A STUDY OF 'RISK FACTORS RELATING TO THE COMMODITY MARKET & PERCEPTIONS OF INVESTORS WITH SPECIAL REFERENCE TO SELECT COMMODITIES DURING TIME PERIOD (2010-2013)

A Thesis

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Under the Board 0f Management Studies

BY

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UNDER THE GUIDANCE OF
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Department Management

2021

DECLARATION

I hereby declare that the thesis entitled 'A study of **"Risk Factor" Relating to Commodity Market & Perception of Investor with special reference to select Commodities during the period (2010-2013)'**submitted for the award of Degree of Doctor of Philosophy is my original work and the thesis has not formed the basis for the award of any degree, diploma, associate ship or fellowship of similar other titles it has not been submitted to any other University or Institution for the award of any degree or diploma.

Place: Pune Signature of the Scholar

Date Sept 2021 Name: Vijaya Laxman Hake

Annexure IV

CERTIFICATE OF THE SUPERVISOR

It is certified that work entitled **A Study of 'Risk Factor' relating to Commodity Market & Perceptions of Investors with respect to select commodities during 2010-2013.**
is an original research work done by **Vijaya Laxman Hake**

Under my supervision for the degree of Doctor of Philosophy in **Management**

to be awarded by Tilak Maharashtra Vidyapeeth, Pune. To best of my knowledge this thesis

- embodies the work of candidate
- himself/herself has duly been completed
- fulfils the requirement of the ordinance related to Ph. D. degree of the TMV
- up to the standard in respect of both content and language for being referred to the examiner.

Signature of the Supervisor

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ABSTRACT

Indian Commodity Market is very important market from growth point of view.Forward Market Commission was established for setting up the commodity exchanges . Forward Market Commission MCX Multi Commodity Exchange, NMCE National Multi Commodity Exchange and NCDEX National Commodity and Derivative Exchange are nationwide commodity exchanges.

At present, the Indian commodity markets have number of commodities available for trading. A Commodity Market is a market where buyer & seller trade commodity linked contracts based on term and condition laid down by commodity exchange. There are total 23 exchanges operating in India and carrying out future trading activities in as many as 146 commodities.

Indian Commodity Market provide an opportunity for investor to achieve good return , diversification benefits & therefore Investor should have knowledge about the market. SEBI should educate the investor as well as trader . SEBI should keep a transparency in the transaction . Thus in these days trader investor get good information through SEBI,Forward Market Commission, MCX, NMCE and ACE and all other exchanges.

The main focus of the study is to understand the market and to find out the perception of investor about the return and to check the investment risk. Therefore part of the study examines the national practices and growth of the market.

The present study wanted to check the perception of investor , risk factor . To check turnover of market whether market help Indian economy to grow in future. Trend of the commodity market shows that market is growing fast.

The present study also reveals that trend showed that commodity market performance is increasing day by day & year by year. Growth of commodity market would depend on effectiveness of managing risk. It is also depending on the how much knowledge investor has. By reviewing the paper we found analytical information. Our thesis focuses the studying chi square test between perception and risk factor. Review of commodity market indicate that there has been research on technical data. Different models are analyzed by many researcher , the research has had inefficient data related to investors perception and risk factor.

Need of the Study is there are four major group wanted to know about the information regarding commodity market .One is investor who always like to know about the return & distribution about the market. second supplier who want to check the price of the commodity. Third there are distributors who always wanted to purchase the bulk of commodities and wanted to check the price.He will also use different market for purchase and sell.

Scope of the study is

conceptual Scope: We wanted to study the Risk Factor, Perception of Commodity Market & Preference of Investors.

Contextual Scope: We wanted to study Trend in commodity market, volatility , price uncertainty & adjoined regarding the market.

Demographic Scope : what are the trend regarding the commodity market during 2011 to 2013.

We have studied five questions those are given below:

1. To check whether there is return in this investment.
2. To check the relationship between Commodity Market and Risk Factor.-
3. To check the time Zone from 2011 to 2013.
4. To check the Volatility in price.
5. To check the views of investor who invest their money into different commodity.

First question we wanted to check the return of the commodity market investment we check many investment avenues like Mutual Fund, Insurance, Share market, Commodity market we found that if investor has good knowledge about the market he will get good return either buy purchasing the commodity or selling the commodity .

Second question We wanted to check the relationship between the commodity we found that in precious commodity there is less risk as compared to other commodity like base metal, Agriculture product and Energy product. We also found that limit to buy method will reduce the risk .

Third question we check the trend , turnover of and volume of commodity market and found that market is growing , Turnover of MCX is command-able We analyzed many paper to prove this data.

Fourth question to check the volatility of commodity market we found that there are commodity like agriculture product who have less volatility.precious commodities and energy product has more volatility in their prices.

The research study throws the light on the trading methods and practices to be followed by the commodity traders to manage the risk faced in the trading. There are different hedging techniques are available in this market , Better understanding will reduce the risk and increase the return in the market.

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LIST OF FIGURES

LIST OF ABBREVIATIONS

SR NO	ABBREVIATION	EXPLANATION
1	MCX	Multi Commodity Exchange
2	NCDEX	National Commodity & Derivative Exchange
3	SPSS	Statistical Package for Social Science
4	VaR	Value at Risk
5	SEBI	Security Exchange Board of India
6	FMC	Forward Market Commission
7	NMCE	National Multi Commodity Exchange
8	ICEX	Indian Commodity Exchange
9	ACE	Allahabad Commodity Exchange
10	NSE	National Stock Exchange
11	BSE	Bombay Stock Exchange
12	OTC	Over the Counter Derivative
13	UNCTAD	United National Conference on Trade and Development
14	ETF	Exchange Traded Fund
15	MTM	Mark to Market
16	CRM	Commodity Risk Market
17	CTF	Commodity Trade Finance
18	CAPM	Capital Asset Pricing Model
19	IMF	International Monetary Fund
20	VAR	Vector Auto Regression
21	DCE	Delian Commodity Exchange
22	CGE	Computable General Equilibrium

CHAPTER 1
INTRODUCTION

1. Commodity Market:

1.1 Evolution of Commodity Market:

In India the first commodity which was traded in early 19th century was Cotton. Thereafter jute and other commodity trading started through the Commodity Market. In early days' commodities were traded Over the counter. But Indian Government put ban on Commodity Trading in Half to the 19 Century. After 1990, after Internationalization Indian agriculture commodities encouraged a lot. After 2003 Government has given recognition to three Commodity Market. Indian Government has given permission for three Electronic Commodity Market that is MCX (Multi commodity Exchange), NCDEX (National Commodity Derivative Exchange) NMCE (National Malty Commodity Exchange. Indian Commodity Exchange & ACE Derivative & Commodity Exchange limited. Apart from these government has started 16 regional Markets. Forward Market Commission is an independent body involved regulation of all commodity exchange.

1.2 Introduction:

Introduction Ever since the dawn of civilization, commodity trading has become an integral part of mankind. The first and foremost reason is that commodity represents the fundamental elements of lifestyle of human beings. In the early days. People used to exchange goods for goods, which was called as 'Barter System' With the advancement of civilization, trading system has gone through various changes and has now entered into an era of Future trading besides existence physical trading across the world. The history of Commodity Future trading can be traced back to 1688 with the introduction of Future trading in rice in Japan. This was followed by an increased participation in commodity derivatives, especially in Futures, in the industrialized countries like America and Britain. All the countries opened the avenue for introduction of Future trading in commodities in 19th century. Major commodity Future trading

platform opened in the world are Chicago Board of Trade (NYBOT) New York Mercantile Exchange (NYMEX). A Commodity derivative is a contract which derives its value from an underlying commodity. The main purpose of Future market is to provide a mechanism for successfully managing the price risk associated with commodities. Future markets provide a mechanism for successfully managing the price risk associated with commodities. Future market provides a platform for buyers and sellers to trade in a huge number of diverse commodities such as agricultural products, metals and energy. These markets are not only meant for hedgers, speculator and arbitrages but also for retail investors who want to trade in booming commodity market.

Commodities exchange is an exchange where various commodities and derivatives products are traded. Most commodity market across the world trade in agricultural products and other raw materials (like, jeera, sugar, Chilli, Chana, Energy Sector Crude Oil, Metals –Copper, Zinc, Lead, Buiilions-Gold, Silver, Etc) and contracts based on them. These contracts can include spot prices, forwards, futures and options on futures. Other sophisticated product may include interest rates environmental instruments, swaps, or ocean freight contracts. Commodities exchanges usually trade futures contracts on commodities. Speculators and investors also buy and sell the futures contracts in attempt to make a profit and provide liquidity to the system. However due to the leverage provided by the exchange to traders those participating in commodity futures trading face substantial amount of speculative risk. A futures contract is a standardized contract between two parties to exchange a specified asset of standardized quantity and quality for a price agreed today (the future price or the strike price) but with delivery occurring at a specified future date. The contracts are traded on a futures exchange. The party agreeing to buy the underlying asset in the future, the "buyer" of the contract, is said to be "long" and the party agreeing to sell the asset in the future, the "seller" of the contract, is said to be "short". The terminology reflects the expectations of the parties. The buyer hopes the asset price is going to increase, while the seller hopes for a decrease. Note that the contract itself costs nothing to enter, the buy/sell terminology is a linguistic convenience reflecting the position each party is taking (long or short)

Commodity market is a place where trading in commodities takes place. It is like an Equity market, but instead of buying or selling shares one buys or sells commodities. The commodities markets are one of the oldest prevailing markets in the human history.

In fact derivatives trading started off in commodities with the earliest records being traced back to the 17th century when Rice futures were traded in Japan.

World-over one will find that a market exits for almost all the commodities known to us. These commodities can be broadly classified into the following:
Precious Metals: Gold, Silver, Platinum etc
Other Metals: Nickel, Aluminum, Copper etc
Agro-Based Commodities: Wheat, Corn, Cotton, Oils, Oilseeds, etc.
Soft Commodities: Coffee, Cocoa, Sugar etc
Live-Stock: Live Cattle, Pork Bellies etc
Energy: Crude Oil, Natural Gas, Gasoline etc

The commodities market exits in two distinct forms namely the Over the Counter (OTC) market and the Exchange based market. Also, as in equities, there exists the spot and the derivatives segment. The spot markets are essentially over the counter markets and the participation is restricted to people who are involved with that commodity say the farmer, processor, wholesaler etc. Majority of the derivative trading takes place through exchange-based markets with standardized contracts, settlements etc.

The OTC markets are essentially spot markets and are localized for specific commodities. Almost all the trading that takes place in these markets is delivery based. The buyers as well as the sellers have their set of brokers who negotiate the prices for them. This can be illustrated with the help of the following example: A farmer, who produces castor, wishing to sell his produce would go to the local ‘mandi’. There he would contact his broker who would in turn contact the brokers representing the buyers. The buyers in this case would be wholesalers or refiners. In event of a deal taking place the goods and the money would be exchanged directly between the buyer and the seller. Thus, it can be seen that this market is restricted to only those people who are directly involved with the commodity.

The exchange-traded markets are essentially only derivative markets and are similar to equity derivatives in their working. I.e. everything is standardized, and a person can purchase a contract by paying only a percentage of the contract value. A person can also go short on these exchanges. Also, even though there is a provision for delivery most of the contracts are squared-off before expiry and are settled in cash. As a result,

one can see an active participation by people who are not associated with the commodity.

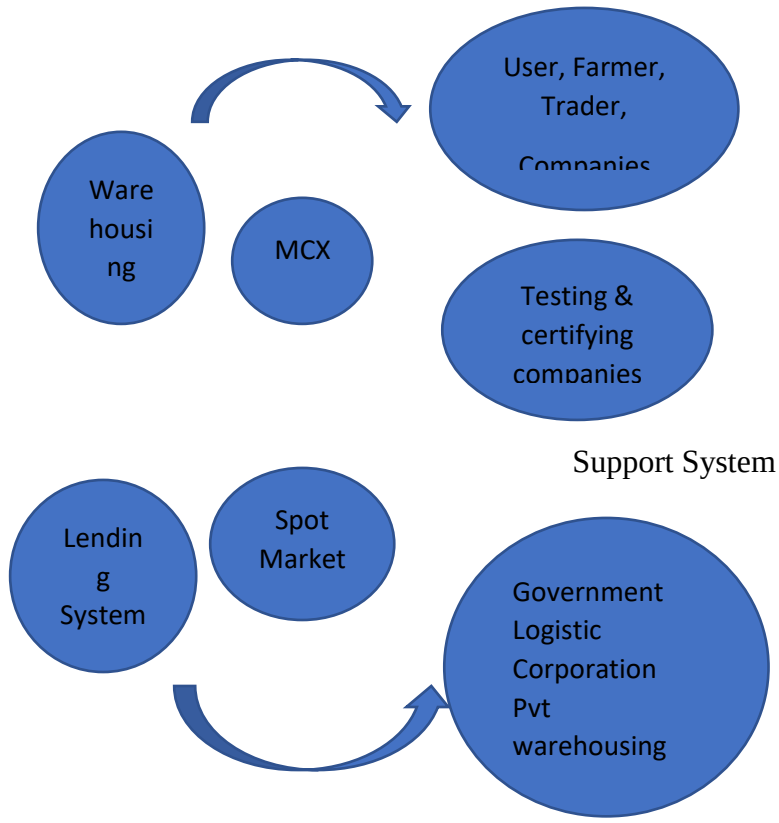
In addition to the spot transactions, forward deals also take place in these markets. However, they too happen on a delivery basis and hence are restricted to the participants in the spot markets.

The commodity exchanges do facilitate delivery, although it has been observed world-over that only 2% of all the trades result in actual delivery.

Commodity futures markets offer certain economic benefits. First, futures trading is a very efficient means of determining the future price level for a commodity. The price discovery is the best and the consensus market forecast of future prices of commodities traded in the market as there are many potential buyers and sellers competing freely. There are innumerable small and large numbers of producers of commodities across the world competing in world or in national markets. These widely dispersed producers find it difficult to know what prices are available. Moreover, the opportunity for farmer, processor, trader and consumer to ascertain their likely cost and develop long range plans is limited. Therefore, the price discovery is of crucial importance to farmers as it helps them predict their earnings and plan their future investments accordingly. It also enables consumers, traders and processors to get very highly reliable future price information which help them in quoting a realistic price and execute their buy and sell contracts. Thus, the price discovery essentially provides all segments in the society with a guide to what various commodities are worth now as well as today‘s best estimate for the future. Therefore, the price discovery has the potential to minimize uncertainties about future prices in commodity markets.

Secondly, futures contracts are used for price risk management. Commodity futures markets offer farmers, commodity dealers, processors, and consumers a means of passing the price risks inherent in their businesses to traders who are willing to assume these risks. In other words, commercial users of the markets can hedge, which is to enter an equal and opposite transaction in order to reduce the risk of monetary loss due to a change in price and, by doing so, lower their costs of doing business. This results in a more efficient marketing system and, ultimately, lower costs for consumers.

Figure 1.1 Support System



Source: MCX

Above figure shows that MCX relates to farmer, Agents, traders and Government. It has supporting system like lending system, spot market and Government logistic corporation. Introduction Ever since the dawn of civilization, commodity trading has become an integral part of mankind. The first and foremost reason is that commodity represents the fundamental elements of lifestyle of human beings. In the early days. People used to exchange goods for goods, which was called as 'Barter System' With the advancement of civilization, trading system has gone through various changes and has now entered into an era of Future trading besides existence physical trading across the world. The history of Commodity Future trading can be traced back to 1688 with the introduction of Future trading in rice in Japan. This was followed by an increased participation in commodity derivatives, especially in Futures, in the industrialized countries like America and Britain. All the countries opened the avenue for introduction of Future trading in commodities in 19th century. Major commodity Future trading platform opened in the world are Chicago Board of Trade (NYBOT) New York Mercantile Exchange (NYMEX). A Commodity derivative is a contract which derives

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1.3 Indian scenario:

The commodity derivative markets in India are as old as those of the US. The origin of commodity derivatives market in India can be traced back to 1875, when Bombay

Cotton Trade Association Ltd, Was set up to start trading in cotton Futures. Subsequent to this, many other associations have started Future trading in commodities at different places. For example, the Futures trading in oilseeds started in 1900 at Bombay. Raw jute products in 1912 in Calcutta, Wheat in Hapur in 1913, bullion in Bombay in 1920. However, in 1939, the Option trading in cotton was banned by the government of Bombay to restrict the speculative activity in the cotton market. In subsequent years, forward trading in various commodities like oilseeds, food grains, vegetable oil, sugar cloth were also prohibited. India's commodity exchange has come a long way since their opening up the early twenty first century. In India, three national level exchange namely

1. Multi Commodity Exchange of India (MCX)
2. National Commodity and Derivatives Exchange (NCDEX)
3. National Multi Commodity Exchanges (NMCX)

These are operating to cater to the needs of Indian investors, apart from these national level exchanges, nearly 20 regional exchanges are in operation, to deal with specified commodities in that region.

1.4 Present Scenario:

Ban completely lifted in 2003 Emergence of national level demutualized online multi-commodity exchanges 3 national and 20 regional exchanges Trade in 60 commodities compared with just 8 in 2000 Growth exceeds 7-8 times in FY09 over Fy10 structure of Indian Commodity Market Forward Market Commission (FMC) is the regulator of the Commodity Futures Market.

a. Arbitrage:

The simultaneous purchase and sale of similar. Commodities in different markets to take advantage of a price discrepancy. Backwardation. A futures market in which the relationship between two delivery months of the same commodity is abnormal. The opposite of Catango Basis The difference between the current cash price of a commodity and the futures price of the same commodity.

b. Bear Market:

A Market in which prices are declining. A market participant who believes prices will move lower is called a “bear”. Therefore, prices will always be lower side in bear market. A news item is considered bearish if it is expected to result in lower prices.

c. Bid :

An expression of willingness to buy a commodity at a given price. The opposite of offer. Here trader will buy the commodity which they wish to buy.

c. Broker:

A company or individual that executes futures and options orders on behalf of financial and commercial institutions or the general public. Broker will also provide the information to trader.

d. Bull Market:

A Market in which prices are rising. A market participant who believes prices will move higher is called a “Bull” A new item is considered bullish it is expected to result in higher prices. In this market traders have expectation of getting commodity in higher price.

e. Clearing:

It is the process by which a clearing house maintain records of all trades and settles margin flow on a daily mark-to market basis for its clearing members. All records are kept in clearing.

f. Clearing House:

An Agency or separate corporation of a futures exchange that is responsible for settling trading accounts, collecting and maintaining margin money, regulating delivery and reporting trade data.

The clearinghouse becomes the buyer to each seller (and the seller to each buyer) and assumes responsibility for protecting buyers and sellers from financial loss by assuring performance on each contract. Clearing house provide right information to buyers.

g. Clearing Member:

A member of an exchange clearinghouse responsible for the financial commitments of its customers. All trades of a non-clearing member must be registered and eventually settled through a clearing member. Clearing member is important person in this trade.

h. closing price:

At the end of each day's trading the system calculates the weighted average price of all trades of that contract done during the last 30 minutes of a trading session. It is weighted average price which is shown in last 30 minutes.

i. Commission :

A fee charged by a broker to a customer for executing a transaction. Future market in which prices in succeeding delivery months are progressively higher. The opposite of backwardation.

j. Delivery:

(FMC Forward Market Commission), The transaction of the cash commodity from the seller of a futures contract to the buyer of a futures contract. Each future exchange has specific procedures for delivery of cash commodity. Some futures contracts, such as stock index contracts, are cash settled. Expiration Date Generally the last date on which an option may be exercised. It is not uncommon for an option to expire on a specified date during the month prior to the delivery month for the underlying futures contracts, Cash is settled as per the contract.

k. Future Contract:

It is an agreement between two parties to buy or sell a specified quantity and quality of an asset at a certain time in the future at a price agreed upon at the time enter the contract on the futures exchange. Forward contract it is an agreement between two parties to buy or sell an asset at a future exchange.

l. Forward Contract:

It is an agreement between two parties to buy or sell an asset at a future date for price agreed upon while signing the agreement. Forward contract is not traded in the exchange. Transaction or actual buying and selling happen in future.

m. Long :

Long is the transaction who has bought futures contracts.

n. Margin:

An amount of money deposited by both buyers and sellers of futures contracts and by sellers of options contracts to ensure performance of the terms of the contracts (the making or taking delivery of the commodity or the cancellation of the position by a subsequent offsetting trade. Margin in commodities is not a down payment, as in securities. Maintenance Margin A set minimum margin (per outstanding futures contract that a customer must maintain in his margin account to retain the futures position. Everyday Mark to Markets debit or credit a margin account based on the close of that day's trading session. In this way, buyers and sellers are protected against the possibility of contract default. In this market daily checks are there and therefore default does not happen.

o. Market Order:

An order to buy or sell a futures or options contract at whatever price is obtainable when the order reaches the trading floor. NBOT National Board of Trade open interest. The total number of futures contracts of a given commodity that have not yet been offset by an opposite futures transaction nor fulfilled by delivery of the commodity.

Open transaction has a buyer and a seller, but for calculation of open interest only one side of the contract is counted. Overbought a technical opinion that the market price has risen too steeply and too fast in relation to underlying fundamental factors.

p. Overbought: A technical opinion that the market price has risen too steeply and too fast in relation to underlying fundamental factors.
q. Oversold: A technical opinion that the market price has declined too steeply and too fast in relation to underlying fundamental factors.
r. Price discovery: The process of determining the price of a commodity by trading conducted in open outcry at an exchange.
s. Settlement Price: The last price paid for a futures contract on any trading day. Settlement prices are used to determine open trade equity, margin calls and invoice prices for deliveries. Short one who has sold futures contract.
t. Speculator: A market participant who tries to profit from buying and selling by Anticipating future price movements.

u. Spot: Usually refers to a cash market price for a physical commodity that is available for immediate delivery.
v. Volume: The number of purchases and sales of futures contracts made during a specified period of time, often the total transactions for one trading day.
w. Warehouse Receipt: A document guaranteeing the existence and availability of a given quantity and quality of a commodity in storage; commonly used as the instrument of transfer of ownership in both cash and futures transactions.

1.5 Commodity Market Regulating Body:

The commodity futures traded in commodity exchanges are regulated by the government under the Forward Contracts Regulations Act 1952 and the Rules framed there under. The regulator for the commodities trading is the Forward Market Commission, situated at Mumbai, which comes under the Ministry of Consumer Affairs Food and Public Distribution. Forward Markets Commission (FMC) It is statutory institution set up in 1953 under Forward Contracts Regulation Act 1952. Commission consists of minimum two and maximum four members appointed by Central Govt. Out of these members there is one nominated chairman. All the exchange has been set up under overall control of Forward Market Commission (FMC) of Government of India. Two types of Commodity Market prevail in India.

1. MCX The Multi Commodity Exchange of India Limited (MCX) India's first listed exchange, is a state of the art, commodity futures exchange that facilitates online trading, and clearing and settlement of commodity futures transactions, thereby providing a platform for risk management. The exchange which started operations in November 2003, operates which the regulatory framework of the Forward Contracts (Regulation) Act 1952. MCX has been certified to three ISO standards including ISO 9001:2008 quality management standard, ISO 27001:2005 information security management standard and ISO 14001:2004 environment management standard.
2. NCDEX National Commodity & Derivatives Exchange Limited is a professionally managed online multi commodity exchange. The shareholders of NCDEX comprises of large public sector bank and companies. NCDEX is public limited company incorporated on April 23, 2003 under the Companies Act, 1956. It obtained its Certificate for commencement of Business on May 9.

