer side while they buy energy. There is a necessity for the fixing of standard price for the total period of contract as this is a regular practice in Europe which needed to be accepted in Romania as well which is essential for the fixation of prices throughout the entire transactional period that would benefit both the consumer and the supplier in all possible ways. The price of fixed value could be set by possessing the financial states which will pave way to predicting costs of energy between the contractual agreements that was agreed upon by the customer at the end.

Huang (2019) studied and found out that the core phenomenal aspects of research were safety, management policies, profitability, and capitalistic returns to the stakeholders which had a profound impact on the markets over decades. In addition, these perspectives contained separate features belonging to finance which rendered stable information to the investors about trading. Indeed, a tool assessing these available perspectives shall serve the investors to a great extent in identifying the need of the investments in the market. This study highlighted their attempt in examining the performances of major retail industries with the primary index which was useful for analyzing the safety measures, managerial and economic growth of those industries accounting to the profitability yielded by them whose ratio value proposed that the investors could profitably apply the technique of calculation to any industry for creating highly profitable capitalistic returns.

The results obtained by Jia *et al.*(2019) were based on the relevant results of research conducted with seven crucial indicators for describing the nature of the retail investors and the institutional investors. In this study, data was collected between October 2006 and February 2018 with a total of 137 samples for study where the sentiment indexes of retail investors as well as the sentiment index of institutional investors were given top most priority. The group analysis of comparison with analysis of multiple linear regression for analyzing the relation between supply of money which is a policy of monetization and the excess return of stock market with the power of sentiment of retail investors and the sentiment of institutional investors' sentiments. Based on the above criteria, it was observed that the results of returns of stock markets were positively correlated to the policy of monetization and their effects on the share markets would be based upon the sentiments of both the retailers and the institutions where such enhancement levels were stressed under the effect of sentiments of institutional investors. Also, the policy of monetization would be consisting of a greater impact over the returns of the stock market returns under the combinational effects of double sentiments of all the investors in union. To be more precise, the more positive the sentiment of institution is, the more will be the impacts of policy of monetization on returns of stock markets would be with respect to volatility.

Li *et al.*(2019) carried out a detailed investigation on the impacts of opinions of users in the online market of financial communities where a classifier based upon the convolutional neural network was developed and employed for extracting the opinions of the users in their reviews with the achievement of precision value of 75.4%. By carrying out the machine learning way of analyzing the financial data, the impacts that these users in the financial markets create were enlisted in detail with clear and crisp results which was found useful for finding patterns of the users' tendency in terms of support for predicting the returns and volatility of the markets leaving a negative impact on the returns of the market.This had led to the exploration of an interesting aspect that the markets have shown their reactions prior to the posted comments or reviews thereby bringing in the understanding that the users or retail investors in the financial communities might get affected over the performances of markets in the past days.

Objectives of the study

- To measure different options for investment selected by the retail investors.
- To investigate the attitude of the investor(s) and their corresponding perception towards the derivative market.
- To highlight the importance of the derivative market in the perspective of the retail investor(s).

Hypothesis of the study

H_{01}: Economic conditions have an impact on the behavior of the investors.

H_{02}: Herding behavior impacts the decision-making processes of the investors.

H_{03}: Disposable income has a direct impact on the investor behavior.

H_{04}: Awareness and education on various financial options is essential for effective decision- making processes.

H_{05}: Age of the investors is highly essential to assess their behavior.

Research Methodology

The various principles pertaining to the collection and analysis of data will be discussed in this section.
Data collection
The collection of data shall be done through a structured questionnaire either by one to one mode or by online survey which shall be filled by the respondents for further exploration. The respondents would include brokers, retail investors, and investment professionals. The online survey shall be hosted on docs.google.com which is effective in the "choice-based sampling" processes if required.

Points to remember during data collection

- Fixing the appropriate sample size to suit the research is mandatory.
- Ensuring error free data collection is highly recommended.
- Modifying the sample size to adjust the analysis in case of occurrence of errors must be carried out.

Software Analysis

The availability of online tools for the analysis of data collected from the respondents is many and careful selection of suitable tool is mandatory. The usage of SPSS version 17 statistical software package coupled with multiple linear regressions proves to be an effective tool in this regard.

Factor Analysis

Analyzing the factors to find the important factors influencing the user behavior shall be done with the help of factor analysis based upon principle component analysis(Bennet et al., 2011). It is an iterative process which implements the repetition of SPSS factor analysis procedure iteratively until an optimal solution is obtained.
In factor analysis, a group of variables will be represented parsimoniously by smaller set of components whose results show which variables needed to be retained as the independent variables. Based on the collected dataset without chaotic patterns of missing data, it can be concluded that the impact of outliers on the solution would be less. The analysis shall be supported by effective split and validation tests of reliability with a level of significance of 0.05. The effective decision-making model shall be constructed as follows:

$$X=A_0 + (\text{sumof } (A_i * Y_i))$$

Where
i=1 to n
Y_1 to Y_n are the factors influencing user behavior stated in the questionnaire
A_0 to A_n are constant values.
The vital factors according to individual investor shall be grouped as follows for further insights:
Predictability of investor's income

- Confidence of investor
- Rationality of investor
- Knowledge of investor
- Credibility of information
- Performance of stock market(s)

Conclusion

The retail investors show a drift in their behavior towards the derivative market owing to the introduction of the behavioral finance concepts. The behavioral finance had made its stamp on all possible areas and thorough research on them becomes the need of the hour. It is noteworthy that the small-scale investors try to play safe without taking many risks by investing in insurance, mutual funds, governmental bonds whereas adventure lovers take a leap of putting themselves into risks and in lieu of that they invest in the derivative markets. This is due to the lucrative return offered by the derivative markets with hedging of interest rates with maximal profits and minimal loss. There have been much awareness and knowledge about the derivate markets among the retail investors due to the efforts of the trading companies who encourage such potent clients to invest in various highly beneficiary exchanges.

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