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Perception towards Volatility in Prices: A Study of Commodity Future Traders in Ludhiana city

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Abstract

Commodity prices are highly volatile leading to higher risk in trading but also may generate higher returns. Although there are several mathematical tools to calculate historical and expected volatility, nevertheless, traders regularly perceive about volatility before carrying out actual trading. The present study deals with the study of such perception. The survey of 100 randomly selected commodity traders from Ludhiana city was performed and their perception about volatility was enquired. Statistical significance at 5% was found in their agreement towards the fact that even if overall markets are calm, there are incidences of high volatility in commodity markets as compared to other markets and this trend has been rising. This increased volatility affects future returns, but also offer good opportunities for traders, especially if they make use of technical analysis or derivatives.

Key words: Commodity, traders, volatility, trader's perception

JEL Classification: C83, Q14

Introduction

Indian economy is a commodity-based economy in which a major percentage of population depends directly or indirectly on agricultural commodities. In commodity markets, future market contracts are widely used as a risk-hedging and speculative tool on either physical commodity itself or on open positions in commodity derivatives. In commodity markets, a variety of products ranging from basic agricultural commodities to precious metals, base metals, crude oil, energy, etc are traded. It is a market that may be physical or virtual where buying, selling and trading of different commodities takes place. One of the characteristic of commodity market is that it displays extreme volatility which is broadly defined as frequent changes in the price of an asset over a period of time. The volatility may increase with an increase in the price range on a daily, weekly, monthly, or longer-term basis. As per Prasad et al (2019), price volatility is helpful in determining the risk-reward profile of any asset.

Commodities are more volatile than other assets for five main reasons namely liquidity, the role of mother nature, supply and demand, geopolitics, and leverage. There are three chief reasons why commodity prices move higher or lower. The first is the fundamental state of a commodity market. If current inventories exceed demand, the oversupply tends to drive prices lower. But if the demand is greater than supplies, the inventory deficit tends to push prices higher. Secondly, commodity prices fluctuate due to the technical condition of the market. Price charts often drive the behavior of investors, traders, and other market participants. Since everyone studies the same data, a herd mentality of massive group buying or selling consequently influence the prices. Finally, commodity prices are sensitive to changes in the global macroeconomic and geopolitical landscape. Commodity trading in India started much before it started in many other countries. However, years of foreign rule, droughts, and periods of scarcity and government policies hinder the growth of commodity trading in India. After a long period of inactivity, commodity trading however restarted in India in the year 2003 with the establishment of Multi Commodity Exchange (MCX), and National

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Commodity and Derivatives Exchange (NCDEX). The other dominant commodity exchanges are National Multi-Commodity Exchange (NMCE) and Indian Commodity Exchange (ICEX). The commodity exchanges in India are regulated by Security and Exchange Board of India (SEBI). A large number of commodities are traded in these exchanges. Agricultural commodities like black pepper, cardamom, castor seeds, cotton, crude palm oil, rubber, etc; Soft products such as coffee, cocoa, sugar, etc; Energy products like crude oil, natural gas, gasoline and other energy sources; base metals such as nickel, aluminum, copper, brass, lead etc; Precious metals such as gold, silver, platinum, etc, are traded in these exchanges (Robert, 2017).

Volatility is the variance in the price of an asset over a period of time. The prices of commodities have depicted extremely high volatility in India (Devlin *et al,* 2011; Dwyer *et al,* 2011; Algieri, 2012; Nissanke, 2012; Mohapatra, 2017). Therefore in such an environment, volatility is a major concern for most of the investors. In commodity markets as in stock markets, return and risk are directly proportional. Many research studies have found oil to be the most volatile commodity followed by energy and then agricultural commodities. The studies have further proved that high returns are associated with high risk (Mukherjee and Goswami, 2015; Nirmala, 2018).

A large number of studies are available about investor's perceptions about the Indian commodity market. Venkateswari (2017) found that most of the investors are involved in short term trading and the investor is ready to take high risk in commodity trading. Investors are interested mainly in increasing their wealth through the commodity futures market. Jeevanandham and Ananth (2016) believes that the Indian commodity market has developed on a limited scale. Further he found that in the Indian commodity market, various investors with different socioeconomic status have implemented the 'tolerable' way to deal with the risk and contributed as investors in the commodity market. Rajaram and Hiriyappa (2019) indicated that the socio-economic status of the trader affects their perception regarding the commodity market. The study further concluded that investors can make substantial returns only if investments are made in a more disciplined manner.