2003. It commenced its operations on December 15, 2003. As on March30, 2013. The Exchange offered 31 contracts for trading of which 23 agricultural commodities, precious metal, 2 energy, 1 polymer and 2 other metals. The top 5 commodities, in terms of volume traded at the Exchange, were Soya oil, Soya bean, RM seed, Chana and Castor Seed.

Commodity traded world over one will find that a market exits for almost all the commodities known to us. These commodities can be broadly classified into the following: METAL Aluminum Copper, Lead, Nickel, Sponge Iron, Steel Long, Steel Long (Govindgarh) Steel Flat, Tin, Zinc BULLION GOLD, Gold HNI, Gold M, I-gold, Silver, Silver HNI, Silver M FIBER Cotton Staple, Cotton M Staple, Cotton S Staple, Cotton Yarn, Kapas ENERGY Brent Crude Oil, Crude Oil, Furnace Oil, Natural Gas, M.E. Sour Crude Oil SPICES Cardamom, Jeera, Pepper, Red Chili, Turmeric PLANTATIONS Areca nut, Cashew Kernel, Coffee(Robusta), Rubber PULSES Chana, Masur, Yellow Peas PETROCHEMICALS HDPE, Polypropylene(PP), PVC OIL & OIL SEEDS Castor oil, Castor Seeds, Coconut Cake, Coconut oil, Cotton Seed, Crude Palm Oil, Groundnut Oil Kapasia Khalli, Mustard Oil, Mustard Seed (Jaipur), Mustard Seed (Sirsa), RBD Palmolein, Refined Soy Oil, Refined Sunflower oil, Rice Bran DOC, Rice Bran Refined Oil, Sesame Seed, Soy meal, Soy Bean, Soy Seeds CEREALS Maize OTHERS Guar gum, Guar Seed, Gurchaku, Mentha Oil, Potato(Agro). Potato (Tarkeshwar), Sugar M-30, Sugar S-30 INDIAN EXCHANGES. The following are the list of exchange and commodities in which futures contracts are traded in India are as follows no of exchanges:

1. Indian pepper & Spice Trade Association, Kochi (IPSTA) pepper (domestic and international contracts)
2. Vijay Beopar chamber Ltd., Muzaffarnagar Gur.
3. Rajdhani oil & oilseed exchange ltd, Delhi Gur, Mustard seed its oil & oilcake.
4. Bhatinda Om & oil exchange Ltd, Bhantada Gur.
5. The chamber of commerce Hapur Gur.potatoes and mustard seed.
6. The Meerut Agro Commodity Exchange ltd., Meerut Gur.
7. The Bombay commodity Exchange Ltd., Bombay Oilseed complex

8. Rajkot seeds, oil & Bullion Merchants Association, Rajkot seeds, oil & Bullion Merchants Association, Rajkot Castrol seed, Ground nut. Its oil & cake, cottonseed its oil & cake, cottonseed, its oil and oilcake. & RBD Pamolen.
9. The Ahmedabad Commodity Exchange, Ahmedabad Castrol seed, cottonseed, its oil and oilcake.
10. The East India Jute & Hussain Exchange ltd., Calcutta Hussain & sacking.
11. The East India cotton Association Ltd., Calcutta Cotton.
12. The Spices & Oilseeds Exchange Ltd, Sangli Turmeric.
13. Kanpur Commodity Exchange Ltd., Kanpur Rapeseed/Mustard seed, its oil and cake.
14. National Board of trade, Indore Soya seed, Soya oil and Soya meals. Rapeseed/Mustard seed its oil and oilcake and RBD Palmolive.
15. The First Commodities Exchange of India Ltd., Kochi Copra/Coconut, Its oil & oilcake.
16. Central India Commerce Exchange Ltd., Gwalior Gur and Mustard Seed.
17. E-Sugar India Ltd., Mumbai Sugar.
18. National Multi-Commodity exchange of India Ltd., Ahmedabad Oilseed complex and Rubber, Sugar, Aluminum, nickel, Zinc, Copper, Lead, tin, Pepper, Gram and Sacking.
19. Coffee Futures Exchange India Ltd., Bangalore Coffee.
20. Surendranagar Cotton oil & Oilseeds, Surendranagar Cotton, Cotton seed, kapas.
21. E.commodities Ltd., New Delhi Sugar.
22. Bullion Merchants Association, Bikaner Mustard seed its oil & oilcake.
23. Multi Commodity exchange (MCX) Mumbai Metals & Agri Commodities.
24. National Commodity and Derivation Exchange (NCDEX), Mumbai Metals & Agri Commodities.
25. National Multi Commodity Exchange (NMCE) Metals & Agri Commodities.
26. Indian Commodity Exchange (ICEX)Metals & Agri Commodities Participant of Commodity Market.

1.6: Hedgers:

A hedger buys or sells in the futures market to secure the future price of a commodity. Intended to be sold at a later date in the cash market. This helps to protect against price risks. They have economic interest in the underlying assets and exposed to risk of fluctuation of prices of the underlying assets.

1.7 : Speculators:

They are the participants who have no economic interest in the underlying assets, They Participate in the derivatives market to make a short-term profit by taking call on direction of the price movements. For eg. Long position or short position. They are ready to take risk. They are the one who brings depth to the market.

1.8: Arbitragers:

They are those who also have no economic interest in the underlying assets, but they participate in the derivatives market to make a short-term profit from difference in the price of an assets in two different market.

Eg Buy in the market which offers the asset at lower price and sell the asset simultaneously in other market which offers higher price. Myths on commodities trading in recent past, we notice that the regulators banned trading in few commodities, thereby creating misconception in the minds of traders about the commodities market, Hence the following is an attempt to demystify the common myths prevailing among the investors.

I. Commodity market is too complex to understand Commodities markets are not complex as the product dealt in are natural and therefore cannot be artificially manipulated. The demand and supply also depends upon economic factors. It is easier to understand commodities as in our daily life we are familiar with commodities. we know the rulling prices of these commodities in the market, which in stocks, we are not fully aware about internal affairs of the company.
II. Only farmers are interested in trading and also only they should be trading: It is in correct to say that farmers would use this market. Actually, the farmers only

use the commodity future prices as a tool to decide which crop to grow and to what extent and some large farmers would use this market to hedge their risk through an intermediary. These intermediaries would normally be the same commission agents who help farmers to sell their crop in cash market. Apart from the farmer, others related to commodity trading either directly or indirectly can participate in trading to hedge their price risk.

III. Commodity markets are operating to serve the needs of speculators and not of the real investors: commodities markets existence serves for price discovery and price risk management. Through this platform everybody related to commodities can find better price discovery mechanism. Producers and consumers of the commodity can find better price. Discovery mechanism. Producers and consumers of the commodity can minimize their price risk by way of hedging. However, speculators constitute only one dimension the market. They can work only because someone is hedging their risk in the market. This market provides the price signals to producers as well as consumers to meet their long-term requirement. These price signals are not available to users unless there is a commodity futures exchange and, in its absence, the markets have price fluctuations. Price stabilization comes from the price discovery process when market participants react positively to the information available to decide a price.

IV. Large membership is required to run commodity exchanges: It is a misconception that to be a successful commodity exchange it need large number of members. Success of any commodity exchange depends upon good and well spread brokerage houses and their penetration levels. Once the commodity futures trading is well established then the services will be broadened to many intermediaries with separate trading rights and have few members with separate trading rights and have few members with clearing rights like banks.

V. Commodities are only cash settled contracts: unlike equity market, commodities traded through exchanges are deliverable on expiry. To facilitate smooth delivery process, the Forward Markets Commission (FMC) has categorized the delivery mechanism into three dimensions viz compulsory delivery contracts sellers option contracts on expiry of the contracts the open positions will be either settled by delivery or cash depending upon sellers and buyers. Since the delivery process take long time to materialize and one has to keep track of all

the delivery process transactions, nobody wants to take burden of delivery handling process.

1.9: Compulsory delivery option: It is an option where on the expiry of contract of a particular commodity. All the open outstanding positions are closed.

1.10. Value of Trading:

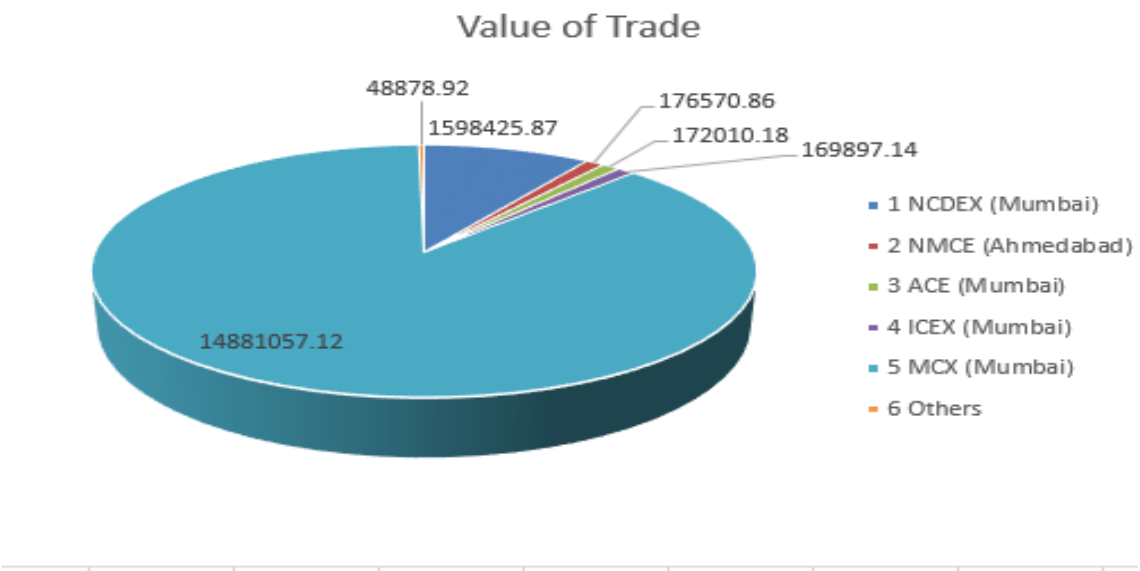
Table : 1.1 Value in Rs and percent share of the Commodity Exchange to the total value of trade during the year 2012-13

Sr. No.	Name of the Exchange	Value of Trade	%
1	NCDEX (Mumbai)	1598425.87	10%
2	NMCE (Ahmedabad)	176570.86	1%
3	ACE (Mumbai)	172010.18	1%
4	ICEX (Mumbai)	169897.14	1%
5	MCX (Mumbai)	14881057.12	87%
6	Others	48878.92	0.01%

Source : MCX

From the above table we can see that MCX Mumbai has highest share of trade it is 87% second market who have second highest market share is NCDEX. Value of MCX market is 148,81,05,712**.**

Figure 1.2 Value of Trade



Source: Forward Market Commission, Ministry of Consumer Affairs, Forward & Public

Distribution, Department of Consumer Affairs, Annual Report 2012-13.

Table 1.2 Value of Trade in Commodities in India (2010-2013) (Rupees Lakh Crores)

Commodity Groups	2010-11	2011-12	2012-13
Bullion & Other Metals	81.82	630.79	111.2273
Agriculture	14.56	21.96	21.557
Energy	23.11	28.51	37.68409
Other	0	0	70.4684
Total	119.49	181.26	70.4684

Source: Forward Market Commission Annual Report.

From the above figure we can see that Value of trade as per commodity Bullion and Metals has huge trading in commodity market,

1.11: List of Commodities:

Table 1.3 List of Commodities

Head	Commodity	Symbol	Unit	Location	Lot Size
Bullion	Chanadal	Chanadal	Kgs	-	100
	Flakementh	Flakementh	Kgs	Sambhal	1
		Goldglob	Grms		10
Bullion	Gold	Gold	Grms	Ahmedabad	1
Bullion	Gold	Gold	Grms	Ahmedabad	10
Bullion	Gold Guinea	Gold Guinea	Grms	Ahmedabad	8
Bullion	Gold HNI	Goldani	Grms	Ahmedabad	10
Bullion	Gold M	Goldm	Grms	Ahmedabad	10
Bullion	Gold M	Goldm	Grms	Ahmedabad	100
Bullion	Gold Petal	Gold petal	Grms	Ahmedabad	1
Bullion	Gold Petal	Goldptldel	Grms	Delhi	1
Bullion	Platinum	Platinum	Grms	Mumbai	1
Bullion	Silver	Silver	Kgs	Ahmedabad	1
Bullion	Silver	Silver	Kgs	Ahmedabad	30
Bullion	Silver 1000	Silver 1000	Kgs	Delhi	1
Bullion	Silver HNI	Silver HNI	Kgs	Ahmedabad	1
Bullion	Silver M	Silver M	Kgs	Ahmedabad	1
Bullion	Silver M	Silver M	Kgs	Ahmedabad	5
Bullion	Silver Micro	Silver Mic	Kgs	Ahmedabad	1
cereals	Barely	Barley	Kgs	Jaipur	100
cereals	**Maize**	**Maize**	**Kgs**	**Nizamabad**	**100**
cereals	**Wheat**	**Wheat**	**Kgs**	**Delhi**	**100**
Energy	**ATF**	**ATF**	**Bbl**	**Mumbai**	**1**
Energy	**Brent Crude Oil**	**Brcrude oil**	**Bbl**	**Mumbai**	**1**
Energy	**Crude oil**	**Crud oil**	**Bbl**	**Mumbai**	**1**
Energy	**Crude oil**	**Crud oil**	**Bbl**	**Mumbai**	**100**
Energy	**Crude oil Mini**	**Crude oil m**	**Bbl**	**Mumbai**	**1**
Energy	**Crude oil Mini**	**Crude oil m**	**Bbl**	**Mumbai**	**10**
Energy	**Electmth**	**Electmth**	**Mwh**	**IEX**	**1**
Energy	**Electwk**	**Electwk**	**Mwh**	**IEX**	**1**
Energy	**Gasoline**	**Gasoline**	**Usegln**	**Mumbai**	**1**

Energy	**Heating Oil**	**Heating oil**	**Usgln**	**Mumbai**	**1**
Energy	**Natural Gas**	**Naturla gas**	**mmBtu**	**Hazirabad**	**1**
Energy	**Natural Gas**	**Natural gas**	**mmBtu**	**Hazirabad**	**1250**
Energy	**Imported Thermal Coal**	**Tcoal**	**MT**	**Chennai**	**1**
Fiber	**Cotton**	**Cotton**	**Bales**	**Rajkot**	**1**
Fiber	Cotton	Cotton	Bales	Rajkot	25
Fiber	Raw Jute	Juteg	Kgsg	Kolkata	100
Fiber	Kapas	Kapas	Kgs	Surendranagar	4
Fiber	Kapas	Kapasg	Kgs	Surendranagar	20
Fiber	Kapas Khali	Kapaskhalg	Kgs	Akola	50
Fiber	Kapas Khali	Kapaskhalg	Kgs	Akola	100
Fiber	Cotton Medium Staple	Medcotton	Maund	Ganganagar	1
Metal	Alumini	Aluminium	Kgs	Mumbai	1
Metal	Aluminium	Aluminium	Kgs	Bhiwandi	1
Metal	Aluminium	Aluminium	Kgs	Bhiwandi	5
Metal	Copper	Copper	Kgs	Bhiwandi	1
Metal	Coppermini	Copperm	Kgs	Mumbai	1
Metal	Coppermini	Copperm	Kgs	Mumbai	250
Metal	Ironore	Ironore	Dmt	Mumbai	1
Metal	Lead	Lead	Kgs	Bhiwandi	1
Metal	Lead	Lead	Kgs	Bhiwandi	5
Metal	Leadmini	Leadmini	Kgs	Mumbai	1
Metal	Nickel	Nickel	Kgs	Bhiwandi	1
Metal	Nickel	Nickelg	Kgs	Bhiwandi	250
Metal	Nickelmini	Nickelm	Kgs	Mumbai	1
Metal	Nickelmini	Nickelm	Kgs	Mumbai	100
Metal	Mild Steel Ingots/ Billets	Steelgzb	MT	Ghaziabad	1
Metal	Tin	Tin	Kgs	Bhiwandi	1
Metal	Zinc	Zinc	Kgs	Bhiwandi	1
Metal	Zinc	Zincg	Kgsg	Bhiwandi	5

Metal	Zincmini	Zincmini	Kgs	Mumbai	1
Oil & Oil Seeds	Castor Seed	Castorseed	Kgs	Mumbai	10
Oil & Oil Seeds	Crude Palm Oil	Cpog	Kgs	Kandla	10
Oil & Oil Seeds	RBD Palmolein	Rbdpalmoling	Kgs	Mumbai	10
Oil & Oil Seeds	Refined Soy Oil	Refsoyoilg	Kgs	Indore	10
Oil & Oil Seeds	Castor Seed – Rajkot	Rjkcasseed	Kgs	Rajkot	100
Oil & Oil Seeds	Soya Bean	Soyabeang	Kgs	Indore	100
Others	Almond (Non Pariel)	Almond	kgs	Delhi	1
Others	Guar Gum	Guargumg	Kgs	Jodhpur	100
Others	Guar Seed	Guarseedg	Kgs	Bikaner	100
Others	Menthaoil	Menthaoil	Kgs	Chandausi	1
Others	Menthaoil	Menthaoil	Kgs	Chandausi	360
Others	Potato	Potatog	Kgs	Agra	100
Others	Potato – Tarkeshwar	Potatotrwr	Kgs	Tarkeshwar	100
Others	Sugarmdel	Sugarmdel	Kgs	Delhi	100
Petrochemicals	Heatingoil	Heatingoil	Usgln	Mumbai	1
Plantations	Rubber	Rubber	Kgs	Kochi	100
Pulses	Yellow Peas	Yellopeas	Kgs	Mumbai	100
Spices	Cardamom	Cardamom	Kgs	Vandanmedu	1
Spices	Cardamom	Cardamom	Kgs	Vandanmedu	100
Spices	Coriander	Coriander	Kgs	Kota	100
Spices	Sugarmkol	Sugarmkolg	Kgs	Kolhapur	100
Spices	Turmeric	Turmericg	Kgs	Nizamabad	100
Weather	Carbon (CER)	Cer	MT	Mumbai	1
Weather	Carbon (CFI)	Cfi	MT	Mumbai	1

Source: Commodity Market Report

1.12 Turnover of Commodity Market from 2011-2013

Turnover of market is very important because it give us an idea of total market value. It is huge market,

Table 1.4 Turnover of Commodity Market

Year	Traded Contract (In lots)	Quantity (In 000's)	Total Value (in Lakhs)
2011	346192367	180347727.952	149328520.19
2012	388751074	226773664.055	1489059632.74
2013	264627693	179830608.549	1073320439.67

Source: Commodity Market Report

Latest Market Share of commodity market that is (2016-17) -90.35, has 1364 locations and 5,90,000+ trading Terminals

1.13 Trend in Commodity Market:

Trend up till 2012 was negative in commodity like metal but in another commodity, we find that commodity market is growing.

Table 1.5 Economic Survey Global Commodity Derivative & Future & Option (Rs in Crore)

Commodities	2009	2010	2011	2012
Agriculture	927,693,001	130,5384,722	996,837,283	137,0531,588
Energy	657,025,702	723,590,380	814,774,756	905,856,156
Precious Gem	462,823,715	643,645,225	435,113,003	554,253,069
Precious	151,512,950	175,002,550	342,057,656	319,267,659

Source: Economy Survey

Global Commodity Market survey we found that Agriculture has highest Market volume that is 137,0531,588.

1.14 Physical Benchmark :

Table: 1.6 Physical Benchmark :

S. No	Commodity group	Traded global benchmarks	Traded domestic benchmarks

1	Crude Oil	Brent, Platts, Dubai, WTI	MCX prices are benchmarked to CME WTI Crude Oil Prices.
2	Natural gas	Henry Hub, JCC	MCX prices are benchmarked to CME Henry Hub Prices.
3	Copper	LME, COMEX	MCX prices are benchmarked to CME copper prices. Domestic pricing based on import parity pricing linked to LME.
4	Aluminum	LME	MCX prices are benchmarked to LME Aluminum prices, Domestic pricing based on import parity pricing linked to LME.
5	Zinc	LME	MCX prices are benchmarking to LME Zinc prices, Domestic Pricing based on import parity pricing linked to LME.
6	Lead	LME	MCX prices are benchmarking & LME lead prices. Domestic pricing based on import parity pricing lined to LME.
7	Nickel	LME	MCX prices are benchmarked to LME prices. Domestic pricing based on import parity pricing linked to LME.
8	Crude Palm Oil	BHD	MCX
9	Cotton	CME group (COMEX)	MCX
10	Gold	CME group (COMEX)	MCX
11	Silver	CME Group (COMEX)	MCX

Source: MCX

From the above table 1.6 we found that MCX prices are benchmarked for other Markets. It means we can say that from 2006 Indian commodity market has done good development.

1.15 Why to Invest in Commodity Market:

Commodity trading has fully diverse avenues for investment away from traditional avenue that is bond, equity and real estate. Investor are adding commodity exposure to their existing portfolio to increase the return while lowering the risk. Commodity have negative correlation with other asset classes.

1.16 Benefits to invest in Commodity Market:

Benefit of Commodity Future market is that they provide hedging against price risk. Hedging is the practice of offsetting the price risk in a cash market position by taking an equal and opposite position in the futures market. By taking a position in the

The primary benefit of commodity futures market is that they provide hedging against price risk. Hedging is the practice of offsetting the price risk in a cash market position by taking an equal and opposite position in the futures market. By taking a position in the futures market that is opposite to that held in the spot market, the producer can offset the losses in the latter with the gains in the former. Hedgers use the futures market to mitigate their price risk while speculators seek to profit from the price movements in the market and in doing so they provide much needed liquidity to the market. Another important function of futures market is price discovery. Price signals are essential for the firms to take their production & marketing decisions. Price discovery is the process of buyers and sellers arriving at a transaction price for a given commodity. It also implies how information is produced and transmitted across markets and whether these transmitted prices can be used as a reference price for the trading needs. Proper price discovery can help farmers and traders in avoiding price slumps in the post-harvest period and also help consumers in coping with price volatility. If additional information

is reflected first in futures prices, the futures markets are said to perform the price discovery function efficiently. Futures markets also provide support for credit needs to small producers. The collateral value of inventory is enhanced if it is hedged, enabling firms to borrow on better terms.

Figure: 1.3: Traders

A strong commodity future market has an enormous impact of economy because it will increase the transaction because number of farmers are more also it will control demand and supply and therefore, it will have good impact on economy. An Efficient Market will be assuming farmer to get proper price for crop which he harvests or miner who dig the minerals.

Commodity is a hedger market so far, the dream of bringing genuine hedgers on this platform has not been fulfilled due to the lack of product and depth in the market. Indian commodity market has reputation in Speculator Market & so every industry

organization has lobbied against listing of some commodity at some point of time without understanding the implication or the benefits but if organization could have asked the government to give them better product like option rather than delisting their commodity.

Since SEBI took over the charges it is good positive sign for market, they will make policy or reform in such a way so that market will become a stronger than earlier. SEBI will have all option and through that market will become stronger and stronger.

