

Measuring the Knowledge of Investors on Derivatives: A Prerequisite for Retailing Derivative Products

***Dr. LJ. Chaarlas**

****Ms. N. Kogila**

*Associate Professor and Research Advisor, Department of Commerce, St. Joseph's College [Autonomous], Tiruchirappalli-620 002, Tamil Nadu, India.

**Assistant Professor, Department of Commerce, Bishop Heber College [Autonomous], Tiruchirappalli-620 017, Tamil Nadu, India.

Abstract

The derivatives are the legally permitted tools used in the Indian Stock Market and are very important in the management of risk. The marketing of the derivatives solely depend on how the retailers of derivatives / stock broking firms ascertain and assess the level of awareness of investors on derivatives. The present study on “Measuring the Knowledge of Investors on Derivatives: A Prerequisite for Retailing Derivative Products” has been conducted with 120 investor-respondents in Tiruchirappalli district to ascertain their level of awareness on derivatives to help the retailers design appropriate marketing strategy. The study suggests that variables such as gender, age, educational qualification and the experience of investors have a considerable amount of contribution on building up the knowledge of derivative products in the minds of investors. Knowing the influences created by these variables, the stock broking firms may maintain and enhance the awareness of conceptual techniques and operational techniques of derivative products among investors in accordance with the impact created by each variable in constructing required awareness.

Keywords: Derivatives, stock-broking, awareness of derivatives, retailing, investors

1. Introduction

Derivatives are financial products which are designed with the specific purpose of hedging the price risk that comes with any underlying asset class. They are a kind of security whose price or value is determined by the value of the underlying variables. It is more like a contract on a future date in which two or more parties are involved to alleviate future risk. Though they are generally structured as forward contracts, they are commonly known as futures and options. Usually, derivatives enjoy high leverage and their value is affected by the volatility in the rates of the underlying asset.

India has started with a controlled economic system and moved on to become a destination that witnesses constant fluctuation in prices on a daily basis. Hence, derivative instruments in the capital market have been introduced in India.

Derivatives have become the indispensable components of liberalization process to handle risk. Derivatives have been introduced in the Indian Market in the form of index options and index futures. Index options and index futures are basically derivative tools based on stock index. They are really the risk management tools. Since derivative are permitted legally, one can use them to insulate his equity portfolio against the vagaries of the market.

Every investor in the financial arena is affected by price fluctuations which causes high risk. Managing the risk using equity products is difficult for every investor. Hence, investors would be more interested in using derivative product rather than equity products, but the point of knowing these complicated nuances and advantages of derivatives requires wide knowledge on them.

Whether an investor trading on equity products, would prefer derivatives depends on his knowledge on derivatives and the risk involved with derivative investments. This level of awareness of the investor has been considered to be of great importance to the retailers or the stock broking firms who cater to the needs of investors.

Hence, this study has been conducted to understand and measure the level of knowledge among retail investors in derivative market.

2. Derivatives – A Review

A derivative is a financial contract whose value depends on a risk factor(s) of a single or a combination of assets, such as Price of a bond, commodity, currency, share, a yield or interest rate etc. and allows organization to break financial risk into smaller components to best meet specific risk objectives. ^[1]

Over-the-counter (OTC) derivatives are used by financial institutions to create custom strategies designed for specific trading situations. Exchange traded derivatives are commonly used by institutional and retail investors to speculate and hedge financial markets. Counterparty default is eliminated by the use of exchange traded derivatives because all trades are cleared through a central clearinghouse.

Retail investor's access derivatives and risk management systems through futures and options exchanges. Futures exchanges offer derivatives on commodities, currencies, equity indexes, and financial securities. Futures contracts of derivatives designed to purchase or speculate on the future price of an asset. Major corporations use futures contracts to manage the risk involved with buying and selling commodities. Farmers use futures contracts to hedge weather conditions and crop production.

Derivatives are a cost effective means to employ risk management tactics for hedging and protective purposes. Custom tailored strategies can be created to accommodate retail as well as institutional investors. International commodity trading depends on risk management solutions provided by futures derivative contracts. Risk management techniques are best employed through the use of derivative products. Futures and options are the most common form of derivative trading. Retail traders of derivatives use these markets primarily for speculation on a wide range of securities. ^[2]

3. Statement of the Problem

Nowadays, investors hesitate to invest their money in derivatives. Many investors completely stay away from all sorts of derivative products. Because, all derivative products are highly leveraged and most futures contracts come with a time period that stretches from 1 to three months. For options, the period varies between one and twelve months. This makes it very difficult and inconvenient to invest or hold on to stock/index or commodity for a longer period of time using derivatives. Additionally, all derivative contracts come with an inbuilt premium which is called the "time premium". This time premium starts wearing off as a derivative contract gets closer to its expiry date and it completely disappears on the day of expiry.

As a result, any person who wishes to hold on to a stock or index through the derivative route ends up wasting a huge amount of money in paying unnecessary time premiums and broker commissions every time the investors renews his/her derivative contract. These critical procedural issues which are important for trading in derivatives, defines the level of awareness of an investor about derivative products and also determines the amount of effort to be put in by the stock broking firms in retailing derivatives.