Investors' perception of volatility in commodity or other financial markets is highly influenced by many factors (Sindhu *et al*, 2014). But there are some researchers who found that factors like age and income do not influence traders' perception (Tripathi, 2014; Vijaya, 2015). Sornaganesh (2014) found that occupation has the most significant impact on trader's perception. Magdalene et al (2017) found that specific investment in a particular commodity is influenced by many factors particularly in the case of gold. Sainy (2006) found seven external factors primarily influencing the investment decision of the traders. The study suggests that the economic environment, GDP, government policies, foreign trade and investments, disclosure, seasonal effect, asymmetry of information and liberalization policies of the government are major factors affecting commodity prices. Aranganathan (2013) found that different respondents consider different factors before taking their investments or trading decisions particularly in commodities markets, it being both highly risky and lucrative (Ghakar, 2015).

Indian commodity markets provide portfolio diversification for retail investors and traders through commodity derivatives. Many researchers (Hymavathi *et al*, 2018; Prasad *et al*, 2019) have found that a large proportion of non-professionals trade in Indian commodity markets but they lack in their awareness towards the complex dynamics of commodity trading. The government, stock exchange, and brokers conduct awareness programs regarding commodity trading in the urban and semi-urban areas to develop the investor's literacy level. Further many studies (Purohit, 2013; Senthil, 2015; Tiwari and Parray, 2017; Melbha and Bhavan, 2017; Azhar and Marimuthu, 2020) found that most investors are interested to invest in the commodity futures market but they don't know how to invest and the associated risk factors. Proper investor awareness programs only can help them to know the commodity market and commodity futures markets as these are relatively new and emerging markets. Researchers (Deepak and Kumar 2018) have also found that attitude and perception of traders influence preference for specific commodity asset. Further Goel (2013) has observed that the decisions of the traders are highly influenced by financial consultants and advisors.

Data Sources and Methodology

The present study adopted the descriptive research design. The major objective of the study was to assess perception of commodity traders towards volatility. To achieve the objective of the study primary data were collected for gathering observations on perception of the commodity traders towards price volatility. The study surveyed 100 commodity traders in Ludhiana, for the collection of primary data. The trader for the purpose of the study has been defined as "the person who does speculation or hedge trading in commodity trading contract, has position in the nearest month contract and is active in trading for last 6 months at the time of data collection". A list of commodity traders was made with the help of brokerage houses operating in Ludhiana city. The list contained descriptive details of 279 commodity traders along with their contact details. Random sampling of 100 commodity traders was carried out and in order to collect data from sample of 100 respondents, 117 commodity traders were surveyed using personally administered well structured and non-disguised questionnaire. Out of the total 117 collected questionnaires, 17 filled questionnaires were not in order. The questionnaire consisted of demographic and other variables which defined trader's business characteristics like trading experience, mode of trading and trading volume, source of finance of trading, type of trader, number of commodities traded and expected rate of return. The perception variables were measured with the help of Likert scale (5 point scale). Data was further checked for normality and accordingly inferential tests were applied to check the significance of various hypotheses formulated.

Results and Discussion

Demographic profile of commodity traders that was enquired from respondents includes age expressed in years, gender, and marital status, the highest educational qualification at the time of data collection, family size and house ownership. Table 1 depicts the demographic profile of the commodity traders. It can be seen from the table that 51 per cent traders belong to the age group of 30-40 years, followed by 22 per cent investors in the age group of 40-50 years. Therefore approximately 73 per cent of commodity traders belong to age group of 30-50 years. The proportion of the traders either belonging to the age group of greater than 50 years and less than 30 years is very less. In the sample there are 85 per cent males and 15 per cent females. With respect to marital status 78 per cent respondents are married and 22 per cent are unmarried. As far as educational qualifications are concerned out of sample of 100 respondents, 59 per cent are graduates, 22 per cent are post graduates and 13 per cent are professionals. Majority of the traders are those with own house ownership. Further for 65 per cent of the traders family size varies from four to five family members. As per the sample characteristics, it can be inferred that most of the commodity traders are males, belonging to age group of 30-50years, largely graduates, married and own their own house. The study also assessed the economic profile of the commodity traders. The economic profile mainly includes individual monthly income. Majority of the investors under survey reported income between Rs 50 thousand and Rs. One lakh per month, followed by 23 per cent traders who reported income less than Rs 50 thousand per month. Sample also consisted 21 per cent traders who reported income of Rs. 20 thousand per month and above.