Firm should form a Hedging policy, some firm/ organization on their own make some policy which is one sided and which leads a dispute, but people /organization make money out of this and use this money supply as working capital. An entrepreneur requires efficient policy to hedge risk. therefore, farmer is using future market which is an inferior tool to hedge require managing huge cash flow in term of MTM & margin requirement which make hedging costly and capital intensive for our corporate which normally runs on a very tight working capital in contrast option makes hedging very efficient as well as cost effective with less capital & lower Risk. Corporate participation is required for to achieve better price discovery. Commodity Market has key role in setting up efficient market space for the agriculture Produce on which a larger people depend. An efficient marketplace reduces the middleman and passes best possible price also it provides future prices to the farmer early enough to plant the crop. Which is in demand and short in supply helping them in crop selection and naturally adjusting demand & supply of various product. If this market goes well it will also help farmer to know which product, they should grow what should be the water plan this plan will also help the government to reduce the subsidies of commodity.

By introducing option small and marginal farmer can access the market with less capital Without compromising on risk. A farmer can buy a put option of the harvest month and execute his option towards the harvest time if it is in his favor or rather chose not to if the prices are higher than what he started with. The only hurdle is knowledge Gap If exchange members and regulator have to address together to educate and enable them to use the platform. Now most of the farmer has modern mobile phone broking firm has mobile application so taking the price to every household is easy and cheaper.

Speculator, trader or investor is essential part of any marketplace and even in commodity market he has key role in risk mitigation. He is risk taker and largely

dominating the future market so far but he is exposed to huge market risk without much protection available. Now with introduction of option there is low price and low risk option. These traders are to take the benefit of commodity & significantly contribute to the liquidity & efficiency of the market.

1.17 Role of Commodity Market Intermediaries:

1.2.1. Role of Market:

Motilal Oswal (2017) Commodity Derivative Market in India has recently completed one century. There are three Brokers, members and future exchanges have three major intermediaries who play key role? Market is not yet mature, and Government need to bring new set of reforms so that is which would help market institutions to facilitate & regulate trade. A well-developed commodity future market and developed Warehousing facility will grow market very fast as well as it will help farmer to get proper benefit. It will also help government to control prices of commodities and control the price fluctuation. Market could expand its role in enabling farmers taking decision about crop and their post harvesting management through post dissemination of price information.

1.2.2 Reaching to Masses:

Exchange can do reach to farmers, but intermediaries can reach to masses and so that they can provide platform for farmer where he can get proper price as well as he can hedge the risk. It is the intermediaries who help investor and farmer to get proper price and he only educate them and make them learn how they can get best price through market. But still most of the traders can say that education is not yet reach till masses. Technology will do this work in future. because these days farmer also has modern phone so they will learn this thing. In Corporate Policy framework commodity risk management get least importance. Hedging is done by procurement department rather than treasury. In oswal's paper he has mentioned that 47% corporate recognized their commodity risk and only 26% corporate have quantified it.

1.2.3 Compliance and Self-Regulation:

Regulatory Framework is necessary for such big market. Therefore, government has put this market under SEBI (Security Exchange Board of India) so there are hopes that SEBI will make strict policies. It is available on SEBIs website. Strict regulations are very important. In India low membership barrier will see that member at exchange are grown in such an extent that regulator to oversee them with its limited extents. But market should have its own and self-regulation because self-regulation is better for industry therefore the broker or intermediary should make strict regulations.

Aditya Singh (2009) examined the Agricultural Marketing System in India. The author has concluded that there was large price spread (difference between) price paid by farmer & price paid by consumers which was due to various marketing costs and margins of the intermediaries. The price paid by farmers by licensed middlemen for their produce could be monitored & thereby ensuring that they were not exploited.

Pradeep kumar Mishra & Anjani Sinha in their paper titled "Supply Chain Management of Agricultural Commodities through Electronic Spot Exchanges: provide an overview of Agricultured Marketing in India. E Spot Trading & the concept of National Electronic Spot Market.. Author concludes by saying that the supply chain from farm to fark consists of multiple layers of intermediation, mostly without any qualification value addition. This makes the chain inefficient result into costlier food product to the consumers. It is high time to have a fresh look at the supply chain management with a view to improve marketing efficiency & enhance farmers price realization without increasing price paid by the consumer. Electronic sport exchange are a unique model to achieve efficiency in management of supply chain for Agricultural Commodities . Author has mentioned in his paper that this model should use by 1000 of location across the country for making Its presence felt in agriculture supply chain at a mass scale. It is possible only if large number of corporate buyers start using this exchange. Which will stimulate the agriculture economy in general & farmer in particular.

Dr G Malyadri & B Sudheer Kumar (2012) in his report "A study on commodity market " here author has analyzed the view of commodity trader & to know the investment pattern of commodity trader & people. Finding says that Commodity trading play very crucial role in the process of managing the price risk. Derivative such as forward, future & option are extensively used in develop, developing countries in the world, however Indian are using this in limited scale.In India people are still considering Commodity market investment is risky investment.

Dr(Mrs) N.V. Kavitha & Mrs N Suma Reddy (2015) in their paper titled "A study on the Commodity Derivative Market & Development in India -Towards Sustainability " author has analyzed Indian Commodity Derivative Market & its present status. The authors concludes that by saying that the growth is found with respect to its growing market network & also with respect to volume of trade. Previously there were only exchange functioning on the regional level, Now market expanding till nationwide.

1.2.4. Aggregation and Financing:

Two of the biggest challenges faced by the commodity market stakeholders especially physical market are getting cheap finance and handling small quantities. The Intermediaries are playing both roles. They can handle pool of money or commodities by aggregating small participants. To achieve economies at scale and perform the function of hedging or investing for the benefit of their customer.

1.2.5. Commodity for Finance:

Commodity online is also providing loans for Agri Commodities. These loans are against Agri Commodity Warehouse Receipt.

- They provide loan from 10 lakh to 25 Crores.
- The loan limit is assessed loan limit is also depend on proof of dealing in Commodities.
- The tenure of loan is for 8 months to 12 months.
- The only collateral security is obtained for the commodities which are stored in Government Warehouses.

1.2.6 Commodity exchanges can take up non-commodity product:

Nandini Sanyal (2016) In her article in Economic Times has taken interview of Mr Samir Shah CEO NCDEX has mentioned that There has been an improvement in Commodity Trading volume. There is competition and

therefore Spot trading have been adopting new and global best practices in their process.

Commodity Market is too young as compared to basic market therefore the opportunities is huge. It will develop and grow faster as well as it will increase new solution new ideas, New type of product in the marketplace and so it will also create opportunity to do more.

It is also a new market and therefore Regulator has come out with very clear guideline about allowing stock exchanges to take up Commodity Product and vice versa. Commodity Exchange to take up non-commodity products.

NCDEX strengthening the process of fixing final settlement price of future contracts:

There is a problem, that produce material cannot be store in Godown, and if the produce is stored in Godown there is lack of transparency of stocks in warehouses. The country needs a system which allow 100% electronic transparency of all stocks in all the are house and NCDEX team is recommended it to the Warehouse Developing & Regulatory authority for implementing a similar solution across the country in all the warehouses in the country. WDRA is actively considering NCDEX proposal. NCDEX authorities has provided guideline for a national level repository for electronic information of stock that are stored in the warehouses.

The Inflationary pressure of the economy and improvement of supply side of the economy:

It is definitely getting better on the supply-side. Eg. Over the last 5-6 year the development of the due to private sector warehouse now farmer can send the produce in a more evenly spread manner throughout the year.

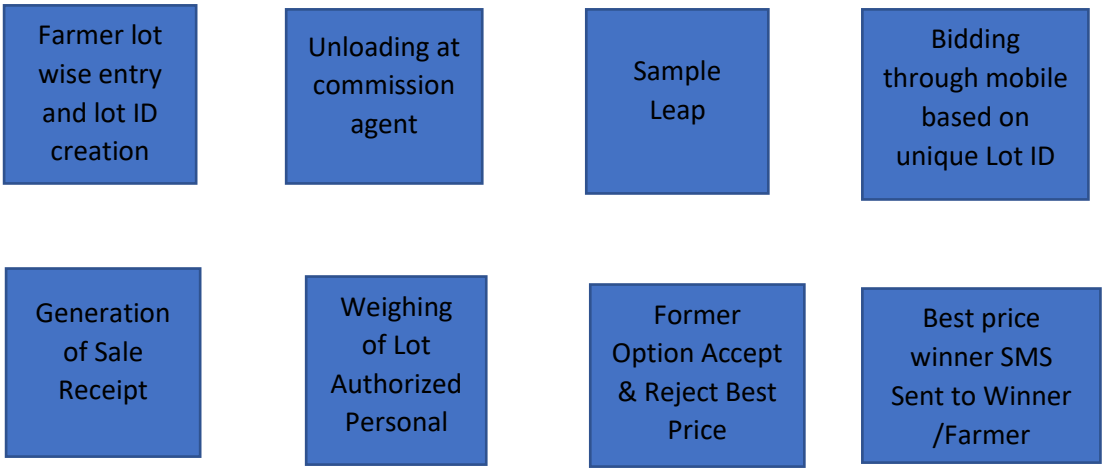
Prime Minister Modi to on 14th April 2017 launched National Agri Market Project. Government is also taking other initiative like Government has started undertaking reforms in their agricultural marketing infrastructure. Government is working with Madhya Pradesh, Karnataka and Gujrat to helping them to reform their agricultural marketing infrastructure also they help remove supply chain bottlenecks therefore policies and programs are shaping up very well. Market become more and more integrated and still there are some lacunas it is

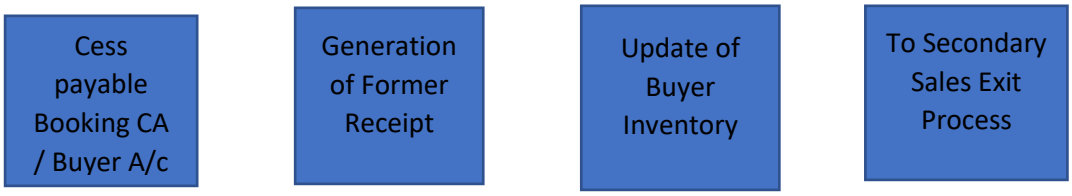
not 100%. Eg. Import is allowed but export is not allowed vice a versa. But import is not allowed because of these sinking not being a fully efficient. There is also a chance that Indian prices will not be synchronization with the rest of the world. But alignment has been much more in the last 4-5 years as compared to 10 to 15 years. Oil seed prices are moving very much in tangent with international prices because large import element in our edible oil sector. It is also depending on International trade it means how free it is.so all these things will help us to improve the supply side of the economy.

1.18 Primary Market Reform for inclusive growth (NCDEX):

There are 7190 regulated primary markets in India handling agricultural production in the country as on 31st March 2012 growing substantially from a mere 286 in 1950. The main objective to set up this market to ensuring reasonable gain to the farmer by creating on environment in markets for fair play of supply & demand. Regulate market practices & attain transparency in transaction. Market is currently responsible for the marketing of 255 million tons of food grains, 30 million tons of oilseeds and 220 million tons of fruits & vegetables. Country also has 22505 rural primary market 20% are follows reformer regulatory framework. These regulated markets set up under state AMC Acts.

Figure 1.4 Process flow of Online Mandi





1.19 Trend in Commodity Market:

UNCTED report two trends have become evident in commodity markets in recent years, Functions and Structure of commodity market has changed. Direct trade between trader and producers have become increasingly simple, forcing trader to offer new added value. structures have become polarized, with large, diversified trading houses existing next to small niche market players. New trend has been the increased use that firms, mostly from the developed countries, have made of sophisticated market-based instruments such as forward and future contracts, swaps and options to protect themselves against adverse price development in the commodity market.

The developments in trading techniques offer commodity exporting developing countries new opportunities to counter the fluctuations in the prices of their primary products.

UNCTAD has been undertaking work in this area for several years. UNCTAD's technical cooperation program increased attention is being given to policy advice, awareness-raising and training in commodity trading, risk management and finance. These days government also realized importance of exploring innovative approaches to minimizing the risks arising from commodity market fluctuations. It appears that direct trade deals between commodity producers and consumers have increased in importance for many commodities in the last few years and that the volume of trade handled by traders has decreased, When world market prices for a commodity fall, a commodity producer risks being unable to cover production costs; a commodity trader who buys commodities before reselling them runs the risk of not covering his purchasing costs. On the other hand, a commodity processor faces price risks in respect of both his inputs and outputs, as the extent of his processing margin is dependent upon variations in the two prices. The risk for the final consumer is to pay higher-than-expected prices for the commodity that he purchases. There are also price risks associated with the holding of inventories by exporters, traders and importers. In most companies may claim their

objective is to "maximize returns", this involves an inherent contradiction, since maximizing returns implies accepting maximum risks. The choice between using forward, futures or options contracts on organized exchanges and OTC contracts is a difficult one. Price formation in OTC markets is by nature not transparent and depends on the availability of necessary information and bargaining strength. The forward, futures or options contracts on organized exchanges and OTC contracts is a difficult one. OTC markets is by nature not transparent and depends on the availability of necessary information and bargaining strength. Moreover, use of the OTC market involves a counterpart risk - will the counterpart fulfil his obligations? In contrast, on futures exchanges, prices are published for the types of contracts traded and a clearing house guarantees the fulfilment of contracts.

Although most companies may claim their objective is to "maximize returns", this involves an inherent contradiction, since maximizing returns implies accepting maximum risks.

Samuelson (1965) analyzed the risk of futures prices as predictor of future spot prices for a given contract in other words todays futures prices are the best unbiased predictor of tomorrows future prices.

G. C. Rauser and C. Carter (1988) the efficiency of soybean or soybean oil and soybean meal futures markets using semi strong form test via structurally based ARIMA model. They emphasized that unless the forecaster information from the models is enough to provide profitable trend then superior forecasting performance in a statistical sense has not economically significance.

Usually only an amount of between 5 and 10 per cent of the value of the instrument must be deposited when it is to purchase. Thus, a user's expenditures linked to the forced liquidation of a futures position caused by his inability to meet a margin call (the extra deposits required when the price moves against him) may be many times higher than the amount of the margin call.Standardized contracts are usually traded on commodity exchanges, whereas tailor-made contracts are traded over the counter directly between two market participants.Speculators are market participants who are not covering the price risks linked to a physical transaction in a commodity, but who wish to make profits from their perceived correct anticipation of future price developments and for this are willing to take on a price risk.

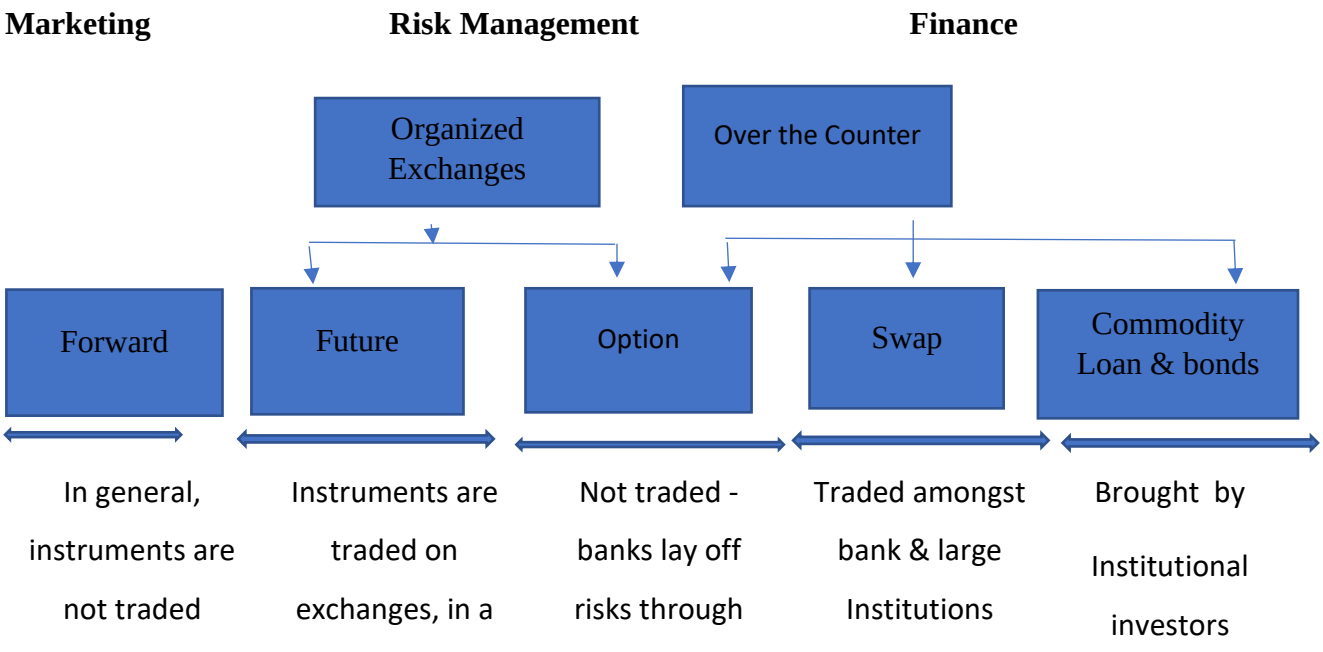
In the OTC market, on the other hand, contract specifications are not standardized: they are the outcome of a direct negotiation between two market participants and are tailored to suit the specific requirements of these participants for a specified period. As OTC contracts are traded directly between two parties. The choice between using forward, futures or options contracts on organized exchanges and OTC contracts is a difficult one. Price formation in OTC markets is by nature not transparent and depends on the availability of necessary information and bargaining strength

(a) Forward contracts and OTC options which are primarily trade-related instruments; as these contracts incorporate high credit risks, they are used only when trading partners have mutual confidence in each other. Forward contracts can also help in obtaining short-term export financing.

(b) Futures and exchange-traded options, as well as swaps between banks and consumers, which are primarily price hedging instruments. Like forward contracts, futures contracts can be used to obtain short-term export financing.

(c) Swaps between intermediaries and producers, and commodity-linked loans and bonds, which are instruments through which, in many cases elements of price hedging are combined with financial deals. Swaps are often used to make the repayment of loans or investments more secure (although they are also used as pure hedging instruments), while the primary aim of commodity-linked loans and bonds is to raise finance.

(Figure 1.5) Typology of Risk Management Instruments



	transparent manner	various operations, including on futures exchanges	Investors Eagers to take risk
instruments are not traded	on exchanges, in a transparent manner		

Source : UNCTAD 1995

The prices of futures contracts over various contract months should provide a profile of expected future prices. When this is so, prices of futures contracts can be safely used in price negotiations for physical trade.

1.20: Risk & Return :

UNCTAD Although most companies may claim their objective is to "maximize returns", this involves an inherent contradiction, since maximizing returns implies accepting maximum risks.

Conclusion:

The commodity market is very important to the market.It is another option for all other investment avenues. Through this market traders, and farmers will get benefit. they will get the known price. Transparency is there in this market so aromatically risk will reduce. Another risk measure eg edging, is available. Details are available on websites, newspapers, TV channels, and various books, magazines, articles, Apps, etc and therefore collecting information is easy. The analysis is also available on the above articles, apps, channels even in the website. Rule and regulations are available so its become easy to invest or trade in this market.

From the point of view of Economic development trend of this market is remarkable. Purchasing one unit of gold is easy and its provides a good return. As another market this market also has risks but Investors can mitigate the risk.

SEBI is one of the finest regulatory bodies which is connected with this market and therefore investing and , treading become smoother.

Information about the market is available on the website so farmers, trader or investor can learn the basics.

The recommendation can be more useful for the trader who could use the strategies for the investment in commodity derivative.

CHAPTER 2

REVIEW OF LITERATURE

An attempt is made in this chapter to review some of the important and leading literature relating to the topic of the study with a view to get an insight on the topic and to prepare a framework for the present study. The first section reviews the link between history, trends, process, risk , volatility and economic development; second section deals with the literature relating to the Test and model used by different authors in their research paper , Here as researcher we have search around thousand research papers from that selected papers were reviewed . In last section the main findings revealed from the review of literature.

2.1 Birth and development of Commodity Market:

A Commodity is defined as an article of Commerce. A more German definition to Dubai Gold Commodity Exchange (DGCX) is a merchandise that are traded on legally recognized and Government empowered commodity exchange. Eg. Petroleum, foreign currencies, metal, agricultural products and financial instruments.

1776-1815 which severely disrupted Commodity Market worldwide (O' Rourke 2006). The clark and Gayer Rostow – Schwartz series for England, the Friis Glamann series for Denmark the Posthumus series for the Netherlands and the Bezanson series for Philadelphia show Higher prices during World War (1776 – 1819)

In all cases bar one (the Gayer-Rostow-Schwartz series) the difference between sun period are statistically significant. They also increased price volatility (Irwin 2005 O' Rourke -2007)

Shroff 1950. refered tje Government of India draft bill on introduction of forward trading in India & recommended forward trading helps in hedging , price stabilization reducing the speculation. The study further advised to established trading Rules and Regulation approved and managed by government.

Kamara 1982. has analyzed the impact of commodity market on overall economy, he has also compaired the spot market volatility after & before & found there is no significant change.

Kabra committee report 1993 advised to strengthen the Forward Market Commission (FMC) Forward Market Act 1952 by mean of improving infrastructure,telephonic function of the exchange adequateness automation . Regulation to designing & trading of future contract establishing strong vigilance committee.

UNCTAD & World bank joint mission Report (1996) highlighted the role of future markets as market based instrument for managing role & suggested the strengthening of Institutional capacity of the regulator & the exchanges for effective performance of these market, Government intervention was pervasive in some sensitive major committee like wheat, rice & sugar.

Government of India, Vohra N. D. & Bagri B.R.(2003), Author has mentioned in this paper is India required market where wide range of product will be traded . This would help the investor to hedge their commodity risk. In India Agriculture is imported sector & therefore it contribute maximum to the growth of GDP . It passess the capacity of not only being one of the top five producer of the commodities but also major consumers of bullion & energy products. India has more potentiality to become major center for trading of more commodities.

P Sahoo, Rajiv Kumar (2009) author has analysed the commodity market and he has mentioned that trading in commodity derivative on exchange platform is a instrument to achive price discovery. Better price risk management, beside macro economy with better resources allocation Though the volume of commodity future trade increase exponentially after the withdrawal of prohibition in 2003.author has analysed five main top commodities like gold, copper, petroleum, crude, soya oil & Chana in commodity future market in India, result suggest that the commodities future market is efficient for all five commodities. therefore market is very important.

Battacharya Himadri, (2007). Commodity Derivative market in India agriculture market have existed in India for centureis . In original form the agriculture market began as a designated location where producer & buyer would congregate. The cash or spot market for agricultural commodities in India. The whole sale market where large variety of commodity bought & sold consist of large no of market place.

2.1.1 Study relating to Regulatory Body of Commodity Derivative Market :

Dr Shree Bhagwat,Angad Singh Marav (2015) Author has studied role of Forward Market Commission Author has included concepts, function, power of forward market commission.

Poornima and Deepty (2015) discussed about the status of commodity market in india. The paper focused on the SEBI, FMC merger and studied its impact on future growth prospects and challenges. The merger was aimed at streamlining the regulations & curb wild speculation in commodity.