Hence it is important to study the level of awareness of investors on derivatives and derivatives trading. Therefore, the present study “Measuring the Knowledge of Investors on Derivatives: A Prerequisite for Retailing Derivative Products” has been attempted by the researcher to present the level of awareness of investors on derivatives product.

4. Objectives of the Study

A study on “Measuring the Knowledge of Investors on Derivatives: A Prerequisite for Retailing Derivative Products” has been carried out with the following objectives:

Primary objective:

1. To analyze the overall level of knowledge of investors about derivatives.

Secondary objectives

1. To ascertain the level of the conceptual knowledge of investors on derivatives.
2. To ascertain the level of the operational knowledge of investors on trading on derivatives.
3. To provide appropriate suggestion for retailing/stock broking firms to retail derivatives product according to the level of awareness of investors and their readiness to take risk.

5. Research Hypothesis of the Study

A study on “Measuring the Knowledge of Investors on Derivatives: A Prerequisite for Retailing Derivative Products” has been carried out to test the awareness of investing in derivatives, with the following research hypotheses.

1. There is no significant difference between gender of the respondents and their overall knowledge level on derivatives.
2. There is a significant association between age of the respondents and their overall knowledge level on derivatives.
3. There is a significant difference between educational qualification of the respondents and their overall knowledge level on derivatives.
4. There is a significant difference between experience of the respondents and their overall knowledge level on derivatives.

6. Scope of the Study

The study focuses on the overall knowledge of investors on derivatives products. The present study covered the sample of 120 investor-respondents of the district of Trichirappalli during the period of three months from January 2013 to March 2013. This study may be useful to the retailing/stock broking firms to retail derivative products according to the level of knowledge of investor and their readiness to take risk.

7. Methodology

The investors of the district of Tiruchirappalli who were selected through snowball sampling frame the sample units of this study. The sample size consisted of 120 investor-respondents who were the floor-traders of stock broking firms of Tiruchirappalli District. The study was based on primary data collected from the investor-respondents using a structured questionnaire which has also been used as an interview schedule.

The hypotheses of the study have been analyzed and proved using Mann-Whitney Test, Chi-Square Test, Oneway Anova ‘F’ Test, and Kruskal- Wallis test.

8. Limitations of the Study

The study has been conducted among 120 investor respondents who were the floor-traders of derivative products in stock broking firms of Tiruchirappalli District. The study may not be applicable to any period other than January 2013 to March 2013. Hence, the result is not applicable to any period other than the study period and also not applicable to any area other than the area of the district of Tiruchirappalli. It is limited to the floor-traders of derivative products in stock broking firms in Tiruchirappalli District

9. Analysis and Results

The analysis of the study has been focused on the level of knowledge of investors on the conceptual and operational techniques of derivative products with their gender, age, level of education and level of experience in stock market investment. The results of the analyses are explained in the following tables.

TABLE I

Difference between gender of the Respondents and their overall Knowledge

S.No	Gender	Mean Rank	Sum of Ranks
1	Concept		
	Male (n=94)	56.72	5331.50
	Female (n=26)	74.17	1928.50
2	Operational		
	Male (n=94)	55.46	5213.00
	Female (n=26)	78.73	2047.00
3	Overall Knowledge		
	Male (n=94)	55.91	5256.00
	Female (n=26)	77.08	2004.00

Test Statistics (a)

	Concept	Operational	Overall Knowledge
Mann-Whitney U	866.500	748.000	791.000
Wilcoxon W	5331.500	5213.000	5256.00
Z	-2.316	-3.077	-2.794
Asymp. Sig. (2-tailed)	0.021	0.002	0.005

a. Grouping variables: Gender

Source: Field Data

Findings

The Table I indicates the difference between gender of the respondent and their overall knowledge in derivative products. It indicates that there is a significant difference between gender of the respondents and their overall knowledge. Hence, there is a significant difference between gender of the respondents and their overall knowledge in derivative products. Hence, the calculated value less than table value. So the research hypothesis accepted and the null hypothesis rejected.

TABLE II

Association between age of the Respondents and their Overall Knowledge

S.No	Various Dimensions of Knowledge	Age					Statistical Inference
		Below 25 yrs (n=12)	26-35 yrs (n=40)	36-45 yrs (n=24)	46-55 yrs (n=10)	Above 55 yrs (n=34)	
1	Concept						X ² =36.933
	Low	0	10 (25%)	14(58.3%)	4 (40%)	28(82.4%)	Df=4 .000<0.05
	High	12(100%)	30 (75%)	10(41.7%)	6 (60%)	6 (17.6%)	Significant
2	Operational						X ² =40. 911
	Low	0	8(20%)	14(58.3%)	4(40%)	28(82.4%)	Df=4 .000<0.05
	High	12(100%)	32(80%)	10(41.7%)	6(60%)	6(17.6%)	Significant
3	Overall Knowledge						X ² =36.933
	Low	0	10(25%)	14(58.3%)	4(40%)	28(82.4%)	Df=4 .000<0.05
	High	12(100%)	30(75%)	10(41.7%)	6(60%)	6(17.6%)	Significant

Source: Field Data

Findings

The Table II indicates the association between age of the respondents and their overall knowledge in derivative products. It indicates that there is a significant association between age of the respondents and their overall knowledge. Hence, there is a significant association between age of the respondents and their overall knowledge in derivative products. Hence, the calculated value less than table value. So the research hypothesis accepted and the null hypothesis rejected.