Table1. Demographic profile of commodity traders (N=100)

Parameter	Category	Per cent Response
Age (in Years)	20 to less than 30	18
	30 to less than 40	51
	40 to less than 50	22
	50 to less than 60	09
Gender	Male	85
	Female	15
Marital Status	Married	78
	Unmarried	22
Highest Educational Qualification	Senior Secondary	6
	Graduate	59
	Post Graduate	22
	Professional	13
Family Size (no. of members)	2	2
	3	3
	4	33
	5	32
	6	24
	7	6
House Ownership	Own	75
	Rented	25
Monthly Income (in Rs / month)	<50000	23
	50000-<100000	38
	100000-<150000	12
	150000-<200000	06
	200000 Above	21

The information given in the Table 2 depicts the business profile of the commodity traders. Majority of the commodity traders describe themselves as positional traders as compared to other 33 per cent who described

Table 2. Business profile of commodity traders (N=100)

Particulars	Parameters	Per cent Respose
Type of Trader	Positional trader	67
	Day trader	33
Most traded commodity	Metals	24
	Energy	26
	Bullion	33
	Agricultural	17
Trading experience	Less than 3 years	24
	3 to less than 5 years	55
	5 years and Above	21
Frequency of trading	Multiple times in a day	30
	Every day	53
	Every week	17
Source of finance for trading	Own money	59
	Borrowed money	11
	Margin money	30
Trading motivation	Profession	31
	Additional income	52
	To increase knowledge	17
Goal for commodity trading	To grow aggressively	21
	To grow significantly	31
	To grow moderately	14
	To grow with caution	30
	To avoid losing money	04
No. of commodities for trading	Less than 5	68
	5 to less than 10	27
	0 and above	5
Risk and return profile of commodity traders	High risk and high return	26
	Moderate risk and moderate return	55
	Low risk and low return	19
Most frequent mode of trading	Online	63
	Offline	09
	Both	28
Trading volume per Day (Rs)	Less than 5 lakh	44
	5 to less than 10 lakh	33
	10 to less than 15 lakh	23
Expectation from trading	To outperform the market	21
	To generally keep pace with the commodity market	20
	To slightly trail the commodity market, but make a good profit	31
	To trail the commodity market, but make a moderate profit	13
	To have some stability, but modest profits	11
	To have a high degree of stability, but small profits	04
Expected rate of return (ROR) per annum from commodity trading	Less than 12%	18
	12% - 24%	70
	24% - 36%	12
Reasons for choosing a particular Commodity Exchange	Liquidity	20
	Transparency	39
	Longer trading hours	14
	Better services	27
Perceived higher volatility in commodity group	Metals	34
	Energy	34
	Bullion	12
	Agricultural	20

Table 3. Volatility perception of commodity traders **(N = 100)**

Variables	Mean Perception	S.D	t test (p value)
Volatility has been rising in commodity market	4.14	0.667	17.092 (0.001)
Overall markets are calm in nature but there are incidences of high volatility	4.11	0.840	13.220 (0.001)
Volatility affects future returns	4.18	0.657	17.955 (0.001)
Volatility offers good opportunities for traders	4.15	0.575	19.994 (0.001)
Technical analyst can make use of this volatility in generating good returns	3.97	0.937	10.353 (0.001)
There is more volatility in commodity market as compared to stock markets	3.72	1.036	6.953 (0.001)
With increasing technical innovations in commodity market, volatility is rising	3.93	0.756	12.309 (0.001)
Volatility is not good for Long term investors	3.79	0.913	8.649 (0.001)
Derivatives help in generating good return due to volatility	4.01	0.628	16.094 (0.001)
Largely on an average I have earned good returns due to increasing volatility	3.73	0.886	8.240 (0.001)
I feel that this volatility will increase more in future	3.93	0.868	10.720 (0.001)
I desire that regulators should devise more measures to contain volatility	3.65	0.892	7.288 (0.001)

themselves as day traders. From selected sample 55 per cent are having trading experience between three to five years. As per the data collected from the respondents, bullion is found to be the most traded commodity, 33 per cent traders trade in bullion while 26 per cent traders who trade in energy contracts. Most of the commodity traders do daily trading in commodity exchanges.