K. G.Sahdevan (2012) Author in his paper mentioned that present legal framework of this market is inadequate for the effective regulation & growth of commodity market in India here author has mentioned that regulator can act as the line of defense against manipulation . Regulator particular ensure they have the best practices and procedure for trading, margining , clearing , market monitoring & surveillance risk control delivery and settlement. These are the important factor studied by the author.

Chand 201,Sahadevan 2012,has mentioned in their paper that improving agriculture market and reducing price risk for Indias small & marginal farmer has been an important policy agenda for several dealers. Indian government has made considerable efforts through security and improve the market linkage for small holders & offering support prices.

Acharya 2012, Ranjan 2005, There has been increase policy thrust on improving smallholders market access & risk management. The forward market commission been replaced by Security and Exchange Board of India(SEBI) as the commodity derivative market regulation.

Ali Gupta 2011, Dey & Maitra 2010, participation of direct and indirect of a good number of small holders in the derivative markets is important for inclusive benefit & impart however small farmer are offer reluctant to engage in activity accrued as risky and entrepreneurial in the absence of effective risk mitigation measures. Two development organization Aga Khan Rural Support programme & self Employed Women Association (SEWA) facilitated farmer price information access or participation in hedging the price risk. Farmers participation in spot and future market is analyzed.

Hariharan R. & Dr B.A. Karunakara Raddy (2018) , Study focused on overall growth of commodity market & progress of market. After liberalization there was a tremendous change in the commodity market. In India commodity market play important role commodity market act as leverage for hedging & speculation. Commodity market is an alternative option for an investor who is not happy with equity market. Author has mentioned that awareness level of commodity market has to be involve. Derivative trading is also permitted in 6 national and 56 regional level market.

2.2 History of Commodity Trading:

Organized trading in Commodity Market started in the mid nineteenth century in Chicago, (Chicago United State). Its evolution has happened due to regular problem of Trading like If farmer must trade on the SPOT for cash transaction there were problem that where they store their product again price was constraint, lack of coordination, absence of uniformity etc.

Other problems are problem faced by Buyer and Seller (farmer) and (Trader) here we can solve this problem by increasing No of Market player, if competition increases hence increase no of stakeholders in the price fixation of wheat.

Price fluctuation will also affect the players either positively or negatively. Those traders who face this kind of risk they tried to find out way of alleviating the effect of these price fluctuation.

Answer for this is Forward Market came into existence in this transaction both the parties involved could agree to exchange produce for cash at a future date.

Kang and Mahajan, (2006) Price risk in agriculture result from the volatility of crop prices after its harvest. Farmer cannot judge how much cost he has to pay for labour, equipment, fertilizer and other work because it is difficult to judge the possible return given the volatility of crop price at the time of harvest.

Commodity trading of cotton started in 1875. Commodity derivative trading began in 1900.Turnover of MCX US$ 6 to 8 billions MCX is in 800 cities, 12600 trading terminals. MCX COMDEX India’s first & only composite future price index.

Aditya Singh in his paper titled “ The Indian farmer, middlemen & the APMCs examined the Agricultural Marketing system in India. The author concludes that there

was a large price spread (difference between the Price paid by farmer & price paid by consumers)which was due to various marketing costs and margins of the intermediaries. But by creating regulated marketing the price paid by farmers by licensed middlemen for their produce could be monitored & thereby ensuring that they were not exploited.

Pradeep kumar Mishra & Anhani Sinha in their paper titled "Supply chain Management of Agricultural commodities through Electronic Spot Exchanges: provide an overview of Agricultural Marketing in India. E-spot Trading & the concept of National Electronic Spot Market .Author concludes by saying that the supply chain from farm to fork consists of multiple layers of intermediation mostly without any qualitative value addition. This makes the chain inefficient result into costlier food product to the consumers. It is high time to have a fresh look at the supply chain management with a view to improve marketing effectiveness & enhance farmers price realization without increasing price paid by the consumers. Electronic Spot exchange are a unique model to achieve efficiency in management of supply chain for Agriculture commodities. Author has mentioned in his paper that this model should use by to 1000 of location across the country for making This presence felt in agriculture supply chain at a mass scale. It is possible if large no of corporate & buyers start using this exchange,which will stimulate the agriculture economy in general & farmer in particular.

Dr(Mrs) N.V. Kavitha & Mrs N. Suma Reddy (2015) in their paper titled " A study on the commodity Derivatives Market & Development in India-Towards sustainability". author has analyzed issues related to Indian Commodity Derivative market & its present status. The authors concludes that by saying that the growth is found with respect to its growing market network & also with respect to volume of trade previously there were only exchange functioning on the regional level now market expand & functioning till national & international level.

D. Rejnus(2006) In the study titled " The present significance of Commodity exchange Trading in the study entitled "The present significance of commodity exchange trading in the conditions of the current world economy the rational behind the bar finding says that commodity possess some qualities that financial instruments do not having resistance to inflation. In this paper author has mentioned that commodity trading will extend not only through growing share but also during increase number of commodity tradable on exchange.

Size of the commodities market grows many folds here on commodity related and dependent Industries constitute about 58%. Market share of MCX is 84.04% (FY 2014-15). MCX has 486,770 Trading terminals & total 2000 members are working with them.Currently the various commodities across the country clock on annual turnover of Rs 140000 crore (Rs 140billion)with the introduction of Future trading to of the size market grow many fold hereon.Commodity future play important role in commodity market. It shares important the risk and pool the information from market The market mediates between buyers and seller of the commodity & facilitates decisions related to storage & consumption of commodities.

There are Three option :

The national Commodity & Derivative Exchanges (NCDEX)

1. The multi Commodity of Exchange of India.
2. The National Multi commodity Exchange of India

All three are electronic trading & settlement system & a national presence.

MCX.com (2015) Kotak Mahindra Bank Ltd acquired 15% equity stake in company.

MCXs highest daily turnover is 1,19,941 crores achieved of April 15 2013 since inception.

It is world's 3rd largest commodity futures exchange in terms of number of contracts traded in 2012. It became India's first listed exchange on March 2012. It is first exchange to report its first sustainability performance since FY 2009-10.Commodity future services are provided by Refeo Sify securities SSk (Sharekhan) & ICICI Commtrade (ICICI direct) ISj comdesk ISj securities) & Sunidhi Consultancy are already offering commodity future services you can also get a list of more members from the respective exchange & decide upon the broker you want to choose from you can have an amount as low Rs 5000 Here you need money for margin payable upfront to exchange through broker, margin can be 5-10 % of the value of commodity contract while you can start off trading at Rs 5000 with ISJ comm trade other broker like ICICIdirect have 0.05 as broking Pune based broker charge 0.05 % as broking charges plus taxes.For trading in bullion that is in gold & silver. Minimum amount is Rs 650 for Rs 950. for current price of approximately Rs 6500 for gold for one trading unit (10 gm) & about Rs 9500 for silver (one kg).

Here Agriculture trading is different for agriculture trading required Rs 5000 to start

trading but price & lots are different for different commodities.

Chen & Firth 2004. checked the relationship between return & trading volume of four commodity future in china they found that there is no correlation between volume & return but signify the causality from trading volume & return via verse, they found correlation between absolute return & trading volume.

2.3 Price Risk Arises due to number of factors:

1. Uncertain output: Unlike other sectors, where producer can estimate the output as per input whereas farmer can do that because there is uncertainty of lack or excess rainfall, pest attacks and disease.
2. Inelastic supply and income inelastic demand for agricultural products (Sekhar, 2004): Cost for land and labour are fixed and prevent the farmer from adapting quickly to the economic environment. This coupled with an income inelastic demand from some agricultural produce result in a high fluctuation of prices.
3. Nature and agricultural planning process where production decisions for most farm products are made in advance of the time the product is marketed (Starleaf, 1982) these decisions are based on prior demand and performance. However, the difference in the case of agricultural activity is the significant time lag between investments made and returns received.
4. Governments policies and Interventions: Additionally, the government trade policies, along with the procurement, distribution, and agenda of building buffer stocks has an impact on prices (Chand, 2003) Subsidized price at which the government offers to buy paddy.

2.3.1 Is Hedging will reduce risk:

Vivek Rajvansh (2015) he explained about the challenges of future market, he has explained that the inception of commodity market & growth of commodity market. In commodity market future market dominate the spot market. Inefficiency also lead to increase the risk in the market which can be controlled by use of heading of commodity future result suggest that commodity futures provide transparent price discovery for the traded commodity.

Jumah et al (1999) Evaluating commodity market efficiency are conintegration of appropriate author has studied spot and lagged future rates . he has mentioned that spot & lagged future rates correctly for the UK Wheat future contract traded at LDFFE Bi Variate analysis shows that spot and lagged future rates are cointegrated with the vector a necessary condition for market efficiency. Author has mentioned that a symptomic theory in aVariate VECM estimation the spot rate lagged future domestic interest rate as shown to be cointegrated with our vector "cointegration paradox is explained by investigating the relative magnitude of the forecast error and the domestic interest rate. Carl & His POT measuring risk in commodity market.In present study author has focused on four commodity namely west Texas intermediate crude oil, natural Gas , gold & corn for period of 2001-20017.Author has used Extrem Value Theory with a set of conditional Auto Regressive Log (CARL) model to redict risk measure for the futures return serves of the considered commodities . Here authro has used peal-0ver Threshold (POT) method combined with indicator & absolute value.Carl models in order to predict the probability of tail events & value at risk & expected shrot fall risk measure for the selected commodities.

2.4. Price volatility of Castor Seed:

Price movement become clearer. Volatility where planting and sowing season lasts from July to October and harvest from Oct to April. NCDEX spot price data for castor seeds highlight that prices tends to firm up during the planting period and eases down during the harvesting period. Prices also tend to show inter – seasonal variation of almost Rs 200 to Rs 350 per quintal (MCX India, Commodity Brief)

Other than this in year 2012 we can see that prices saw a steep decline due to oversupply (Commodity online, 2012) over the last 4 years, prices have risen sharply in July/August (sowing season), by over 8% in each year. In the year 2012, the seasonal variation was about Rs 230 per 20 kilo gram which translates into Rs 862.5 per bag of castor seeds. This translates into an annualized difference of 72.9% considering the farmer sowed in June 2010 and harvested/sold the product in February 2011.

This price volatility drives demand for hedging, whether it is done via financial instruments, such as futures contracts or options, or through physical instruments, such as inventories.

2.5. Commodity Price Risk:

(Deloitte MCX , 2018), Commodity price risk is the financial risk. These risks are specifically driven by internal and external market forces. financial performance/ profitability

fluctuations in the prices of commodities that are out of the control of the entity since they are primarily driven by external market forces. Sharp fluctuations in commodity prices are creating significant business challenges that can affect production costs, product pricing, earnings and credit availability. This price volatility makes it imperative for an entity to manage the impact of commodity price fluctuations across its value chain to effectively manage its financial performance and profitability.

2.5.1 Is Storability will reduce the price volatility risk:

Jian Yang (2014) In his paper Asset storability & Price Discovery of Commodity Future Market

Commodity Price Risk is a new Lead (2002), Has studied price discovery performance of future market for Storable & Non-Storable commodities. They have considered all long-run commodities.by analyzing the market they found that asset storability does not affect the existence of cointegration between cash & future prices & the usefulness of future markets in predicting future cash prices. But it can be affected by the magnitude of bias of future market estimates for future cash prices the finding are important from the point of decision making about commodity pricing forecasting and heading.

Trolle A Schwartz E (2009) Studied the Volatility in unspanned stochastic volatility & the pricing of the commodity. Commodity derivatives are an important part of the international commodity market. The trend has increased continuously & therefore author has developed a stochastic volatility model for pricing commodity derivatives. The model features unspanned stochastic volatility, quasi-analytical prices of options on futures contracts & dynamics of the futures current in terms of the low dimensional affine state vector. Here the author has also developed a mode of NYMEX, crude oil

derivative using an extensive panel data set of 45,517 future prices & 2,33,104 option prices. Spanning 4082 business day.

Cark C. Boda Kang, C.N. Skilbosios & The=uy Duong To (2012), the author studied the volatility structure of commodity markets. The author has also mentioned the stochastic method in his paper.

2.5.2 Price discovery:

Xianojie Xu (2014) Author has analysed 182 spatially spoted US cash market from 2006 -2011.Author has analysed price discovery for cash .large number of cash market is available. Author cosidered explicitly the issue of the market selection which has been neglected in previous years. Author has selected 52 cash market based on logarithmic prices and the informational sources role of future & cash prices are equal in long run for leg out of 52 markets. In the short run the undirectional causality from cash to future prices is most possible no matter whether cash market is cointegrated with the future or not . Vash majority of causal relationship are linear.

As per Delloite Commodity price is financial risk of entity like financial erformance/profitability upon fluctuation in the price of commodity that are out of control of the entity. It is primarily driven by external market. Sharp fluctuation in price create challenges for business that can affect the production costs. Production pricing, earning & credit availability .The price volatility make it imperative for an entity to manage the impact of commodity price fluctuation across its value chain to effectively manage its financial performance & profitability.

2.6. Price Discovery in Commodity Market:

Price discovery is depend on several other interrelated factor . Such as Number, Size, location and competitiveness of buyer & Seller. Market information include amount, timelines & reliability of information. Standardized “Exchange traded” forward contract, Indian market is more sensitive here market are generally imported by information asymmetric and instances of intentional external influences leading to greater price discovery inefficiency whereas commodity exchange market are more

efficient due to transparency where information flows and assimilation are instantaneous and more importantly reliable.

Ing-Haw Cheng and Wei Xiong (2014) author in this study analysed many earlier studies on commodity future market & provide conceptual understanding on financialization. They studied if speculation in future market resulted in distorting the cash prices of the commodites. Author has very well analysed the financialization effect on the cash prices through the mechanisms like risk sharing ,information discovery & storage which may result in the distortion of cash prices. Author has studied financialization in this paper and he has critically review academic studies through the perspective of how financial investors affect risk sharing.he mentioned that due to financialization investor substantially changed commodity markets .

Trading by participants from across the commodity ecosystem on a commodity exchange encourages transparency by leading the market price of the commodity close to its fair value. This enables companies and consumer to develop effective hedging strategies such price signals are important to take decision on production, market & processing of commodities eg. Farmers on expected return among competing across small & medium enterprises and large corporate about the possible fact's trends in relation to their exposure as well as consuming groups such a importers/trader's consumers as to what will be likely price in the new future. The price discovery approach at Indian Commodity exchanges have demonstrated their ability to align with the physical market price as well as international commodity market where india is price taker through price discovery at national and international level substantial benefit have been obtained where market participant is able to benchmark price effectively with available commodity price. The price is also depending on quality, region delivery routes, geographical disparities, transportation & pricing structure. Eg. Price of oil is depending on color, consistency, its natural state approximately 160 types of crude oil are traded in the exchange. Physical market together which vary in characteristics & quality.

Neha Seth, Arpit Sidhu (2012) In their research paper Price discovery & volatility spillover in commodity market a review of I review of empirical literture. Author has reviewed paper related to commodity market he has mentioned that the most of the farmer studies examin market relationship with price discovery & volatility spillover

using cointegration tests. Regression analysis univariate & bivariate generalized autoregresive conditional Garch Model as a tool for data analysis.

2.7. Importance from the managers point of view:

(Jorg Mayer, 2009). Financial Investment has become increasingly important on Commodity exchange. This paper distinguishes two type of Financial Investors and emphasizes differences in their position taking motivation and price impacts. Index trade follows a passive strategy holding virtually only long position, Money manager's trade on both sides of the market & attempt to maximize short term returns. Regression analysis indicates that (i) index trader positions are particularly influenced by roll returns, while money manager emphasize spot return &than ii) money manager moved from emphasizing diversification to a more speculative strategy by taking commodity positions that are positively, rather than negatively related to developments in equity markets Granger Causality tests indicates that these differences translate into different price impacts (i) index trader positions have a caused price impact particularly for agricultural commodities & (ii) money manager had a causal impact during the sharp increases in the price for some nonagricultural commodities.

Shunmugam & Debojyoti Dey 2011, Author has given total overview of all the research studies on commodity derivative market. Paper talks about the spot market . It is discussed that commodities have performed their role & the benefits are reaped by various stakeholders.It is suggested that next step would be institutional support to be given to commodity market so that the commodity market will develop further . This could be in the form of allowing new products like option, indices & other intangible options which could attract the risk investors.

2.8. Financialization of Commodity Market:

Colin A Cartor, Gabriel J Poer, Mr Osca E. Menliva, ECIAC (2012),In this report authro studied the role of commodity market in the development of Latin America, author has provide extensive analysis of conceptual aspects. Characteristics, functions, operation & development of future commodity market.Role performed by exchange is studied low access to these market. Participartion in future exchange local exchange financial assistance & technical assistance are discussed. In concluding remark author

has mentioned that technical assistance is required and it is very important for the development of market.

2.9 . Nature and causes of price Volatility in Agricultural Commodity:

(Balcombe, 2009). explain the nature and causes of price Volatility in agricultural Commodity Price Overtime, The contributor of factor such as level of stocks, yield, export contraction and the Volatility of oil prices, interest rates and exchange rate a analyzed. The article assess the existence of the periodic form of Volatility past Volatility can be a significant prediction of current volatility given rise to periods with either high or low price volatility pattern are commodity found in markets where prices are partly driven by speculative forces. An important aspect of this study lies in the measurement of volatility. Agricultural commodity prices as well as interest and exchange rates are decomposed in trends cyclical& seasonal components within this approach, volatility is not just defined in term of export change in series but in terms of the

variance of the shocks governing the volatility of series component. Using this method, the influence of other variables on this variance can be estimate given the different frequency of data, the analysis is based on two econometric methods. In the first method monthly data on commodity prices, interest rates & exchange rate is used. In the second method the author employs a panel estimator utilizing variables such as stocks, yields and export concentration for which data are available annually.

(Nilanjan Ghosh, 2009) The issue of expanding the scope of commodity derivative trading is apparently normative and value judgmental. This is primarily because of a large group of people who feel that commodity derivative trading should not be allowed at all and hence the question of expanding its scope does not arise. However, there are enough strong arguments in favor of strengthening commodity derivatives markets and developing supportive market institutions and awareness. The role of commodity futures markets becomes even more compelling with India moving toward greater trade liberalization (Nilanjana Ghosh, 2010) Impact of futures trading on physical market prices is, probably, the most contentious issue among policymakers and researchers. For futures markets to be effective, the futures forum should not only have a close relation with the physical markets and thereby help hedging through a process of

arbitrage between both the markets, but it should also serve as a forum whose prices should be taken as a "reference price" by physical market functionaries. This service of "reference pricing" is popularly known as "price discovery". However, the fact of the matter is much deeper than what meets the eye. The advocates of derivative markets have traditionally argued that speculation in the futures markets primarily help the twin economic functions of hedging and price discovery. Yet, traditionally, futures markets have been vilified as the speculators' haven with the allegation that excessive speculation in the futures forum has led to price volatility and inflation in the economy. It is again axiomatic that greater the price volatility, higher the speculation.

Hence, while advocates of commodity markets feel that speculators take up the hedgers' risk and provide liquidity to the markets, and thereby help futures markets to perform the dual functions of price risk management and price discovery, the anti-market sentiments argue that speculators in the futures markets can create havoc in the physical market segment in two ways: first, by increasing price volatility (contrary to the futures markets' axiomatic role of price stabilization), and second, by creating inflationary pressures on the economy.

(Rutten, 2009), On the other hand, there is also a widespread misconception of the notion of "price discovery." The methodological issues involved in testing the relationship between the futures and physical markets have been discussed in details by Rutten (2009). In most cases, econometrics have used Granger causality tests or Garbade-Silber frameworks to test whether futures prices cause physical market prices. If the hypothesis is found to be true, it is inferred that the price discovery function is performed by futures markets. While the attempts are appreciable, there is a need to exercise caution.

Relationships might often be spurious, and at times away from reality. It is essential to develop a general equilibrium framework, and on the basis of a computable general equilibrium (CGE) model, the influence of the futures markets on the physical markets can be deliberated. On the other hand, it is essential to carry out primary-level surveys to cross-check the results and publish the primary survey results.

There is another aspect to price discovery function of the futures markets, as also the econometric models used to test them. The anti-market faction has often interpreted results as per its convenience. If futures prices act as reference prices for the physical

markets during the time of a price rise, this faction assumes that the rise in futures price is responsible for the commodity price rise in the economy. Eventually, the entire blame for the inflationary trend is placed on the speculative elements in the futures markets, without considering the fact that price, fundamentally, is a function of demand and supply. An efficient futures market will be able to access this information, process it and pass this on to the physical markets. The question of efficiency of the futures markets in acquiring and processing this information was discussed in a paper by (Sangeeta Chakrabarty and Nilanjana Ghosh (2013) at the TAER-ISID seminar. Ideally, commodity futures exchanges integrate the futures and cash prices, thereby leading to overall efficient price formation. This can happen in two ways. First, in the context of non-conformity of the two markets because of excessive speculation, market players can simultaneously take equal and opposite positions (long or short) in the futures and the physical markets and bring the markets to conformity. Second, during delivery, players can demand to receive or deliver the physical product through the exchange, the threat of which makes the futures and cash prices converge. Because futures are traded on exchanges that are anonymous public auctions with prices displayed for all to see, the markets perform the important function of price discovery. Various commodity exchanges around the world have emphasized their roles in price discovery either at the international or at the local level. All exchanges eventually attempt effective price dissemination, thereby reducing information asymmetries, which can minimize the adverse selection and moral hazard problems in transactions. Information and communication technology have definitely played a crucial role in this context here. Such attempts have been well-documented for Dalian Commodity Exchange (DCE) in China, Bursa Malaysia (which is often claimed to have discovered the prices of Malaysian palm oil), and Tokyo Commodity Exchange or TOCOM (which provides a benchmark for price discovery in Middle East Crude Oil).

The National Agriculture Policy(2000) recommended to liberate the agriculture & Allied seed enhancement , the infrastructure & information technology further they have to contract on liquid commodities.

2.10. Consumption Betas and Backwardation in Commodity Markets

Robert H litzenberger, Thomas B. Haxula, (2012) This paper examines the relationship between commodity Consumption betas and realized Commodity future contract. Risk premiums A linear relationship between risk premium and consumption betas is eveloped based on a consumption oriented CAPM. The parameters of this linear model are estimated using fourteen Commodities.

2.11. Asset pricing with conditioning Information:

Kevin Wang, Feb 12, 2003. Pg 161-196. This paper presents a new test of conditional versions of the Sharpe-Lintner CAPM, the Jagannathan & Wang (1996) extension of the CAPM and the Fame & French (1993) three factor Model. The test is based on a general nonparametric methodology that avoids functional form misspecification of betas, risk premia& the stochastic discount factor, our result provides a novel view of empirical performance of these models. In particular we find that a nonparametric version of the Fama and French model performs well even when challenged by momentum portfolios.

2.12. Liquidity in the Foreign Exchange Market: Measurement, Commodity and Risk Premiums.

Lorianomancini, Angelo Ranaldo, Jan wampelmeyer. (2013) provide the first systematic study of liquidity in the foreign exchange market, we find significant variation in liquidity across exchange rates, substantial Liquidity Costs, and strong commodity in Liquidity across currencies and with equity and bond markets Analyzing the impact of liquidity risk on carry trades , author shows that funding (investment) currencies offer insurance against (exposure) to liquidity risk. A Liquidity risk factor has a strong impact on carry trade returns from 2007 to 2009 Suggestion that liquidity risk is priced, anthropochore present evidence that liquidity spirals may trigger that finding.

