

An Analysis on Perspectives of Investors on Commodity Trading and Risk Management in India

D. Shree Jyothi, D. Srinivasa Rao

Abstract: Indian commodity market has seen tremendous growth over the past few decades. Investment in capital market attracts higher risk as the return is higher. It becomes very important to understand the perspectives of the investors in market in order to minimize the risk faced. This will help them accomplish their goal of achieving higher return by minimizing the risk. The aim of the paper is to provide the risk management perspectives of commodity investors in India. The study concentrates on the aspects like the market and exchange selected for trading, types of risks faced, method of analysis, technique used for managing risk, percentage of the investment, advantages and disadvantages of trading in commodity trading etc. The results can be used by the commodity investors in taking wiser decisions in commodity derivatives investment. Also, hedge their risk accordingly.

Index Terms: Commodities, risk, market, exchange, source.

I. INTRODUCTION

Financial Market is the important component of the financial system of India which plays a significant role in the economic development. Derivatives are the financial instruments which do not have their own value but take the value from the underlying assets like equity, livestock, bullion, wheat, Foreign Exchange etc. Commodity derivatives are one of the important types of derivatives traded in the five national exchanges and the regional exchanges. Though its roots were laid in 1875 by the Bombay cotton Trade Association Ltd but formally organized trading started in 2003. The present paper aims to study the perspectives of the commodity investors concentrating on the aspects like the market and exchange selected for trading, types of risks faced, method of analysis, technique followed for managing risk, percentage of the investment, advantages and disadvantages of trading in commodity trading etc. The results can be used by the commodity investors in taking wiser decisions in commodity derivatives investment.

Research Gap: The earlier research concentrated mainly on the price discovery mechanism and the co-integration between spot price and futures price. Hence, the present study gains importance in terms of providing the information on the perspectives of commodity investors in India.

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II. LITERATURE REVIEW

Eduardoborensztein and Carmen. Reinhart[3], have provided a framework to explain impact of the demand and supply on commodity prices. Also, concluded stating the demand factors are the main fundamentals for commodity prices. Brajesh Kumar, Ajay Pandey[1], have studied in the paper the cointegration between the Indian commodity future markets with their world counterparts for nine agricultural products. It is found that all the commodities had linkage with other exchanges in world. Roger J. B. Wets Ignacio Rios[4], have given a stochastic process which would estimate the copper prices. The model considers inflation adjusted prices and can be applicable for other commodity prices also. X.E. Xu. H.G. Fund [2], have conducted a bivariate asymmetric GARCH model to compare the precious metals future contracts traded in Chinese and Japanese markets. It is observed from the results that there is a great volatility spillover across both markets. It was evident from the study that, there is intraday pricing information transfer between the markets, Isita Mukherjee and Bhaskar Goswami[5], observed the volatility of the daily return of select commodities. Four commodities were considered and it was found that maturity effect is only valid for gold returns. Bojana Vukovic, Kristina Mijic[6], concluded that rational decisions in investment process. He suggested that risks in investments can be reduced to a minimum level when they are identified, assessed, monitored and avoided. Dr. Periasamy[7], has studied the perception of investors in commodity derivatives market. He analysed the investment pattern of investors in Chennai City, the factors influencing the spot and Futures and have made some suggestions to them.

III. DATA SOURCES AND METHODOLOGY OF THE STUDY

The study was analytical and descriptive in nature. Data is collected from primary sources from a sample of 512 commodity investors through a structure questionnaire. The data was collected by adopting simple random sampling method. Statistical tools like Frequency, ranking analysis are used to analyze the data.

The statistical software's used are Excel and IBM SPSS 23

Source: Author's Calculation

IV. DATA ANALYSIS AND FINDINGS

The Indian commodity market has transformed from a situation where price was determined by the suppliers but now price is determined by the investors. The increase in the number of investors would clearly show that demand for commodity trading has increased. Commodity derivatives are taken as one of the investment avenue today and preferred by investors who look for higher return. Commodity futures are more in demand though options are still in the process of acceptance due to its advantages since the permission granted in 2016 only. The tables below depict the various perspectives of the commodity investors. The analysis is performed using the Friedman's ranking analysis and multiple response frequency methods as the respondents were given the choice to select multiple options.