A large chunk of the traders used their own money for trading. Most of the traders do trading to earn additional income. From the selected sample 31 per cent of the traders do trading with the goal to grow significantly in commodity trading. In terms of number of commodities traded most of the traders trade in limited number of commodities i.e. less than 5, whereas 27 per cent traders trade in commodities ranging between five to ten. The respondents were also asked about their risk return profile, majority of respondents depicted moderate risk and moderate return profile.

Out of the sample 63 per cent of the traders use online mode of trading whereas, 38 per cent traders use both online and offline mode of trading. Traders were also asked about their trading volume in a day, most of the traders (44%) trade with trading volume of less than Rs 5 lakh a day while 33 per cent with trading volume of Rs 5 to 10 lakh per day.

Traders in the market are having different expectations from their trading activities. Thirty one per cent traders depicted their intention to slightly trail the market but to make good profits, 21 per cent traders want to outperform the market and 20 per cent traders want to keep their pace with the commodity market. Further most of the traders (70%) expect 12-24% return on their investment. Traders were also enquired about the reasons behind choosing a particular exchange for their trading activities. Most of the traders (39%) select a particular exchange because of the transparency provided by the same, whereas 27 per cent traders who prefer better services. Further most of the commodity traders perceive both energy (34%) and metal (34%) as more volatile in comparison to bullion and agricultural commodities.

The information given in the table 3 depicts the results of the volatility perception of the commodity traders. Volatility is perceived differently by different traders. The average perception of respondents came out to be 4.18 which states that volatility affect the future returns but they are neutral of the opinion that the regulators should devise more measures to contain volatility . Traders highly agree on the statement that the overall markets are calm in nature but there are incidences of high volatility. The traders perceive that volatility offers good opportunities for traders which was found to be significantly different from the hypothesized value. Further the traders highly agree on the statement that technical analyst can make use of this volatility in generating good returns and this agreement was found to be statistically significant. Moreover, the traders perceive that there is more volatility in commodity market as compared to stock markets. Further the traders agree with the statement that with increasing technical innovations in commodity market, volatility is rising. The analysis revealed that the perception statement having mean score of 3.79 is volatility is not good for long term investors. The traders also agree with the statement that Derivatives help in generating good return due to volatility and the agreement was found to be statistically significant. The traders perceives that largely on average traders have earned good returns due to increasing volatility. Further the traders perceive that this volatility will increase more in future.

Conclusion and Policy Implications

A survey of 100 randomly selected commodity traders from Ludhiana city was carried out to assess their perception regarding volatility in commodity futures. Largely traders in sample are males; belong to age group of 30- 40 years, married, graduates and postgraduates with a monthly income ranging from Rs 50000 to 100000 per month. Traders highly perceive that volatility has been rising in commodity markets although overall markets remain calm, but there are sporadic incidences of high volatility. Traders also significantly perceive that commodity markets are highly volatile as compared to other markets and this volatility affect future returns, but at the same time offer good opportunities for the traders especially if they are using technical analysis or derivatives for trading.

There have been many ups and downs in the markets. The policy maker should update the policy periodically, which will help to protect the interest of the investors. For the benefit of investors awareness programmes can be conducted in simple and understandable ways. The general thought among the investors that only very wealthy people can take part in commodities market has to be changed and investors from every walk of the society have to be encouraged to participate. The government needs to look at various policies and measures it needs to adopt to enhance market efficiency. Creating awareness will increase the good investment pattern among the investors provided the spot and future commodity market factors are addressed properly and their valuable suggestions have to be considered carefully which in-turn will create the possibility of improving the perception of investors towards commodity derivatives market in India in the days to come.

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