2.13. Financial Market & Investment Externalities:

Sheridan Titman (2013) This address explores the link between financial Market shocks, investment choices, and various externalities that can arise from these choices.

My Analysis which emphasizes differences between stocks to debt and equity Market provides insights about some stylized facts from the macro finance literature, These insights are illustrated with a discussion of the technology boom & bust in the late 1990s and early 2000s and the housing boom and bust in the mid-2000s.

2.14. Can Time varying Risk of Consumption Disasters:

(Jessica Wachter, ,(2013)Why is equity premium so high & why are stocks so volatile ?

Why are stock returns in excess of government bill rates predictable? This paper proposes an answer to those questions based on a time varying probability of a consumption disaster. In the model aggregate consumption follows a normal distribution with low volatility most of the time, but with some probability of a consumption realization far out in the left tail. The possibility of this poor outcome substantially increases the equity premium, while time variation in the probability of this outcome drives high stock market volatility & excess return predictability.

2.15. Short term Variations and Long-Term Dynamics in Commodity Prices.

Eduardo Schwartz. James E Smith, Federal Reserve Bank St. Luis (2000) In this article, author has developed a two-factor model of commodity prices that allows mean reversion in short-term prices and uncertainty in the equilibrium level to which prices revert. Although these two factors are not directly observable, they may be estimated from spot and futures prices. Intuitively, movements in prices for long-maturity futures contracts provide information about the equilibrium price level, and differences between the prices for the short- and long-term contracts provide information about short-term variations in prices. We show that, although this model does not explicitly consider changes in convenience yields over time, this short-term/long-term model is equivalent to the stochastic convenience yield model developed in Gibson and Schwartz (1990). We estimate the parameters of the model using prices for oil futures contracts and apply the model to some hypothetical oil-linked assets to demonstrate its use and some of its advantages over the Gibson-Schwartz model.

2.16. A theory of Commodity Price Fluctuations:

(Chamber, Marcus J, Bailey, Roy E.1996) This paper studies the price fluctuations of storable commodities that are traded in open markets and are subject to random shocks to demand or, more particularly, to supply. It relaxes the common assumption that the shocks are identically and independently distributed in favor of temporally dependent and periodic disturbances. The existence of a unique stationary rational expectation's equilibrium is demonstrated for each of the models analyzed and testable implications of the models are derived. An illustrative empirical investigation is then undertaken for the model with periodic disturbances using monthly time-series observations for seven commodities over the period 1960-93.

2.17. Competitive Storage and Commodity price dynamic:

(Deaton A. Laroque G., 1996), Open Access Publications from University College London.

By buying cheap and selling dear, risk-neutral commodity speculators can smooth commodity prices and induce serial dependence in price even when none would exist under a simple process of supply and demand. Commodity prices are variable and strongly positively correlated from one year to the next. The variability is often explained by supply factors, and the autocorrelation by the activities of speculators. We show that this explanation is not consistent with the evidence. Speculation can substantially increase autocorrelation for prices that are weakly autocorrelated in its absence, but not to the high levels that are observed in the data.

2.18. On the Behaviors of Commodity prices:

Reviews of Economic Studies Willey Blackwell This paper applies the Standard rational expectation competitive storage model to the study of thirteen commodities. It explains the skewness and existence of rare but violent explosions in prices, Coupled with a high degree of price autocorrelation in more normal times. A central feature of the model is the explicit recognition of the fact that is impossible for the market as whole to carries negative inventories and this introduces an essential non-linearity

which carries through into non-linearity of the predicted commodity price series. For most of the thirteen commodity prices, the behavior of prices from one year to the next conforms to the predictions of the theory about conditional expectations and conditional variances. However, given the non-linearity both of the model and of the actual prices, such conformity is not enough to ensure that the theory yields a complete account of the data. In particular, the analysis does not yield a fully satisfactory explanation for the high autocorrelation observed in the data.

2.19. Limits to arbitrage and hedging –Evidence from Commodity Market :

(Viral V Acharya, Lars A lochstoers, Tarun Ramadorai,2013) Here author has built an equilibrium model of commodity markets in which speculators are capital constrained, and commodity producers have hedging demands for commodity futures. Increases in producers' hedging demand or speculators' capital constraints increase hedging costs via price-pressure on futures. These in turn affect producers' equilibrium hedging and supply decision inducing a link between a financial friction in the futures market and the commodity spot prices. Consistent with the model, measures of producers' propensity to hedge forecasts futures returns and spot prices in oil and gas market data from 1979 to 2010. The component of the commodity futures risk premium associated with producer hedging demand rises when speculative activity reduces. We conclude that limits to financial arbitrage generate limits to hedging by producers and affect equilibrium commodity supply and prices.

2.20. Analytical pricing of discretely monitored Asian style options-Theory and application to commodity market:

(Fusai, Gianluca, Marena, Marina, Roncoroni, Andrea ,2008). Author has studied moment generating function of the joint random vector consisting of a spot price and its discretely monitored average for a large class of square root price dynamics. This result combined with the Fourier transform pricing method proposed by carr and Madam 1999. Option valuation using the fast Fourier transform. Journal of Computation Finance allow author here to derive a closed form formula for the fair value of discretely monitored. Asian style option here author analyze case of commodity price dynamics displaying mean reversion & jointed fitted a quoted future

curve and the seasoned structure of spot price volatility four test are conducted to assess the relative performance of the pricing procedure stemming from out formulae.

2.21. Computing the market price of Volatility risk in the energy Commodity Market;-

(Doran, James s, Ronn, Ehud I, Journal of Banking & Finance ,2008) In this paper author demonstrate the need for a negative market size of volatility risk to recover the difference between Black-Scholes N 1973. The pricing of options and corporate Liabilities – Journal of Political Economy 81, 637-654, Studies of stock price volatility changes.In proceeding of the 1976 Meeting of the Business and Economics statistics section. American Statistical Association pp 177-181. Implied volatility and realized term volatility. Initially using quasi Monte-Carlo Simulation. Author also demonstrate numerically that a negative market price & Volatility risk is the key risk premium in explaining the disparity between risk-neutral and statistical volatility in both equity and commodity energy market.(Vivek Rajvansh 2015) In this paper author explained about the challenges of future market, prices are change all the time and he has also explained the inception of commodity market & growth of commodity market. In commodity market future market dominate the spot market. Inefficiency also lead to increase the risk in the market which can be controlled by use of heading of commodity future result suggest that commodity futures provide transparent price discovery for the traded commodity.

2.22. Problem faces by traders:

Victor Mortinez -de-Albeniz, Joseph Maria Vendrell Simon, 2013. A capacitated commodity Trading model with market power. here author considered problem of a trader that may purchase commodity in one market and resell it in another. There author also study the two market quotes different prices, but the spread is reduced when trading take place. Author has also studied optimal trading policy across the markets so as to obtain the maximum profit in the long term taking into account that the trading activity influence the price processes eg. Market power.

S. Solvanathan Dr V. Manohar 2013, explained the problem which trader normally faced is online trading processes he has also mentioned that online processes has not

taken off in India inspite of the benefits which include low transaction cost, speed, boundary spanning. Convenience, improved communication , risk management other reasons are economic condition because of commodities online trading India's economic condition will also improve.

2.23 Commodity prices:

Nitantamiz Zhou, Performance of Commodity Stock in view of increasing commodity prices when he checked the academic literature to find results on how prices of commodities such as oil & gold affect stock prices of firms engaged in their production, author found mixed results, author thought that instead of focusing on the direct relation between price. Here author investigate the relation between the bull and bear market of commodity prices and commodity. Nitantamis Zhous key finding are Commodity market phases tend to have longer durations compared to stock prices. Commodity market exhibit longer bear phases compared to bull phases whereas the opposite is true for individual stocks. There is little evidence that the markets identified for the individual stocks are related to those for the commodity prices. Commodity prices markets allow traders to partly forecast the markets for their respective stock market sector indices and the aggregate stock market. A possible cause of the lack of relationship is the company's idiosyncratic risks that create a wedge between changes in the underlying commodity prices & changes in the stock price. This effect disappears when we aggregate individual here Christos Ntantamis & Jun Zhou have reached some excellent conclusive about the relationship of commodity price to individual stock. There is work confirms our own. Individual stock remains more affected by co. specific events, substitution, relative valuation and sensitivity to equity markets then to their underlying commodity prices. Here author has used Timmerman Algorithm is used It provide rule that one can iterate in order to determine whether an observation belongs to a bull/bear market. The smallest of the prices so far observed in a current bear market has largest prices so far observed in a current bull market. Here for empirical analysis author has used data for the period 1982 to 2011 commodity prices are obtained from IMF & KITCO. Oil, gold, metal index is used. Bull market phase have a positive mean compared to a negative mean during the bear market phase. Return is higher under a bull market. Skewness is found for the bull market & correlations conditional probabilities and probity model analysis used.

2.24. Diversification benefits:

(Jackson Advocate, 2011)"Diversification benefits from investing in commodity sector the case of precious metals & agricultural product", Here author wanted to check the return of commodity market author wanted to check the benefits from investing in the commodity market by investigating the nature of the relationship between commodity market returns such as silver, gold, and platinum for the precious metal category. Aluminum, tin, nickel, and platinum for the precious metal category in, aluminum, tin, nickel, lead & zinc for the industrial metal is category & cotton, corn soy and rubber for agriculture produce sector & stock market return. As the regional & global convergence of financial market progress correlation of country specific fundamentals has increased thereby reducing the benefits from country specific diversification moreover, with the recent global financial crisis and increased volatility in financial markets across the globe investors are seeking answer to benefits of diversifying in alternate asset such as commodities. Previous papers on commodities sector returns have failed to provide a coherent answer as to commodity investment diversification benefit this makes results from this study important for investors academicians and policy makers eg. If commodity market returns do behave largely independent of the capital market returns then the general sector of investors .

Result of this study suggest commodity market returns & equity market returns have little or no significant positive index dependence thereby signaling diversification benefits from investing in the commodity sector. In short paper explore benefits from investing in the commodity market by investigating the nature of the relationship between commodity market return &stock market returns. Using vector auto regression (VAR) author also examin interdependence among precious metals, Industrial Metals, Agriculture produce and equity market returns have little or no significant positive interdependence thereby signaling diversification benefits from investing in commodity sector.

2.25. Fundamentals of Commodity Future:

(Gorton & fumio Rowwenharst, 2006) . Here author has mentioned that commodity futures risk premiums vary across commodity and over time depending on the level of

physical inventories as predicted by Theory of storage author has used data set on 31 commodities futures and physical inventories between 1969 to 2006 author shows that the convenience yield is a decreasing, nonlinear relationship of inventories price measure such as the future basis, prior future return & spot return reflect the stat of inventories.

Sunanda sen, Mahua Paul 2010, In his paper author has mentioned about the development of commodity future market. It is observed that future trading in agricultural product resulted neither price discovery nor less volatility in food prices therefore it is also providing new avenues for speculation trader.

Mantu kumar mahadik, debashis acharya & M. Suresh babu 2009, Author has mentioned in his paper that future market play dominant rile in future commodity market but their is no cointegration relationship between government intervention in checking the dynamics of spot & suture market.

Sigh 2000. analyzed efficiency of Indian Commodity Future Market , advised the Optimizing the future market to discover the prices & minimizes risk.

2.26. Asset return and inflation:

Fema & French (1977), This paper identifies five common risk factors in the return on stock and bonds there are stock market factors an overall market factor and related to firm size and book to market equity. There are two bond market factors related to maturity & defaults risks. Stock return have shared variation due to the stock market factors.

2.27. Global Financial Stability Report :

Market & Development Issues, IMF, 2006 Estimates that approximately US$ 100 billion is allocated in several commodity indices (BGINA_2007).

2.28. Mature Market:

(Akey 2005, Gorten rowwenhorst 2008),Commodity is alternative asset class it is stylized characteristic unlike capital market inventory (stocks and bonds) commodity

quantities are usually planned commensurate to their anticipated future demand (akey 2005)moreover commodity contract generally constitute a short maturity, unlike the capital market contracts which are characterized by infinite life .

O. Rajnees (2006) in the study entitled the present significance of Commodity exchange trading in the conditions of the current world economy, examins the rational behind the ban finding says that commodity possess some qualities that financial instrument do not have. Author has mentioned the example that is Resistance to Inflation.rajnees has mentioned here that in future commodity trading will increase not only through growing size but also due to increase no of commodity tradable in exchange.

2.29. Movement between commodity market and equity market:

(Nobuyoshi Yamori ,2011) Co-movement between commodity market and equity market: Does commodity market change? This paper using Japanese market data and it found that although the correlation between equity markets and commodity market used to be negative or almost zero before around 2006 it has increased significantly after the global financial crisis in the autumn of 2008. In this sense the commodity market lost its character as an alternative asset in 2008 global crude oil price index by 33% in only a month of October. This paper is first paper to investigate the relationship between commodity market and equity market by using Japanese daily data during the global financial crisis period and to find that unlike previous period there was a strong positive correlation between commodity returns & equity returns during the crisis. In that particular period hedger who buy the commodities are hedge funds. Financial institutions & pension funds have actively traded commodities.

Commodity futures transactions are often considered to be a high-risk transaction because the scheme allows investor to hold large positions with small own capitals. Therefore, an investor who takes too much risk without enough funds may suffer the bitter fate. However, the attraction for institutional investor is not the type of wager but the quality of diversification of investment. In other word investors have realized that prices on commodity markets are not linked with prices on equity market.

Modern investment theory promotes the view that real risk is not the fluctuation in individual asset but rather only that part which cannot be negated by the possession of other assets.

2.30. Is commodity market should be included with other financial market:

(The Economist ,march 2007) has suggested that commodity markets should be included with other financial market as commodity market may have lost their value in investment diversification After Lehman shock in sept market have taken on a completely different appearance. Here author has mentioned Regulation is required because Financial Institutions are investing into it.

2.31. Role of futures market in price discovery:

(Arora Sunita, Narendra Kumar,2013). Here author studied analysis the price discovery aspect of future market. Data on spot prices and near month futures prices of two non-precious metals .one highly traded copper and other lowly traded ie. Aluminum on Multi commodity Exchange of India Ltd., from jan 2006 to Dec 2011 is analyzed Vector Error Correction Model (VECM) based on Cointegration technique is applied. The study concludes that both the series cointegration technique is applied. The study Concludes that both the series of spot & futures prices are cointegrated of order one and explicit a stable long run equilibrium relationship. The results of VECM show that there is a bi-directional causality in spot & futures market but the futures market is found to be more sound in term of discounting new information than the spot market.

Jabir Ali & Kriti Bardhan Gupta (2011) analysed the efficiency of future markets by evaluating the ralation between spot prices & future prices. They applied Granger Casuality & Johensen Co-Integration analysed on 12 agricultural commodities traded on National Commodity & Derivative Exchange Ltd. They concluded that through futures market play a significant role still there exists the prices discovery of spot markets for some commodities.

Anto Joseph et al (2014) have examined the strength and extent of causal relationship between spot market and future market prices of Indian commodity markets.Author has examined the daily spot and future prices series for eight commodities from two

prominent exchange MCX and NCDEX. Result experience powerful price discovery functions in selected commodities.result show that there is strong uni-directional relation from futures to spot in almost all the selected commodities.

UNCTAD Arbeiter Kammer wein has studied price formation in financialization of commodity market. In this paper author has studied the effect of financialization .

.Mehek Arora& Ramesh Chander (2016) Author has studied agriculture commodities and price volatility effects. Author mentioned here that agriculture commodity are very sensitive commodity Price volatility makes the agriculture commodity more risky. Author has studied 5 years data from 2011 to 2015.

2.32. Asset Pricing with conditioning Information:

(Kevin Wang,2003) paper presents a new test of conditional versions of the Sharpe Lintner CAPM, the jagannathan & Wang (1996) extension of the CAPM, and the Fame & French (1993) three factor Model. The test is based on a general nonparametric methodology that avoids functioned from misspecification of betas, risk premia & the stochastic discount factors their result provides a novel view of empirical performance of these models. In particular author found that a nonparametric version of the Fama and French model performs well even when challenged by momentum portfolios.

Anurag Agnihotri, Anand Sharma (2011) studies the convergence by applying regression & correlation suggested that regretion is better measure for convergence. The delinking of commodities traded in MCX and NCDEX have provided opportunities to the traders. It is suggested that there is a need of a new exchange to attract more investor.This new exchange needs to provide warehouse delivery by providing online trading platform.

2.33. Consumption Betas and Backwardation in Commodity Markets:

(Robert H Litzenberger, Thomas B. Hazalea ,2012) this paper examines the relationship between commodity consumption betas and realized Commodity future contract & risk premiums. A linear relationship between risk premium & consumption betas is developed based on a consumption oriented CAPM. The parameters of this linear model are estimated using fourteen commodities.

2.34. Liquidity in the Foreign Exchange Market, Measurement, Commodity and Risk Premiums:

(Loriono mancini, Angelo Ranoldo, Jan wrampelmeyer 2013) provide first systematic study of liquidity in the foreign exchange market, author found significant variation in liquidity across. Exchange rates, substantial liquidity costs, and strong commodity in liquidity across currencies and with equity and bond markets. Analyzing the impact of liquidity risk on carry trades. Author found that funding (investment) currencies offer insurance against (exposure) to liquidity risk. A Liquidity risk factor has a strong impact on carry trade returns from 2007 to 2009 suggesting that liquidity risk is priced. Author present evidence that liquidity spirals may trigger these finding.

2.35. Financial Market & Investment Externalities:

(Sheridan Titman, 2013) Paper show financial market shocks, investment choices, and various externalities that can arise from these choices. Various externalities that can arise form these choices. Here analysis emphasizes differences between shocks to debts. Equity market provides insights about some stylized facts from the macro finance literature. These insights are illustrated with a discussion of the technology boom & bust in the late 1990s and early 2000s.

2.36. Can time varying risk of rare disasters:

(Jessica Wachter, 2013) asks that why is equity premium so high & why are stocks so volatile? In her research she says that Why are stock returns in excess of government bill rates predictable. Paper talked about time varying probability of a consumption disaster. In the model aggregate consumption follows a normal distribution with low volatility most of the time but with some probability of a consumption realized far out in the left tail. The possibility of this poor outcome substantially increases the equity premium, while time variation in the probability of this outcome drives high stock market volatility & excess return predictability.

2.37 Financial Crisis :

Anurag Agnihotri, Study of financial crises and stability across the world. Author has studied about the financial problem. Paper is very useful for risk hedgers.

2.2. RISK MANAGEMENT

2.2.1 Origine of Risk :

Deloitte, In 1700s risk management was used to solve puzzles and its was largely limited for theoretical purpose. Traditionally, risk management in the marketplace was always associated with the use of insurance to protect institutions and individuals from bearing losses associated with accidents. People where started using risk as hedging instrument. The use of derivatives as instrument to manage or 'hedge' against insurable or uninsurable risks began to be used & went on to be widely used from the 1980. Financial Institutions has developing Regulatory framework to protect themselves from unanticipated risk.

2.2.2. Introduction:

MCX, Commodity price risk intrinsically is nothing, but the uncertainty faced by corporates to source or sell a product at a price. Risk varies as per nature and types from industry to Industry. and company who required specific or one commodity always face challenges of effective price management. It can be either tradable or procurement commodity risk. Procuring risk is basically focused towards supply chain side. Whereas tradable risk is on financial risk.

.Shrivastav, Mishra (2009) How do we define risk? In the simplest sense, risk may be viewed as the possibility that the actual outcome will differ from the expected outcome. If one is certain then there is no risk involved. Risk refers to the chances that the actual outcome will be different than the expected outcomes.

Risk presents itself in every aspect of our life. Agriculture, trade and industry have to grapple with uncertainties regarding future prices of raw materials, market price competition, government policy, technical changes, etc Globalization and liberalization of economy, on one hand throw open new opportunities by way of new products, technology and markets and on the other threaten the survival of weak players due to

intense competition and aggressive market practices of financially stronger players. There are changes in demand and supply equation of products and services, physical as well as financial. There is need to use new technology as well as Market have to adopt new and effective measures to reduce the enhanced risks. Derivative is also one of the result of the need to manage risks.

Ravi kishor (2007) W.F.Sharpe and John Linter developed the (CAPM) Capital Asset Pricing Model . The model is based on the portfolio theory developed by Harry Markowitz. The model emphasizes the risk factor in portfolio theory is a combination of two risks. ie. Systematic risk and unsystematic risk. The model has suggested that security return is directly related to systematic risk. CAPM also explain the behavior of security prices and provides a mechanism whereby investor could access the impact of a proposed security investment .

Suyash Bhatt (2015) Risk Management is the process of identification, analysis and either acceptance or mitigation of uncertainty in investment decision making. Essentially, risk can occurs anytime an investor or fund manager analyzes and attempts to quantify the potential for losses in an investment and then takes the appropriate action (or inaction) given their investment objectives and risk tolerance.

Definition of Risk A risk can be defined as an unplanned event with financial consequences resulting in loss or reduced earnings (Vasavada, Kumar, Rao & Pai, 2005). An activity which may give profits or result in loss may be called a risky proposition due to uncertainty or unpredictability of the activity of trade in future. In other words, it can be defined as the uncertainty of the outcome.

Risk can be defined as an financial consequences resulting in loss due to reduced earnings (Vasavada, Kumar & Pai 2005). Risk means there is possibility of loss or damage due to uncertain condition which may or may not happen.

Risk means one will receive a return on an investment that is different from the return one expects to make. In other words, risk can be referred as the volatility in the return with respect to the expected return. This concept of risk comes from the fact that investors who buy assets expect to earn specific returns over the period that they hold the asset. Their actual returns over this holding period may be different from the expected returns and it is this difference between actual returns and expected returns that is a source of risk.

Frank Knight “Risk is measurable uncertainty. as per Irving Fisher Risk may be a defined as combination of hazards measured by probability.

Risk in an investment refers to the volatility in the return with respect to the expected return. It can be reduced by having a combination of assets instead of a single asset.

Risk in an Investment refers to the volatility in the return with respect return. It can be reduced by having a combination of assets instead of a single asset.

2.2.3. Risk in Traditional Sense:

Suyash Bhatt (2015) Risk in holding assets is generally associated with possibility that realized return will be less due to volatility in price. The source of such disappointment is the failure of commodity price to materialized as expected.

Craige Pirronge (2014), In commodity market some risk are fall into more than one category. Crucial function of commodity trader is to manage these risks. Trader normally transfer these risks.

V.V. Chari & Lawrencej Christian (2017), All agents wanted to hedge risk so agents are risk averse and seek to use futures markets to purchase insurance if risks are high relative to returns as well as to provide insurance if returns are high relative to risk. Farmers seek to hedge risk, and this risk fluctuates with the expected level of demand. Bakers also seek to ensure risk, but their incentives to purchase insurance are weaker than those of farmers. The reason is that bakers are partially hedged against price risk because when the price of wheat is high.