Table1:

Source of Information		Responses	Column N %
\$Source_of_Information	Source_FinWeb	398	77.7%
	Source_Brofirm	386	75.4%
	Source_Newspaper	385	75.2%
	Source_WithMgr	62	12.1%
	Total	1231	100.0%

Source: Author's Calculation

Inference:The interest and confidence of investment is developed through the sources of information which help the investor get the inputs required. It is observed from table 1 that Finance websites, information from brokerage firms and newspapers are the important sources of information considered by commodity investors.

Table 2: Preference of Investment

Ranks	
	Mean Rank
Pref_FD	3.28
Pref_MF	5.60
Pref_Equity	6.71
Pref_Comm	4.66
Pref_FinDeriv	5.23
Pref_Insur	3.35
Pref_ReEstate	3.19
Pref_Gold	3.99

Source: Author's Calculation

Test Statistics ^a	
N	512
Chi-Square	1124.272
df	7
Asymp. Sig.	.000

a. Friedman Test

Inference: In India investors can be classified into three types risk averse, risk neutral and risk takers. Depending on their risk taking ability they select the avenue for investment. As we know higher the risk higher the return. Friedman's Rank Analysis is conducted on the investor's responses and it is observed that their order of preference in investment is Equity, Mutual Funds, Financial Derivatives, and Commodity derivatives, Gold, Insurance, Deposit and Real Estate respectively. Test statistics show that the test is significant as (p<0.05). Looking at the preference shown in Table 2 the respondents are mostly risk takers as majority of them have selected Equity.

Table 3:

Types of Risk		Responses	Column N %
\$Type_of_Risk	Infl_risk	393	77.1%
	Curr_risk	386	75.7%
	Mkt_risk	378	74.1%
	Int_risk	376	73.7%
	Country_risk	250	49.0%
	Op_risk	222	43.5%
	Political_risk	205	40.2%
	Crdt_risk	103	20.2%
	Alltheabove	41	8.0%
	Counterparty_risk	40	7.8%
	Reinvest_risk	25	4.9%
	Any_other	2	0.4%
	Total	2421	100.0%

Source: Author's Calculation

Inference: Risk is variability in returns and the respondents were asked to select the various types of risks which they would face while investing in commodity derivatives. Respondents were allowed to select multiple options. Multiple response test in SPSS is conducted to find out and generalize the major types of risks they would encounter and it is observed from the above table 3 that Inflation risk, Currency risk, Market risk, Interest rate risks are the major risks faced while investing in commodities.

Table 4:

Exchange for trading		Responses	Column N %
\$Exchange	Exchange_MCX	462	90.8%
	Exchange_NCDEX	304	59.7%
	Exchange_NMCE	43	8.4%
	Exchange_UCX	23	4.5%
	Exchange_ICEX	20	3.9%
	Exchange_Regional	16	3.1%
	Exchange_ACE	9	1.8%
	Exchange_Anyother	0	0.0%
	Total	877	100.0%

Source: Author's Calculation



Inference: Commodity investors are required to select a market place for trading and it is observed from table 4 that MCX and NCDEX are the preferred national exchanges they select for trading in commodity derivatives.

Table 5:

Type of commodity selected for investment			
\$Commodity_type	Comm_type_Precious	Responses	Column N %
	Comm_type_Precious	385	75.5%
	Comm_type_industrial	279	54.7%
	Comm_type_Agro	274	53.7%
	Comm_type_Energy	264	51.8%
	Comm_type_soft	194	38.0%
	Comm_type_Allabove	10	2.0%
	Comm_type_Anyother	3	0.6%
	Comm_type_Live_stock	0	0.0%
	Total	1409	100.0%

Source: Author's Calculation

Inference: Trading in India happens in types of commodity as listed in the table 5 and observed that the commodities like precious metals, industrial metals, Agro products and Energy are popular commodities for trading.