TABLE III

Oneway Anova Difference between Educational Qualification of the Respondents and their overall Knowledge

S.No	Educational Qualification	Mean	S.D	SS	DF	MS	Statistical Inference
1	Concept						
	Between Groups			806.274	4.00	201.568	F=8.580 .000<0.05 Significant
	up to 10th (n=7)	1.00	2.646				
	11th -12th n(n=13)	10.54	2.16				
	Diploma (n= 12)	6.67	6.14				
	Graduation (n=60)	4.9	5.177				
	Post-Graduation (n=28)	9.36	4.755				
	within Groups			2701.72	115.00	23.493	
2	Operational						
	Between Groups			825.23	4.00	206.307	F=8.076 .000<0.05 Significant
	Up to 10th (n=7)	1.43	3.78				
	11th -12th n(n=13)	11.00	2.345				
	Diploma (n= 12)	6.33	6.05				
	Graduation (n=60)	5.2	5.674				
	Post-Graduation (n=28)	9.71	4.233				
	within Groups			2937.69	115.00	25.545	
3	Overall Knowledge						
	Between Groups			3257.72	4.00	814.431	F=8.707 .000<0.05 Significant
	up to 10th (n=7)	2.43	6.425				
	11th -12th n(n=13)	21.54	3.282				
	Diploma (n= 12)	13	11.786				
	Graduation (n=60)	10.1	10.678				
	Post-Graduation (n=28)	19.07	8.869				
within Groups			10756.2	115.00	93.532		

Source: Field Data

Findings

The Table III demonstrates the difference between educational qualification of the respondents and their overall knowledge in derivative products. It indicates that there is

a significant difference between educational qualification of the respondents and their overall knowledge. Hence, there is a significant difference between educational qualification of the respondents and their overall knowledge in derivative products. Hence, the calculated value less than table value. So the research hypothesis accepted and the null hypothesis rejected.

TABLE IV

Difference between Experiences of the Respondents and their Overall Knowledge

S.No	Experience	Mean Ranks	Test Statistics (a,b)
1	Concept		Chi-square=20.244 Df=4 .000 < 0.05 Significant
	Below 5 (n=32)	61.48	
	5-10 (n=12)	60.17	
	10-15 (n=21)	54.07	
	15-20 (n=37)	76.50	
	Above 20 (n=18)	33.58	
2	Operational		Chi-square=22.524 Df=4 .000 < 0.05 Significant
	Below 5 (n=32)	61.91	
	5-10 (n=12)	67.21	
	10-15 (n=21)	50.88	
	15-20 (n=37)	76.34	
	Above 20 (n=18)	32.19	
3	Overall knowledge		Chi-square=20.440 Df=4 .000 < 0.05 Significant
	Below 5 (n=32)	61.33	
	5-10 (n=12)	68.88	
	10-15 (n=21)	52.90	
	15-20 (n=37)	74.97	
	Above 20 (n=18)	32.56	

a. Kruskal Wallis Test

b. Grouping Variable: Experience

Source: Field Data

Findings

The Table IV shows the difference between experience of the respondents and their overall knowledge in derivative products. It indicates that there is a significant difference between experience of the respondents and their overall knowledge.. Hence, there is a significant difference between experience of the respondents and their overall knowledge. Hence, the calculated value less than table value. So the research hypothesis accepted and the null hypothesis rejected.

10. Findings

From the study it is found that investors are not investing in derivative products due to lack of knowledge on derivatives, difficulty in understanding derivative concepts, and the risk involved in trading derivatives

It is found from the analysis that out of 120 investor-respondents, 53 per cent were having conceptual knowledge derivatives product and 55 per cent were having operational activities on derivatives. Nearly 53 per cent were having overall knowledge on derivatives product.

11. Suggestions

The retailers of derivatives products should promote and spread the awareness on the concepts and usage of derivatives and on the risk and returns involved with the trading on derivative products.

SEBI, RBI, and Stock Exchanges should conduct seminars on the use and importance of derivatives to educate the investors and promote derivative trading.

SEBI should encourage the retailers and the stock broking firms in marketing of derivative products, so that the derivative products reach maximum number of investors in the capital market.

12. Conclusion

The derivatives are the legally permitted tools used in the stock market in India and are very important in the management of risk. The marketing of the derivatives solely depend on how the retailers/stock broking firm ascertain and assess the level of awareness of investors on derivatives. The variables like gender, age, educational qualification and have a considerable amount of contribution on building up the knowledge of derivative products in the minds of investors. Knowing the influences created by these variables the stock broking firms may maintain and enhance the awareness of conceptual techniques and operational techniques of derivative products among investors in accordance with the impact created by each variable in constructing required awareness.

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