2.2.4. Flat Price Risk:

Traditional commodity trading involves little exposure to “flat price” risk. In traditional commodity trading model, a firm purchase or Sells) a commodity to be transformed (transported or stored) and hedge the resulting commodity position via a derivatives transaction (sale of future contract to hedge inventory in transit) until the physical position is unwound by the sale (or purchase) of the original position. The hedger transforms the exposure to the commodity’s flat price into an exposure to the basis between the price of the hedging instrument and the price of the commodity.

Commodity prices can be very volatile, and indeed, can be subject to bouts of extreme volatility. Therefore, firms with flat price exposure can suffer large losses.

2.2.5 Basis Risk:

The basis price is less volatile than the flat price.Hedging involves the exchange of flat price risk for basis risk, such price differences exist because the characteristics of the hedging instrument are seldom identical to the characteristics of the physical commodity being hedged. For instance, a firm may hedge a cargo of heavy Middle Eastern crude oil with a Brent futures contract. Although the prices of these tend to move broadly together, changes in the demand for refined products or outages at refineries or changes in tanker rates or myriad other factors can cause changes in the differential between the two.

They have little exposure to commodity prices (flat price risk). They normally hedge physical commodity transactions with derivatives. Hedging exchanges flat price risk for basis risk. The basis is the differential between the price of a physical commodity and its hedging instrument. Basis risk is the risk of a change in this differential. CTFs accept and manage basis risk in financial markets. They may also take on spread risk, which arises out of timing mismatches between a commodity and a hedging instrument. Margin and volume risk. CTFs have limited exposure to commodity price risk. Their profit is largely based on volumes traded and the margin between purchase and sale prices. Margins and volumes are positively correlated. CTFs have various kinds of liquidity risk: • Hedging liquidity. CTFs use futures exchanges to hedge commodities. Loss-making hedges incur costs daily before offsetting profits on physical commodities are realized. • Market liquidity. In some commodities markets it may be difficult to realize value from a trading position at short notice. • Funding liquidity. With high commodity prices, CTFs need substantial capital to trade effectively. CTFs are exposed to a wide range of operational risks. They manage these through a combination of approaches, including insurance, IT, and health and safety audits. Other risks include political risk, legal/reputational risk, contract performance risk, and currency risk. CTFs can reduce risk: • Through diversification. There is little correlation between basis risks in different commodity markets. A CTF can reduce its overall exposure by trading in multiple commodity markets. Most large CTFs are widely diversified and are therefore

less susceptible to market shocks. • Through integration. Owning assets across the value chain provides opportunities to self-hedge. When there is a market shock, cushioning effects generally occur elsewhere along the value chain.

UNCTD has mentioned in their report that the higher and the more unpredictable the price volatility of a commodity, the greater the possibility of incurring losses or realizing gains on future sales or purchases of a commodity's

Some of the expressions of risk may be:

1. The maximum loss that I can incur is 20%.
2. The chances that I will not make profit are 50%.
3. It is a risky investment because the chances that price will exceed the current level are only 20%. The above statements may be expressions of risk they fail to quantity it. What risky for one may not be risky for other.

2.3. MEASURES OF RISK:

Risk can be measured .

2.3.1 Range:

The difference between Maximum and Minimum values of the return may be defined as a range. It can also be one indication of the risk. Mathematically it can be stated as:

Range = Maximum value or Return

Minimum value or Return

2.3.2. Need of Derivatives:

Spot prices are given to sharp fluctuations depending not only on demand and supply but also market sentiment reflect in the concerns/expectations of experts and major market participants. There are imponderables like natural disasters, war political instability etc. which affect spot market. Derivatives are used as risk tools. An Indian exporter who is to receive sale proceeds in dollars, may wish to sell dollars on a future date as a protection against adverse change in exchange rate. Forward contracts existed centuries ago in India and other countries. But came into prominence in the early 80s

Bretton Woods Agreement in 1972 suspending the convertibility of US dollar into gold. The Chicago Mercantile Exchange, introduced in 1975, trading in currency futures as a hedge against the volatility in exchange rates, and currency option was launched on Philadelphia Stock Exchange in 1983.

2.4 Type of Derivatives

2.4.1. Forward Contract

IIB&F (2007) A forward contract is a simple derivative. It is an agreement to buy or sell an asset at a certain future time for a designated price. The contract may be between two financial institutions and a client. It is traded not on an Exchange but as an "Over the Counters (OTC) product. The variable is the market price of the asset. The agreed upon price is referred to as a delivery price. At the time the contract is entered into, the delivery price is chosen as that the value of forward contract to both parties is zero. It cost nothing to take a long (buy) or short (sell) position in the forward market. Delivery price remain but Forward price is liable to change, If any one buy dollars in January for delivery on Februarys and in the meantime the dollar appreciate buyer stands to gain on the other hand if dollar depreciate buyer losses. The forward contract enables to lock in "certainty" about the future price but does not improve the position. The forward contract is settled at maturity. The seller delivers the asset in return for cash equal to the delivery price.

The pay off to a buyer in a forward contract is the price at maturity is delivery price. While the pay off to the seller is the delivery price ie price at maturity.

2.4.2. Future Contract :

Future are exchange traded contracts to buy or sell financial instruments or physical commodities for future delivery at an agreed price. The asset may be currency, interest rate, or commodities like gold, crude oil , agro commodities and livestock.

Unlike a forward contract the exact delivery date is not specified in futures. The contract is referred to delivery month. The exchange specifies certain standard features of futures contract to facilitate trading, viz the quantity of underlying asset, quality (not

applicable to financial futures), Place of settlement, unit of price quotation. The exchange provides a ready liquid market and 'online trading' lends transparency to the deals. Price goes up as the investor choose the position when future price is determined by demand and supply.

Clearing house is act as an intermediary in future transactions. It may be a part of the exchange or a separate institution like a bank. It guarantees the performance of the contract by both parties to a transaction. Once a contract is entered into by two parties A and B, and recorded by the exchange, it is replaced by two contracts one between A and the clearing House and the other between B and the Clearing House. The exchange interposes itself in every deal as a buyer to every seller and a seller to every buyer. This guarantees that all the transactions are routed through the exchange. The exchange protects itself from counter party default by collecting margin from the traders. A clearing house member is required to maintain a margin with the clearing house, just as an investor is required to keep margin with the broker. The amount of margin (security deposit) is fixed by the exchange. The margin account of clearing house members are adjusted for gains or losses at the end of each trading day in the same way as the margin accounts of investors with the brokers. At the end of a trading all the outstanding contract are re-priced by the clearing house at the settlement price of that session for the purpose of crediting gains/debiting losses to the margin accounts. This process is known as "Mark to Market" (MTM).

Table: 2.1 Mark to Market Process:

Sr No	Impact Inventory Impact	Sales	Purchasing	Earning
1	High cost of inventory which would lead to a constraint in cash flow	Reduced sales value due to lower price which impact profitability	Increase in purchasing power lending to Higher volumes purchases	Net realization value in below cost & sales realizes at lower value thereby reducing earning.
2	Lower cost of inventory which	Increased sales values	Decrease in purchase price	Net realizable value is about cost & sales realizes at same or

	would lead to increase in cash flow	due to higher price		higher value thereby increasing earning.

Source: MCX

Mantu Kumar Mahalik, Debashis Acharya & M. Suresh Babu (2009), Concluded that future commodity markets plays a dominant role in the price discovery of spot market but there is no integrating relationship between the sport and future market it is suggested for government intervention in checking the dynamics of spot and future market.

Golaka C. Nath, Tulasenma Ligareddy (2008), Author has analysed the impact of future trading on commodity prices.he has mentioned here in this paper that government has permitted future trade in more than 100 commodities under various groups including agriculture commodities metals & energy product. The government ordered delisted of future contracts in urad, tur,wheat & rice during January and February 2007 suspecting that future trading in these commodities has been contributing to the increase in prices of these essential.

Table 2.2 Trends in volume trade on Future Exchange

Year	**Turnover(crore)**	**Growth**
2002-03	66530	92.8%
2006-07	33,27,633	272.3%

In above table we can see that the growth of future market is much more and therefore government should promote this market.

Kamaru (1982), mentioned in his paper that introduction of commodity futures trading generally reduced or at least did not increase cash price volatility. The study compared cash market volatility before and after the introduction of future trading. Whole market is depend on price and theirfore this market is important because it is controlling the cash price.

Dasgupta (2004) showed the effect of expected production shocks on the future price elasticity of supply .

Anto Joseph et al (2014) have examined strength and extent of casual relationship between sport prices and future prices of the commodities. Author has examined MCX and NCDEX and eight commodities. Their result shows that the powerful price discovery function in selected commodities. The result is also showed that there is strong uni directional relation from futures to spot in almost all selected commodities.

Dr Showartz (2000) His wide-ranging research interests have focused on different dimensions in asset and securities pricing. Topics in recent years include interest rate models, asset allocation issues, evaluating natural resource investments, pricing Internet companies, the stochastic behavior of commodity prices and valuing patent-protected R&D projects.

Nagwa samak & Hasina M Kamal, (2015) Global debates about determining the direction of Relationship between commodity future & spot prices regulates the importance of their issue . Author has guided the economist, agents to take corrective action. Author has studied the food spot and future prices using different methodology.Author has used Granger casuality. Author has mentioned he wanted to share which market could cause price volatilities to the other market & therefore he mentioned price volatilities . In this paper tow test Linear and non linearGranger causality test along with error correction model is used. This suggest that food future market will lead the food future price.hence food future market will lead in future. Hence direction of future information flow goes from food spot market to food future market.therefore market should minimize the speculative attack. They should focus on implementation of global virtual reserve. Developing countries should adopt possible protection.

2.5 Market Based Forecasts of Commodity Price:

Gonzalo Cortazar,E.Schwartz,F. Riera (2000)

UNCTAD, Arbeiem wein (2000) In this srvey Pice formation of commodity market was studied. Role of OTC market was discussed. Recent evolution of crude oil was discussed .Selected food Commodities were analyzed. What are the financialization effect on commodity market were discussed. Focused busness cycle were studied. Authr has concluded that majoity of the paticipant do not base their trading decision on the fundamentals of supply and demand. Price discovery by a large number of

commodity market investors are inthe market is pssible due to qick prcessing of information about specific supply and demand.study metioned that financial investors play big role in the market because they provide money supply in the market. They use all instruments. Stud y shows that price volatility increases.There is always some volatility is their in the market.

Conclusion:

Different Papers were reviewed and analysis & was studied .Many authors have focused on growth of economy, growth of market , evolution & Trend of market were discussed and studied through research paper. Pricing were analyse by many author and how pricing change , what is volatility and how it affected on market & how overall market return is affected . what are the different risk measure . Many projects and report are available, Difference between Spot market and Future market is also studied. Pricing and volatility of market were studied. Condition of commodity market is also analyzed. Debates on market were seen and recommendation were suggested.

CHAPTER 3:

RESEARCH METHODOLOGY

3.1 Introduction

The research follows the descriptive method of research. This method is put to many statistical analyses. It determines the frequency with which something occurs or the relationship between two variables. According to Cooper and Schindler (2007) "the descriptive studies, in contrast to exploratory, relate to more formalized studies typically structured with clearly stated hypothesis or investigative questions. Formal studies of this nature serve a variety of research objectives such as Description of phenomena or characteristics associated with a subject population (who, what, when, and how of a topic) and discovery of association among different variables" This method also understands the buyer's behavior and market characteristic in this research.

Research is not restricted to any particular area of finance, but it is applicable to all its aspects & phases. Research emphasizes two requirements of good research-systematic search and objectivity in the collection and analysis of the data.

This chapter is basically based on research gaps and literature reviews which are identified in the second chapter. The first part discusses the need for the study. Sections 3.1.1, 3.1.2, and 3.1.3 are 3.1.4 are discussed the objective of the study, the Hypothesis of the study, data description, and statistical tools used. In this research Chi-Square Test, T-Test, and Measure of Central Tendency are used. In this chapter calculation of variables that have been used in the study.

3.1.1 Research Problem:

The research gap stated at the end of the previous chapter on the literature review that why this topic needs to be researched. The literature review points out two reasons which are very important 1. A risk factor is not yet researched therefore it is an opportunity to study the market with a risk factor, 2. What is the perception of investors that is again an essential aspect of the study?

3.2 Research Question(s)

A number of research questions arise from the research problem stated above. Which are framed and eventually translated into a Questionnaire for the research project.

This has been enclosed as an Annexure to the thesis. However, a few of the representative questions are stated below.

1. How important were the following Motivations for investing in the commodity market?
2. What percentage of your income do you invest? (% wise)?
3. Which among these investment criteria do investors usually prefer?
4. In which commodity do you most prefer to invest? (Mention the name of a commodity?
5. In which market do you prefer to trade? Why (Give reason in short)
6. Which type of market do you prefer to trade in?
7. Where do you find more risk?
8. How much % of the profit do get approximately through the following commodity. (Mark tick √ Mark & mention in short)
9. Which type of trading do you prefer the most?
10. What attracted you to the Commodity market?
11. How often do you trade?
12. Volatility of stock market?
13. Volatility of Commodity Market?

The research questions stated are based on the Literature review carried out by the researcher. These resulted in the perception of investors, risk factors, returns from different commodities, and Types of commodities where investor invest their investments.

3.3: Objective of the Research:

The Objective formulated for the research are as follows:

The objective of the Study:

1. To study the mechanism and processes followed in the Indian commodity markets.
2. To study the regulatory mechanism in the commodity markets.

3. To identify various risk management strategies adopted by Investors for the financial Market in general & for the commodity market in particular.
4. To study the perception of Investors with respect to strategies for risk management in the Commodity market.
5. To study the evolution and growth of the commodity market in India and selected developed Economies in other parts of the world**.**

3.4 Hypothesis of the Study:

1. Stock markets in India are more regulated than the Indian commodity markets
2. Commodity market index is less volatile compared to the stock market index.

3.5 Research Design:

The study has been descriptive in nature. Descriptive information has been gathered through a structured questionnaire. It is divided into primary data collection which is collected through a Questionnaire. It is divided into two parts. Primary data collection and secondary data collection.

3.6 Nature of Study:

The study has been essential, quantitative & qualitative data. Data analysis included data entry with coding. Data were checked and found errors if any. Frequency charts and hypothesis testing methods were used to study relationships between two variables and convert the data into meaningful information. Univariate such as the Independent sample t-test and Chi-square test have been adopted to significance of the difference between various parameters.

3.7 Data Collection Methodology:

The respondents were approached via Direct Contract, through a questionnaire. All the respondents were investors who invest in the share market and commodity market regularly and Traders from different trading houses. This reflects positively on the reliability of the information obtained given the respondents have a high level of

familiarity with the subject matter. The questionnaire comprised 43 Questions and 4 hypotheses and would take around 15 minutes to fill up the responses.

3.8 Instrument Design:

A survey instrument was developed based on the following:

1. Suggestions given by the experts: The researcher visited many trading houses. Has an Interaction with experts discussed with them and develop a questionnaire?
2. Literature Survey.

3.8.1. In-depth interview:

As a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a special topic,

3.8.2 Pilot Study:

The main purpose of the study was to establish the construct validity and internal consistency of the adapted instrument. The pilot survey was carried out on 30 Investors and traders from Pune City. The respondents were approached through direct contact.

The pilot study results have been subjected to a reliability testing procedure in SPSS.

A commonly used test named computation of Cronbach Alpha has been used. The result of the test is presented below.

Cross Processing Summary (Table 1)

		N	%
Cases	Valid	30	100.0
	Excluded	0	0
	Total	30	100.0

Table 3.1 Cronbach Alpa Sample Summary

	(Table2) Cronbach's Alpha Based on standardized Items	**N of Items**
.749	.757	32

3.8.3. The Inference is drawn from Cronbach Alpha Test

As given in Table 3.1 sample size for the pilot study was 30 and all 30 were valid cases for analysis. The Cronbach Alfa coefficient calculated was s0.749 (Table 3.2)

As suggested by George and Mallery (2003 p 231) the alpha coefficient if greater than 0.7 is an acceptable measure of internal consistency and reliability. The 3.3 shows item statistics for all 30 items, where all means and standard deviations are in the same range, and very less variation is present. Cronbach Alpha coefficient is 0.754 and 0.757, which is only slightly higher than Cronbach Alfa coefficient which is 0.749.

3.9 Sampling Design:

The researcher has referred trading house list from the commercial Directory of Pune,

In selecting the trading houses consideration has been given to the following factors:

a) Rs 10 crores and above
b) Number of investors more than 100. Appropriate sample size has been taken to survey.

3.9.1 Sampling Unit:

An element or a group of elements on which observations can be taken is called a sampling unit. In this research study the objective is to analyze the Perception of investors, Risk in the market hence sampling unit is 'Investor' trading in commodity market and stock market.

3.9.2 Population:

The collection of all the sampling units in a given region at a particular point of time or a particular period is called population. Yamini and Krejcie & Morgan in their paper 1960 and 1970. As per Infinite population sample size is to be decided.

In this research, the population for the study is all Investors, and Traders who invest in the market in Pune from the period 2013-2019. It is finite in nature. A trading company having a turnover above 10 crores has only been considered.

With the above consideration, there is around 10 big and small Trader in and around Pune. If the investor and trader's strength is taken as 100, the total infinite population would become 100* 1000 = 100,000 in number.

(Critical Value *(Margin of error^2)*Sample Proportion*(1-Sample Proportion)/(Sample proportion(uncertain)^2)/Population Size- 1+((Critical value)*Sample Proportion *(1-Sample Proportion)/(Sample proportion^2))))

The above formula is used and we found 160 as Sample Size.

3.9.3 Sampling Frame:

The list of all the units of the population to be surveyed constitutes the sampling frame. The researcher has access to the directories of MCCIA and Maharashtra Industry to list the Trading Houses. The sampling frame constitutes the list of

Traders and Investors, Address, telephone numbers, and email identification details.

3.9.4 Sampling Method:

A simple random technique was used as a procedure to select sample elements for this study purpose. 500The Population of the study comprises 10 traders, the population definition criterion was Pune-based Traders having turnover above 10 crores. A sample of 20 to 30 investors was randomly selected from each of 10 trading companies to ensure that every element in the population has an equal and known chance of being getting selected.

3.9.5 Sample Size Determination:

As mentioned above, all traders in trading companies in Pune city have been viewed as the target population for the study. Trading companies having turnover above 10 crores have only been considered. The sampling frame includes the investors and traders who are investing in the market for at least 1 year. The researcher referred Industrial and Commercial Directory of Pune, Published by MCCIA, and Maharashtra Industry website for identifying the software industries. A total number of 500 investors//traders were targeted out of which information for 158 Investors could be obtained. The total sample size for the study in this 158.

Which is well above the computed sample size of 150 at a 95% of confidence level,10 margins of error, and a questionnaire using a 5-point Likert Scale. (Malhotra and Birks, 2012)

$$N \geq \frac{(z^2)(s^2)}{(e^2)} \qquad n \geq \frac{(1.96^2)\,(4/6)^2)}{(0.1^2)} \geq 150$$

Where,

N=sample size

Z= Standard score corresponding with 95% level of confidence =1.9>6

S^2 = Variance = $[\text{Range/Max Value + Min Value})]^2 = (4/6)^2$

E = Tolerable error = (1-0.9) = 0.10

Conclusions:

Research Methodology

The study throws insights on the trading method, and practices to be followed by a commodity trader to manage the risk faced in trading. Better knowledge and better analysis will always be helpful for a trader to trade in the commodity market with the help the different techniques. A questionnaire is used to collect the data to assess the investor's perception of the market. The hypothesis is formulated based on objectives. A risk factor is also checked by using same method.chi square test were used to find out the finding.

CHAPTER 4

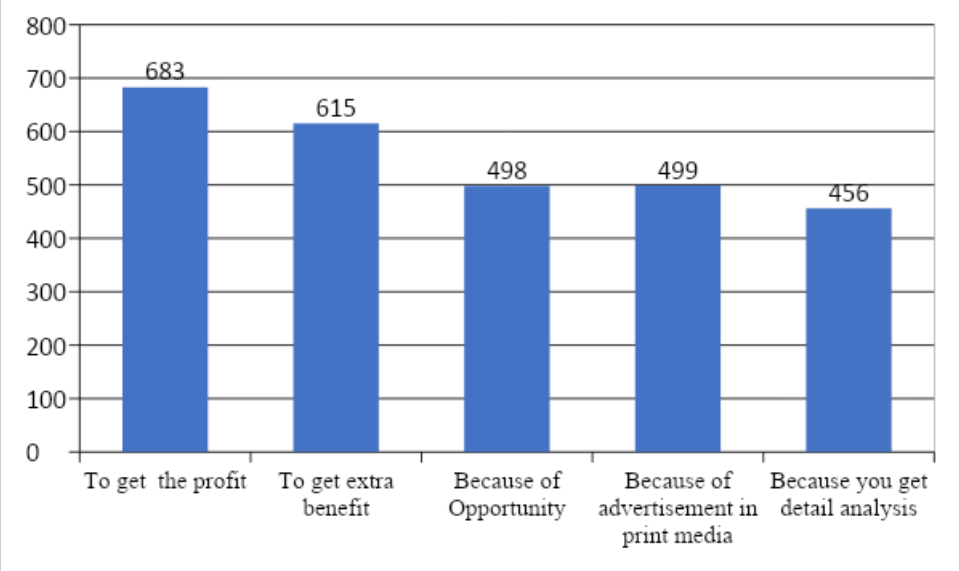
ANALYSIS & INTERPRETATION

An attempt has been made in this study to investigate the relationship between the Investment, Profit or Return. And motivation for investment. This chapter is divided into six sections like Regulation, investments and Returns, second section discussed about the Income invested in different investments. Risk and Return. Third section deals with a Risk and Returns. Fourth section deals with Different types of Investments. Fifth section deals with testing of hypothesis and sixth one provides concluding observations.

Part 4.1 – Motivation for the Investment

Table 4.1: Motivation for the investment

To get the profit	683
To get extra benefit	615
Because of opportunity	498
Because of Advertisements in print media	499
Because you get details analysis.	456



Own Source:

Figure:4.1

Interpretation:

From the above figure we can say that 683 investor says that they invest to get profit. There are 615 investors who invest to get extra benefit. There are 498 investor who says that they invest because there are opportunity available. 499 investor says that they invest because they saw the advertisement, so they invest in commodity market. There are 456 investor who say that they check the analysis details and they invest in the market.