Table 6a:Level of risk in the investments

Ranks	
	Mean Rank
FD_risk_level	2.16
MF_risk_level	4.17
Equity_risk_level	5.92
Comm_risk_level	6.20
FinDerv_risk_level	6.84
Insur_risklevel	3.04
ReEstate_risklevel	4.72
Gold_risklevel	2.95

Source: Author's Calculation

6b:Significance of Friedman test for risk level in investments

Test Statistics ^a	
N	512
Chi-Square	1957.235
df	7
Asymp. Sig.	.000

a. Friedman Test

Source: Author's Calculation

Inference: Respondents opinion was taken to find out the level of risk they assume for each of the investment avenues and Friedman's Rank Analysis is conducted on the investor's responses. It is observed from Table 6 that risk level according to them is highest in Financial Derivatives, commodity derivative and equity respectively. Test statistics show that the test is significant as ($p < 0.05$)

Table 7:

Method of analysis considered for investment in commodities

		Responses	Column N %
\$Method_of_Analysis	Method_Expertsadv	350	69.3%
	Method_Fundamental	227	45.0%
	Method_Technical	204	40.4%
	Method_Both	199	39.4%
	Method_Allabove	26	5.1%
	Method_Anyother	5	1.0%
	Total	1011	100.0%

Source: Author's Calculation

Inference: Respondents were asked about the method of analysis of advice they conduct for investment in commodities. They were allowed to select more than one option. Based on multiple response frequencies, commodity investors feel experts' advice is the best method of analysis for investment and next preference is Fundamental and Technical Analysis.

Table 8:

Source of advice for investment in commodities

		Responses	Column N %
\$Source_of_Advice	Advice_Newspaper	416	81.6%
	Advice_Brokers	395	77.5%
	Advice_Television	300	58.8%
	Advice_Friends	277	54.3%
	Advice_Magazines	176	34.5%
	Advice_Anyother	7	1.4%
	Total	1571	100.0%

Source: Author's Calculation

Inference: Respondents were asked to select the source of advice they prefer before they invest in commodity derivatives. Based on multiple response frequencies, investors feel advices for investment in commodities are given best in newspapers and by the brokers as mentioned in Table 8.

Table 9:

Technique used for managing risk in investment

		Responses	Column N %
\$Technique_Risk_Management	Technq_ExitMinloss	401	78.3%
	Technq_Diversification	377	73.6%
	Technq_Avoidance	304	59.4%
	Technq_Invest_with_trend	300	58.6%
	Technq_Avgdown	219	42.8%
	Technq_Ignorerisk	160	31.3%
	Technq_Hedging	62	12.1%
	Technq_Anyother	3	0.6%
	Total	1826	100.0%

Source: Author's Calculation

Inference: Risk is commodities is high and there are various techniques



used for minimizing the risk in the investment made in commodities. Respondents were asked to select at least one technique and based on multiple response frequencies, it is observed from Table 9 that Exit with minimum loss and Diversification are the best risk management techniques used by investors.

Table 10:

Advantages of investing in commodities			
		Responses	Column N %
\$Advantages	Adv_HighLiquidity	370	72.3%
	Adv_LowInvestment	360	70.3%
	Adv_HighReturn	237	46.3%
	Adv_Pricediscovery	139	27.1%
	Adv_transferability	90	17.6%
	Adv_Anyother	13	2.5%
	Total	1209	100.0%

Source: Author's Calculation

Inference: Advantages are the motivators for investment in a particular instrument. Commodity derivatives have many advantages and the respondents are asked to select more than one advantage which they feel motivated them to invest. Based on multiple response frequencies, it is observed from Table 10 that High liquidity and low investment are the major advantages of investing in commodity derivatives.