4.1.1: Investment to Get A Profit

Table 4.1.1 : To get Profit :

Sr.No	Levels	Total of scale	%
1	Very likely	104	64%
2	likely	30	19%
3	Neither likely nor unlikely	8	5%
4	unlikely	12	8%
5	very unlikely	6	4%
6	not applicable	0	0%
		160	100

Own Source:

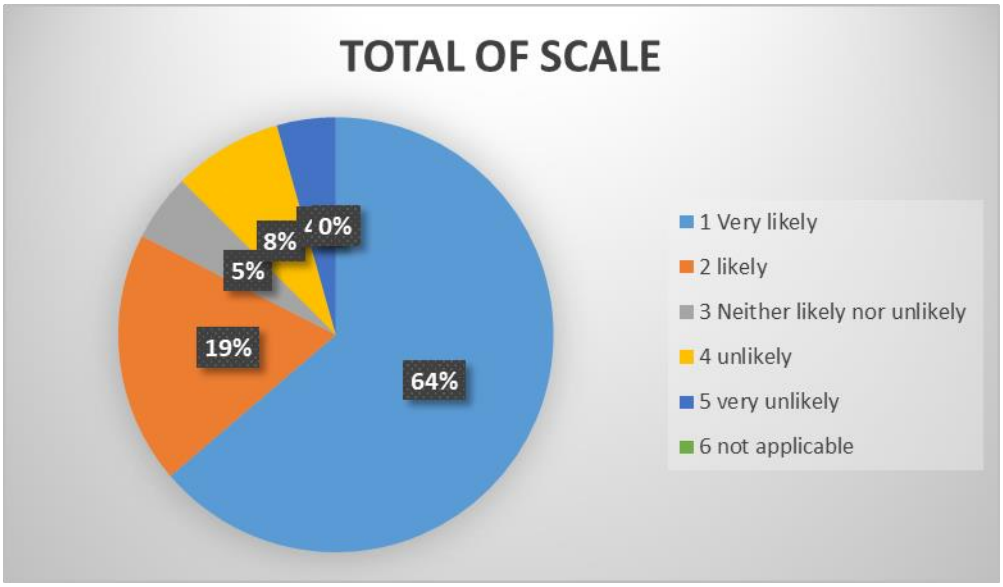


Figure: 4.2

Interpretation :

From the above graph it is revealed that 64% Investors says that very likely they invest in commodity market to get Profit. 19% Investors says that they likely invest in commodity market to get profit. 5% Investors say that they neither likely nor unlikely invest in commodity market to get profit. 8% Investor says that they unlikely invest in commodity market to get profit. 4% Investor says that they very unlikely invest in commodity market to get profit.Therefore we can say that investor are investing for better profit.

4.1.2: To Invest to get extra benefit:

Table 4.1.2 : To Invest to get extra benefit

Row Labels	Level	Invest to get extra benefit	%
1	Very un likely	2	1%
2	unlikely	20	13%
3	Neither likely nor unlikely	17	11%
4	likely	78	49%
5	Very likely	43	26%
Grand Total		**160**	100%

Own Source:

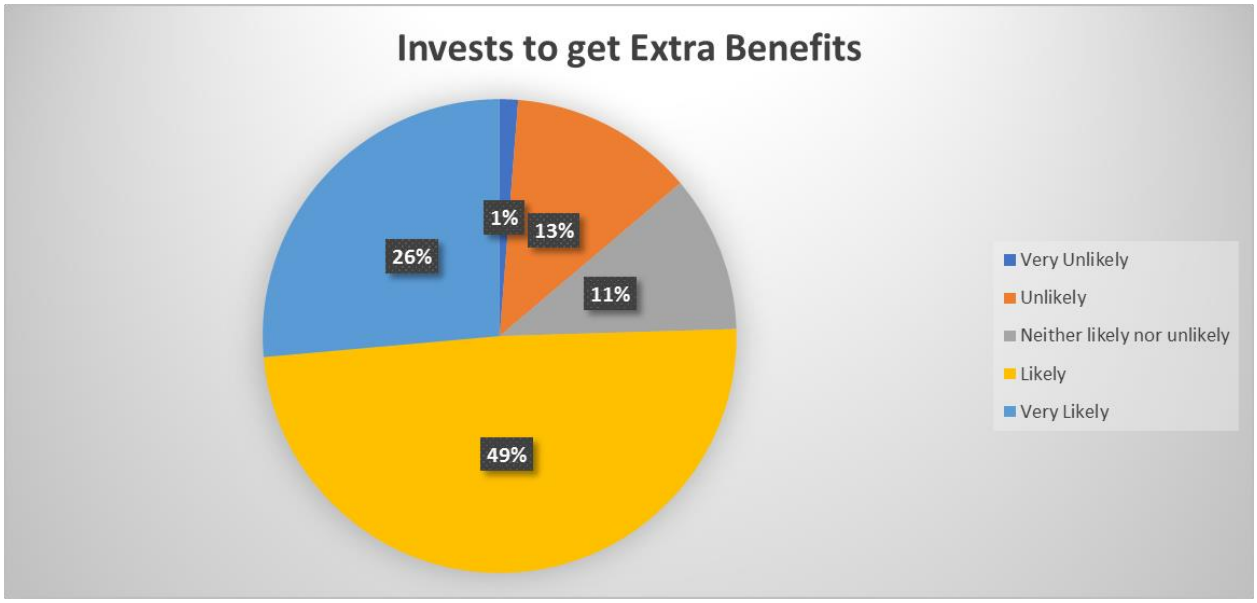


Figure:4.3

From the above table we found that Investor says that in commodity market 26% very unlikely invest in market. 13% Unlikely invest in commodity market. 11% Investor neither likely nor unlikely invest in commodity market. 49% Investor says that likely they invest in commodity market. 1% Investors says that they very likely invest in commodity market.

4.1.3 : To Invest in Market due to Opportunity:

Table 4.1.3 : To Invest in Market due to Opportunity:

Row Labels	Level	**Sum of Because of Opportunity**	**%**
0	Very unlikely	0	0%
1	Unlikely	3	2%
2	Neither likely nor unlikely	18	11%
3	Likely	56	34%
4	Very likely	57	37%
5	Not Applicable	26	16%
Grand Total		160	100

Own Source:

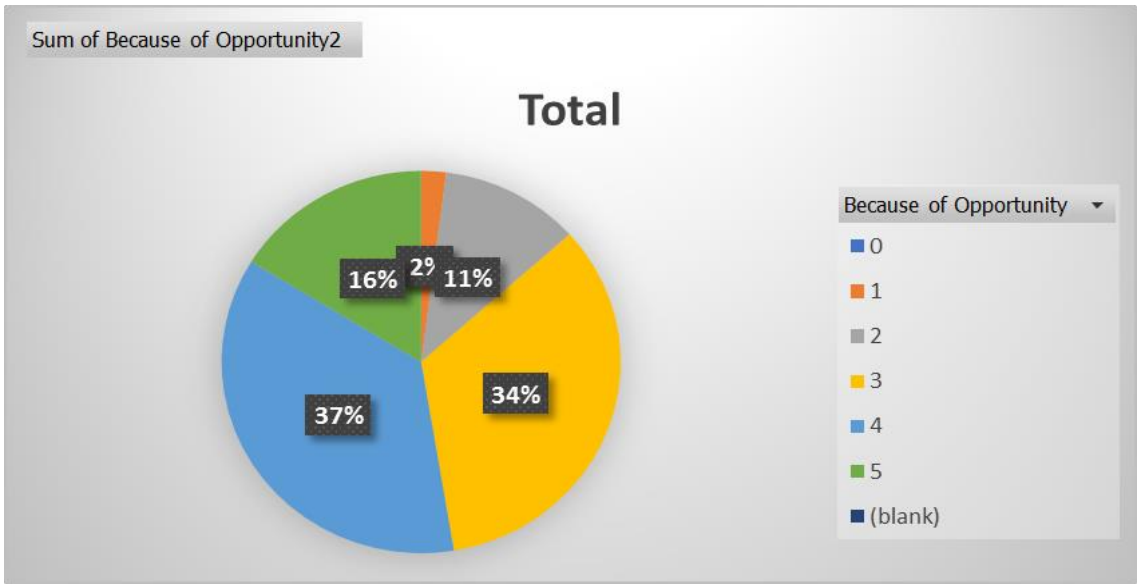


Figure : 4.4

From the above Pie chart Investors says that 16% investor invest very likely in commodity market. 36% Investor says that they likely invest in commodity market.34% investor says that they will neither likely nor unlikely invest in commodity market. 11% investor says that they are unlikely invest in commodity market. 2% investor says that they are very unlikely invest in commodity market.

4.1.4 : To Invest in Commodity Market because of advertisement in print media.

Table 4.1.4 : To Invest in Commodity Market because of advertisement in print media.

Row Labels	Sum of Because of advertisement in print media	Levels	%
1	8	Very unlikely	2%
2	18	Unlikely	11%
3	55	Neither likely nor unlikely	37%
4	58	likely	34%
5	27	Very likely	16%
Grand Total	**160**		**100%**

Own Source:

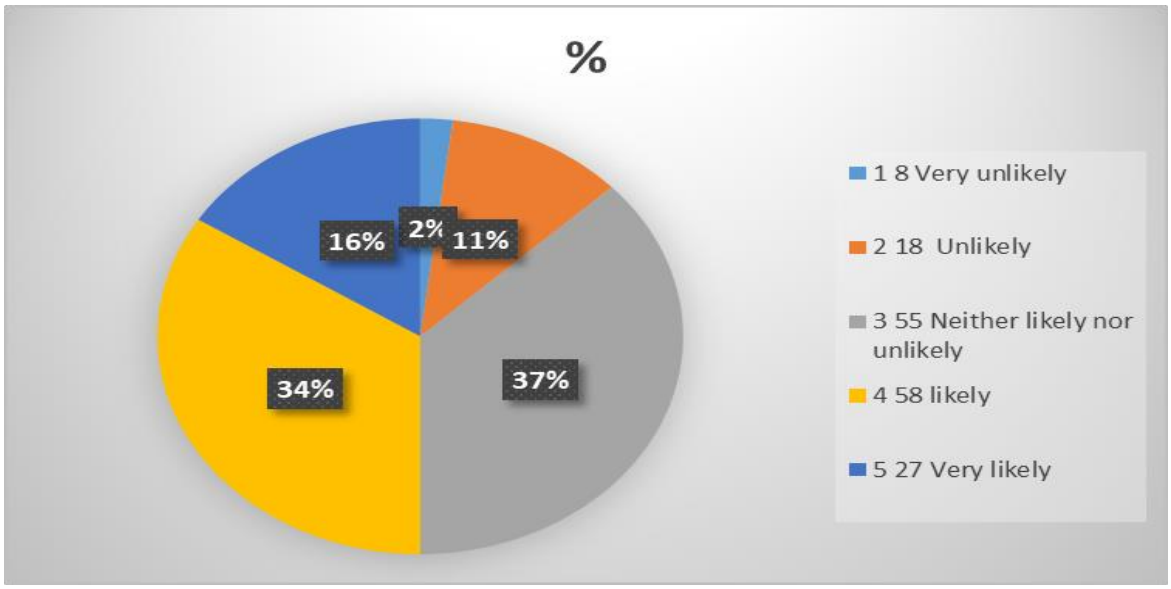


Figure : 4.5

Interpretation:

16% Investor says that very likely they invest in commodity market because of advertisement in print media. 34% likely says that they invest in commodity market because of Advertisement. 37% investors says that they neither likely nor unlikely invest in commodity market because of Advertisement in Print media. 11% unlikely invest in commodity market. 2% says that very unlikely invest in commodity market due to advertisement in print media.

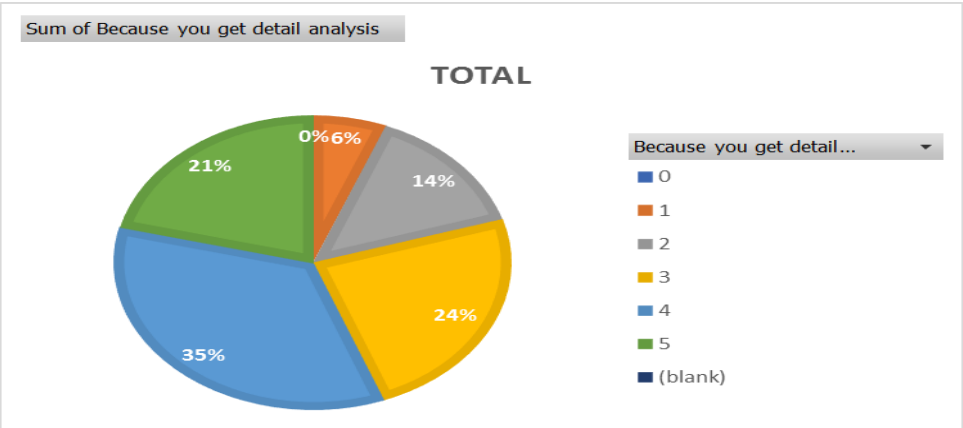
4.1.5 : To Invest because get detail analysis:

Table 4.1.5 : To Invest because get detail analysis:

Row Labels	Sum of Because you get detail analysis	Levels	%
0	0	Not Applicable	0%
1	9	Very unlikely	6%
2	22	Unlikely	14%
3	43	Neither likely nor unlikely	24%
4	54	likely	35%
5	32	Very likely	21%
Grand Total	160		100

Own Source:

Figure: 4.6



Interpretation:

From the above charts and table, it is interpreted by Investor 21% says that they very likely invest in commodity market by checking detail analysis. 35% investors say that they likely invest in commodity market by checking detail analysis. 24% investor say they neither likely nor unlikely invest in commodity market by checking detail analysis. 14% investors say that they unlikely invest in commodity market by checking detail analysis. 6% investors say they very unlikely invest in commodity market by checking detail analysis.

4.2.: Investment option from Income

Table 4.2. : Investment options from income:

Investment	No of Investors	%
Bank Deposit	22	13
Mutual Fund	21	13
LIC	10	6
Real Estate	27	16
Life Insurance	15	9
Equity Market	40	25
Commodity Market	25	15
GRAND TOTAL	160	100

4.2.3Own Source:

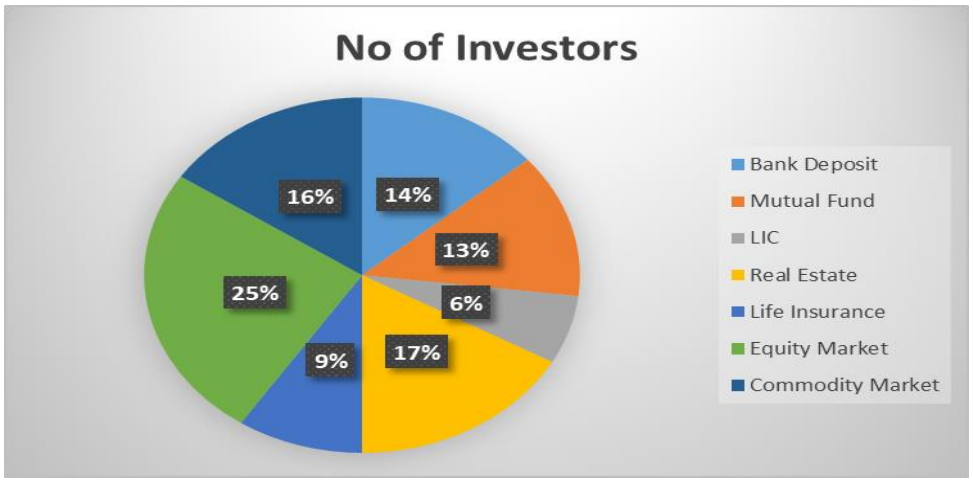


Figure:4.7

Interpretation:

From the above figure we can say that Equity Market is one of the highly preferable market in India. Commodity Market is second largest preferred market where investor like to trade. Bank Deposits and Mutual Funds are Third and fourth preferred market. Last Preferred investment is LIC . It means we can say that High risk High return. These day investor want more return we can also say that most of the investor are from younger generation and they really wanted to take risk for higher return.

4.2.1 : Percentage of your investment invested in Bank Deposit:

Table 4.2.1 : Percentage of your investment invested in Bank Deposit:

Row Labels	Level	Percentage of your income invest in Bank deposit	%
0	Not Applicable	0	0
1	Very unlikely	9	6%
2	Unlikely	29	18%
3	Neither likely nor unlikely	21	13%
4	likely	34	21%
5	Very likely	67	41%
Grand Total		**160**	100

Own Source:

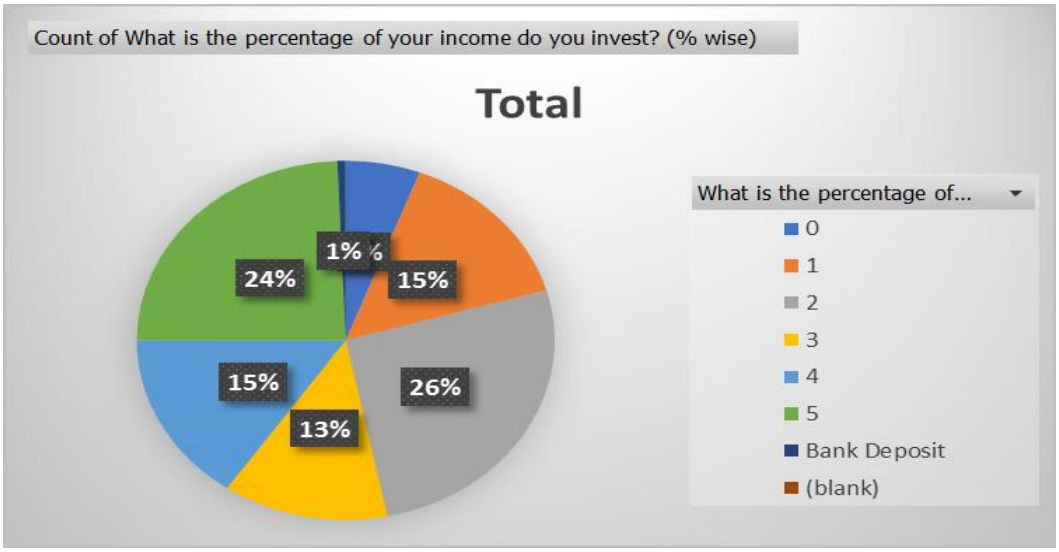


Figure:4.8

From the above diagram we can say that 42% investor very likely invest in Bank Deposit. 21% investors says likely they invest in Bank Deposit. 13% investor neither

likely nor unlikely invest in bank deposit. 18% investor invest unlikely in bank deposit.5% investor very unlikely invest into bank deposit.

4.2.2 : Income invested in Mutual Fund

Table :4.2.2 : Income invested in Mutual Fund

Row Labels	Level	Sum of Mutual Fund	%
0	Not Applicable	0	0
1	Very Unlikely	6	4%
2	Unlikely	21	13%
3	Neither likely nor unlikely	35	22%
4	likely	30	24%
5	Very likely	59	37%
Grand Total		**160**	100%

Own Source:

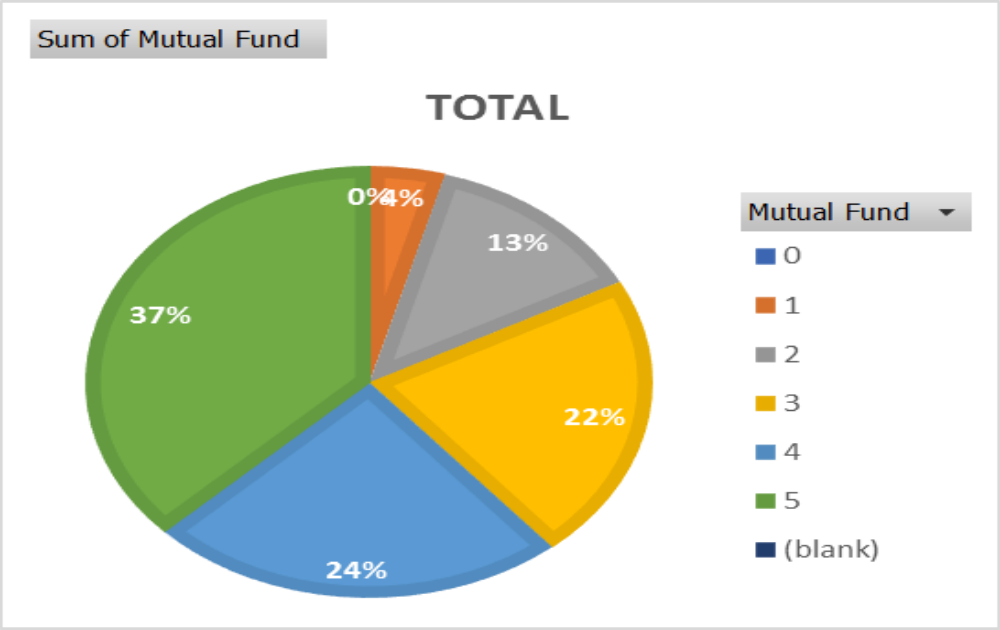


Figure:4.9

Interpretation:

From the above diagram 37% investor very likely invest in Mutual Fund. 24% likely invest their income in mutual fund. 22% investor neither likely nor unlikely invest their

income in mutual funds. 13% Unlikely invest their income in Mutual Fund. 4% investor very unlikely invest their income in Mutual Funds.

4.2.3: Income invested in Life Insurance :

Table 4.2.3 : Income invested in Life Insurance:

Row Labels	Sum of Life Insurance	%	level
0	0	0	Not Applicable
1	15	9%	Very unlikely
2	32	20%	Unlikely
3	43	27%	Neither likely nor likely
4	43	27%	Likely
5	27	17%	Very likely
Grand Total	**160**	100%	

Own Source:

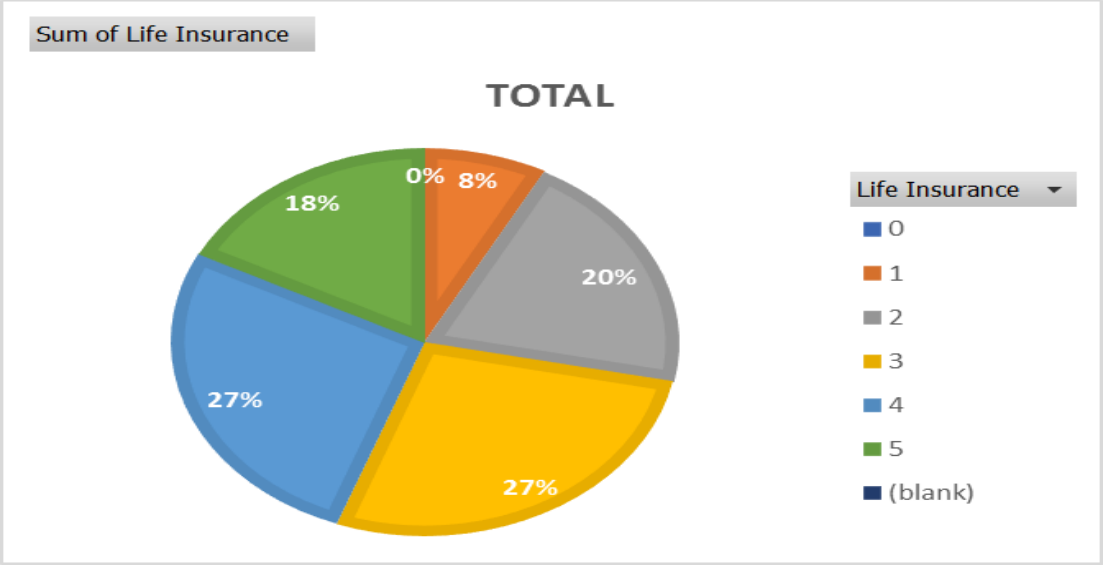


Figure: 4.10

From the above diagram we can say that 17% investor very likely invest in life insurance.27% likely invest in life insurance. 27% neither likely nor unlikely invest in life insurance. 20% unlikely invest in life insurance. 9% very unlikely invest their income in life insurance.