Table 11:

Disadvantages of investing in commodities			
		Responses	Column N %
\$Disadvantages	Disadv_Returns_not_assured	361	70.6%
	Disadv_Stdcontracts	329	64.4%
	Disadv_Volatile	297	58.1%
	Disadv_Highcontractsize	297	58.1%
	Disadv_Complexity	261	51.1%
	Disadv_Risky	240	47.0%
	Disadv_Anyother	11	2.2%
	Total	1796	100.0%

Source: Author's Calculation

Inference: Every coin has two faces and commodity derivatives also. When there are advantages there are disadvantages too. Respondents were asked to select more than one disadvantage. Based on multiple response frequencies, it is observed from Table 11 that Returns not assured and standardized contracts are the major disadvantages of investing in commodity derivatives.

Table 12:

Market for trading in commodities

		Responses	Column N %
\$Market_for_trading	Mrkt_Futures	443	86.5%
	Mrkt_physical	101	19.7%
	Mrkt_options	87	17.0%
	Mrkt_Anyother	1	0.2%
Total		632	100.0%

Source: Author's Calculation

Inference: In India Futures market existed from 2003 but Options were permitted in 2016. Due to late beginning options in spite of their advantages over futures are gaining importance from the investors. Respondents were asked to select more than one market they prefer for investing. Based on multiple response frequencies, it is observed from Table 12 that Futures market is the most preferred market for trading in commodity derivatives.

Table 13: Type of traders in Commodity derivatives market.

TYPE OF THE TRADER	Frequency	Percent
Arbitrager(look for opportunities to in	67	13.09
Hedger(invest with calculation)	95	18.55
Speculator(invest in expectation of profits)	350	68.36
Total	512	100.00

Source: Author's Calculation

Inference: Derivative traders are classified into Arbitragers, Hedgers and Speculators J.C.Hull (2015). Respondents were asked to select the type they belong to. Based on frequencies, it is observed from Table 13 that majority of the respondents are speculators.

Table 14: Frequency of trading by the commodity investors.

Trading	Frequency	Percent
Daily	60	11.72
Weekly	158	30.86
Monthly	148	28.91
Occasionally	146	28.52
Total	512	100.00

Source: Author's Calculation

Inference: Respondents were asked to select the frequency of their trade and based on their responses, it is observed that majority of the



investors are trading weekly, monthly but not daily like in equity. There are quite big numbers who trade occasionally also.

Total	512	100.00
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Source: Author's Calculation

Table 15: Percentage of total investment in commodity derivatives

Percentage of Investment in Commodity derivatives	Frequency	Percent
<25%	341	66.60
26-50%	154	30.08
51-75%	154	30.08
>75%	12	2.34
Total	512	100.00

Source: Author's Calculation

Inference: Respondents when asked about the percentage of investment in commodity derivatives and based on their responses tabulated in Table 15 it is observed that majority of them are investing <25% of the total investment.

Table 16: Classification of commodity derivatives market.

Classification of Commodity derivatives market	Freq.	Percent
High Return-Low Risk	39	7.62
High Return-High Risk	369	72.07
Low Return-High Risk	79	15.43
Low Return-Low Risk	25	4.88
Total	512	100.00

Source: Author's Calculation

Inference: Respondents when asked to classify the commodity derivatives market. It is observed from Table 16 that commodity derivatives market is classified as High Return-High Risk investment by majority of the investors.

Table 17: Duration of association with the commodity derivative market.

Duration	Freq.	Percent
<1 Year	133	25.98
1-2 years	109	21.29
2-3 Years	177	34.57
>5 Years	13	2.54

V. INFERENCE

Respondents were asked about the tenure of their trading in commodities. Based on frequencies, it is observed from Table 17 that majority of the commodity investors have tenure less than less than 3 years.

VI. CONCLUSION

A number of researches have been conducted concentrating on the price discovery mechanism, co-integration between the spot and future price and awareness of commodity derivatives. The significant volatility in the trading of these new instruments recommends for a study on the perspectives of investors on the trading patterns and their management of the risk faced. The present study focused on these aspects and the results are useful to select a commodity to invest, market to trade, percentage of investment to be made, source of information and advice to use for trading etc. These results are useful for commodity derivative investors while taking decisions in investments.

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