4.2.4: Income invested in Equity Market :

Table 4.2.4 : Income invested in Equity Market:

Row Labels	Sum of Equity Market	level	%
0	0	Not applicable	0%
1	3	Very likely	2%
2	11	Unlikely	7%
3	51	Neither likely Nor Unlikely	32%
4	61	Likely	38%
5	34	Very likely	21%
(blank)			
Grand Total	**160**		100%

Own Source:

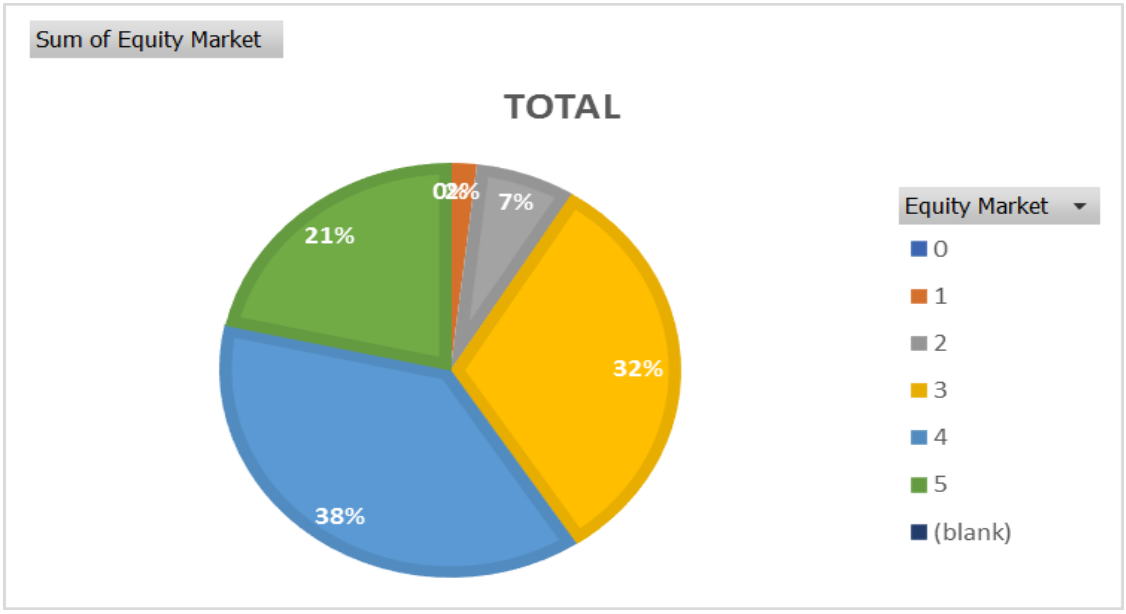


Figure:4.11

Interpretation:

From the above diagram investor very likely to say that 21% of investor very likely says that they invest their income in equity market.38% of income they likely invest in equity market. 32% of income they neither likely nor unlikely invest in equity market.7% unlikely invest in equity market. 2% very unlikely invest in equity market.

4.2.5: Income invested in Commodity Market

Table 4.2.5 : Income invested in Commodity Market

Row Labels	Sum of Commodity market	%	Level
0	0	0%	Not Applicable
1	3	2%	Very unlikely
2	16	10%	unlikely
3	54	34%	Neither likely Nor Unlikely
4	50	31%	Likely
5	37	23%	Very likely
Grand Total	**160**	100%	

Own Source:

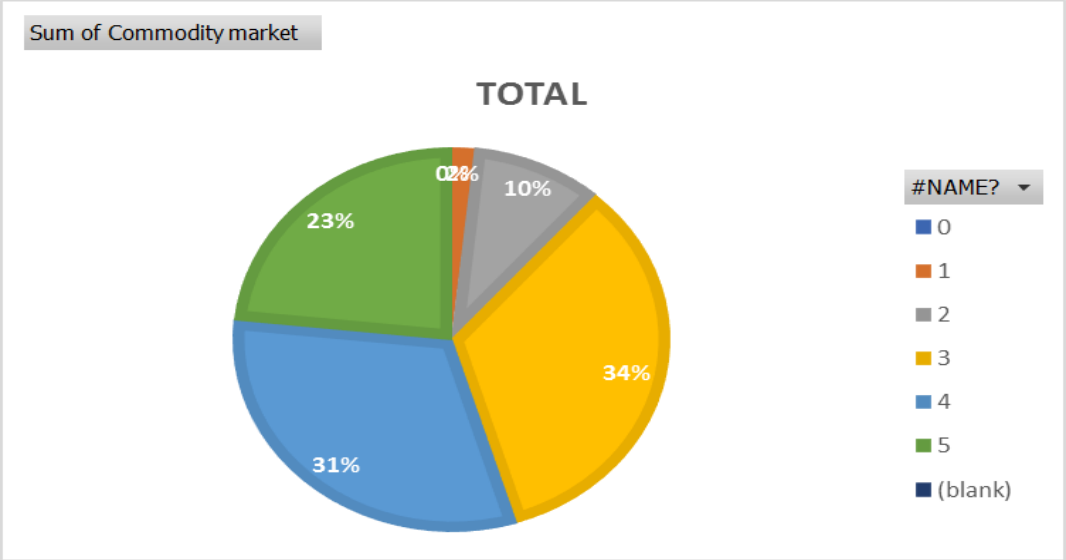


Figure:4.12

Interpretation:

From the above figure investor says 23% of their income they very likely invest in commodity market. 31% likely invest in commodity market. 34% of their income Neither unlikely nor likely invest in commodity market .10% unlikely invest in commodity market and 2% very unlikely invest in commodity market.

4.3: Reason to invest in Commodity Market :

Table 4.3: Reason to invest in Commodity Market

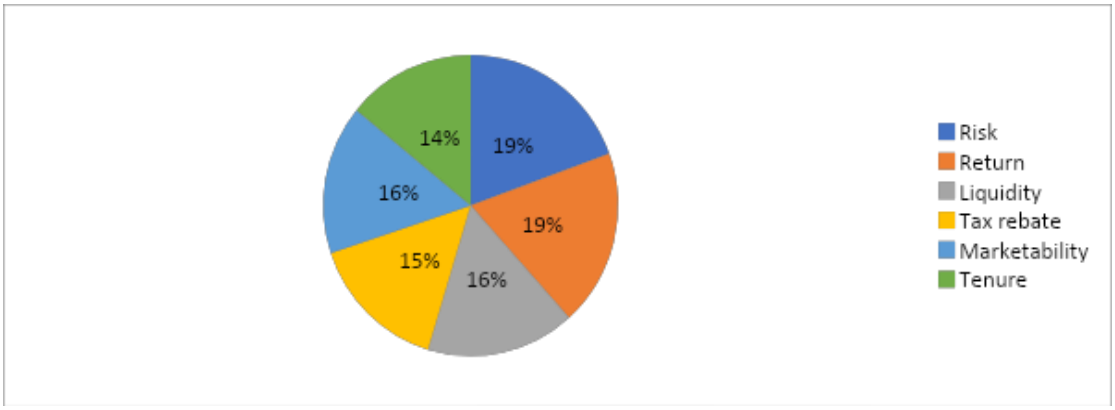
Reasons	%
Risk	20%

Return	19%
Liquidity	16%
Tax Rebate	15%
Marketability	16%
Tenure	14%

Own Source:

Figure: 4.13

Reason to invest in commodity market.



Interpretation:

From the above criteria investor says that though they know there is risk 20% investor invest in commodity market because high risk high return. 19% investor say they invest for return. 16% investor says that they invest in commodity because of liquidity.15% investor say that they invest because they get Tax rebate. 16% investor says that they invest for marketability.14% investor says that they invest for tenure.

4.4.: Which commodity do you prefer to invest:

Table 4.4

In Which Commodity do you most prefer to invest? (Mention name of commodity (1 is least traded 5 most actively traded commodity) (1 least traded , 5 Most actively traded commodity)

Row Labels	%	Level

0	20%	Non Ferrous
1	21%	Bullion
2	12%	Energy
3	16%	Oil
4	15%	Spices
5	16%	Agro Product
(blank)		
Grand Total	100%	

Own Source:

Which commodity do you most prefer to invest?

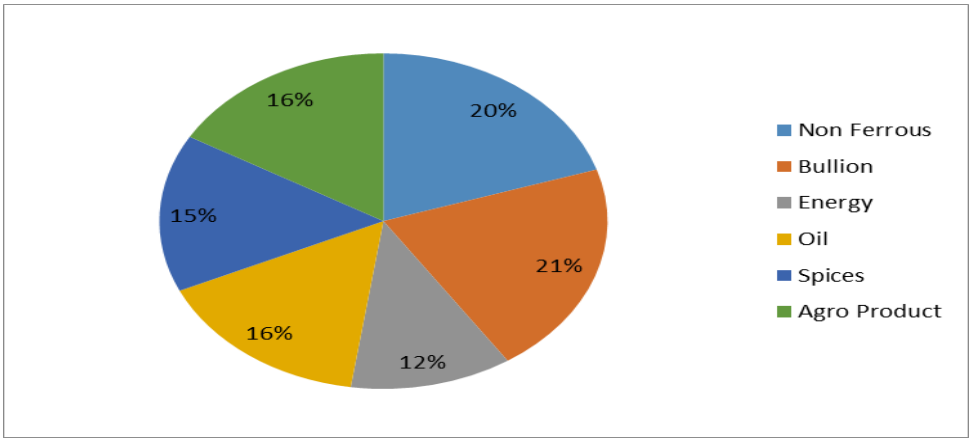


Figure:4.14

Interpretation:

From the above figure we can says that investor invest their 20% income in Non-Ferrous commodities whereas 21% they invest in Bullion. Their 12% income they have invested in Energy, whereas 16% of their income investor have invested in Oil, 15% of income they have invested in spices and remaining 16% they invest in Agro Commodities. So we can says that investor are preferring nonferrous commodities to invest their money in commodity markets.

4.4.1 : Investment in Non-Ferrous Commodity :

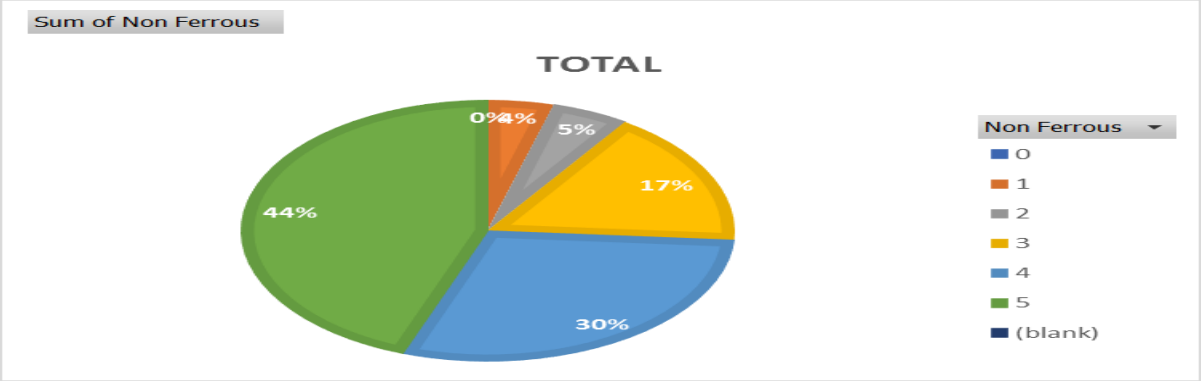
Table 4.4.1 : Investment in Non-Ferrous Commodity:

Row Labels	**Sum of Non Ferrous**	%	Level
0	0	0%	Not Applicable

1	7	4%	Very Unlikely
2	8	5%	Unlikely
3	27	17%	Neither likely nor likelys
4	47	29%	likely
5	71	44%	very likely
(blank)			
Grand Total	**160**	100%	

Own Source: Figure 4.15

Investment in Non-Ferrous Commodity:



Interpretation :

From the above figure investors say that 44% very likely invest in Non Ferrous commodity. 29% likely invest in Non-Ferrous commodity. 17% Neither likely nor unlikely invest in Non-Ferrous commodity.5% unlikely 4% very unlikely invest in commodity market.

4.4.2: Investment in Bullions:

Table: 4.4.2 : Investment in Bullions

Row Labels	Sum of Bullion	Level	%
0	0	Not Applicable	0%
1	3	very unlikely	2%
2	11	unlikely	7%
3	23	Neither likely nor unlikely	14%
4	61	Likely	38%
5	62	Very Likely	39%
Grand Total	160		100%

Own Source:

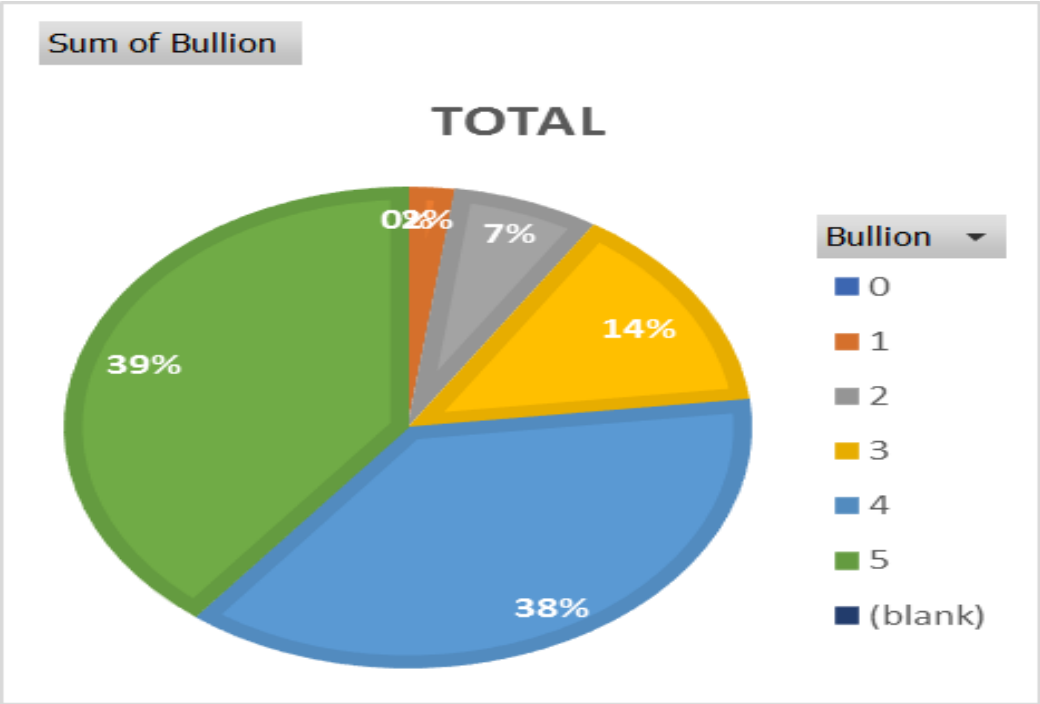


Figure: 4.16

Interpretation:

From the above figure we can say that 39% investor very likely investor in Bullions. 38% likely invest in Bullion. 14% investor neither likely nor unlikely invest in Bullion.7% unlikely invest in Bullions. 2% very unlikely invest in Bullions.

4.4.3: Preference to Energy as investment

Table: 4.4.3 : Preference to Energy as investment

Row Labels	**Sum of Energy**	Level	s
0	0	Not Applicable	0%
1	16	Very Unlikely	10%
2	37	Unlikely	23%
3	50	Neither likely nor Unlikely	31%
4	36	Likely	23%
5	21	Very Likely	13%
Grand Total	**160**		100%

Own Source:

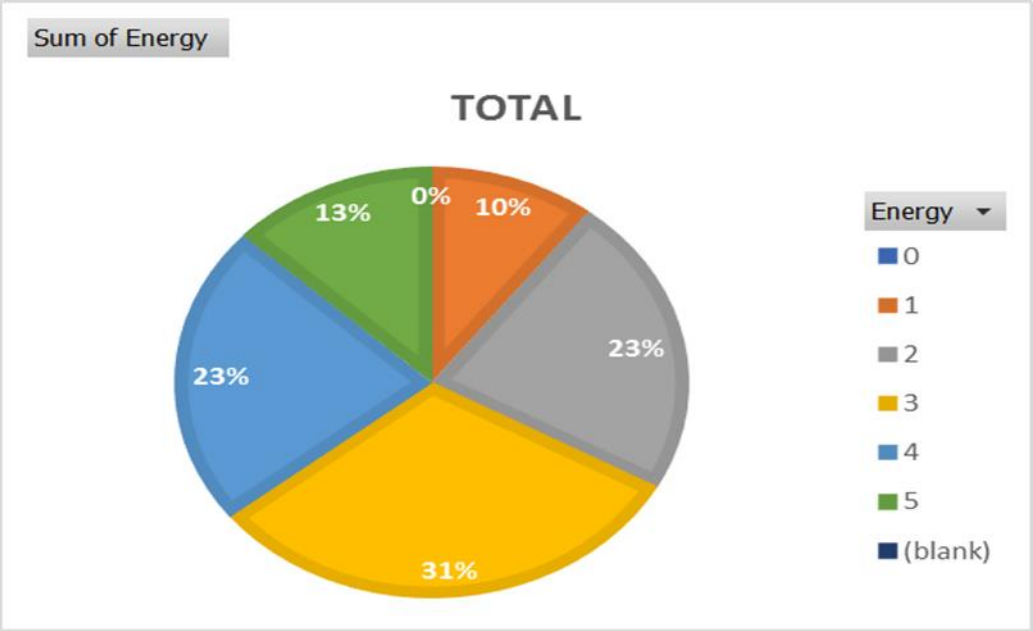


Figure:4.17

Interpretation:

From the above diagram 13% says that very likely they invest in energy. 23% likely invest in energy. 31% Neither likely nor unlikely invest in energy.23% unlikely invest in energy.10% very likely invest in energy. 10% very unlikely invest in energy.

4.4.4 : Preference to Invest in Oil

Table 4.4.4. : Preference to invest in Oil

Row Labels	**Sum of Oil**	Level	%
0	0	Not Applicable	0%
1	10	Very Unlikely	6%
2	11	Unlikely	7%
3	53	Neither likely nor unlikely	33%
4	53	likely	33%
5	34	very likely	21%
Grand Total	**160**		100%

Own Source:

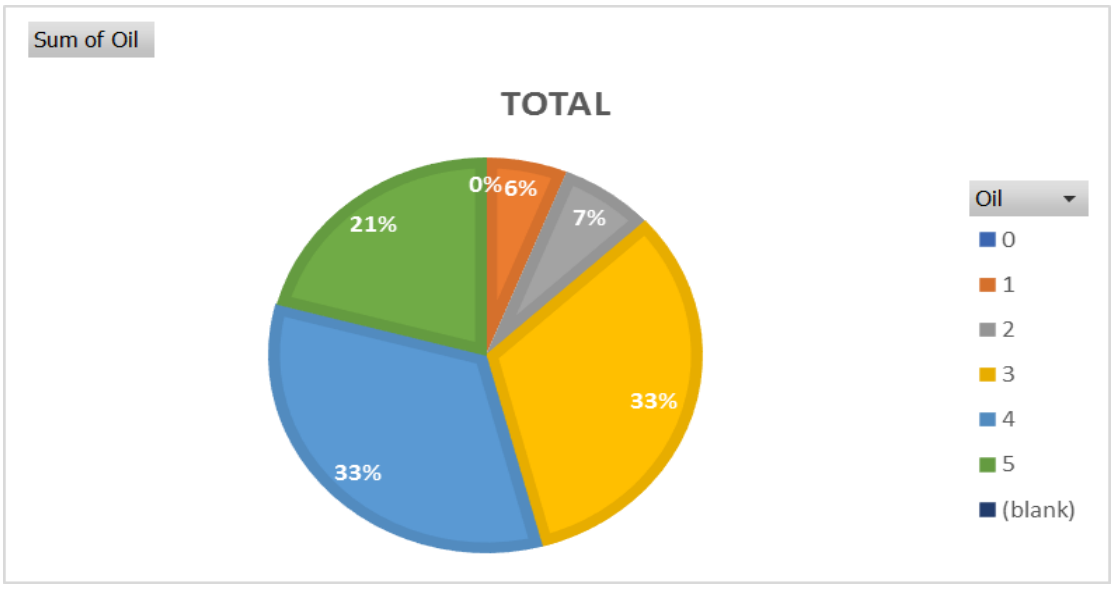


Figure:4.18

Interpretation:

From the above diagram 21% investor very likely invest in oil.33% likely invest in oil. 33% neither likely nor unlikely invest in oil.7% unlikely invest in oil. 6% very unlikely invest in oil. So from above diagram we can say that there are 70% investor who are investing in oil and approximately 30% are not investing in oil.

4.4.5.: Preference to invest in Spices:

Table 4.4.5 : Preference to invest in Spices

Row Labels	**Sum of Spices**	Level	%
0	0	Not Applicable	0%
1	3	Very unlikely	1%
2	21	Unlikely	13%
3	34	Neither likely nor unlikely	21%
4	46	Likely	29%
5	56	Very likely	35%
(blank)			
Grand Total	**160**		100%

Own Source:

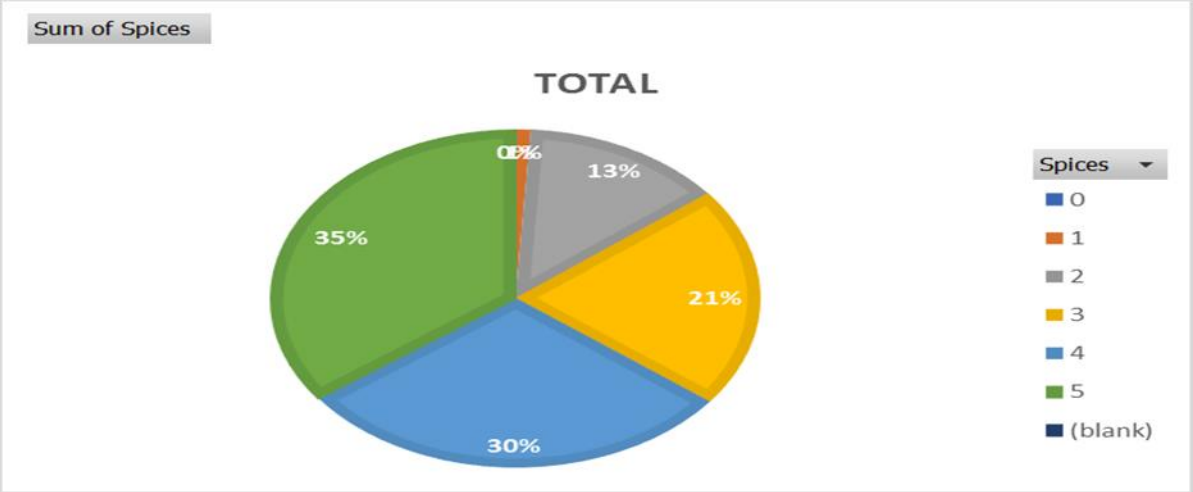


Figure:4.19

Interpretation:

From the above figure 35% very likely invest in commodities like spices. 30% likely invest in spices. 21% neither likely nor unlikely invest in spices. 13% unlikely invest in spices. 1% very unlikely invest in spices.

4.4.6: Preference to invest in Agriculture Commodity:

Table 4.4.6 : Preference to invest in Agriculture Commodity

Row Labels	Sum of Agriculture Product	Level	%
0	0	Not Applicable	0%
1	8	Very unlikely	5%
2	26	unlikely	16%
3	29	Neither likely nor unlikely	18%
4	23	likely	15%
5	74	Very Likely	46%
(blank)			
Grand Total	**160**		100%

Own Source:

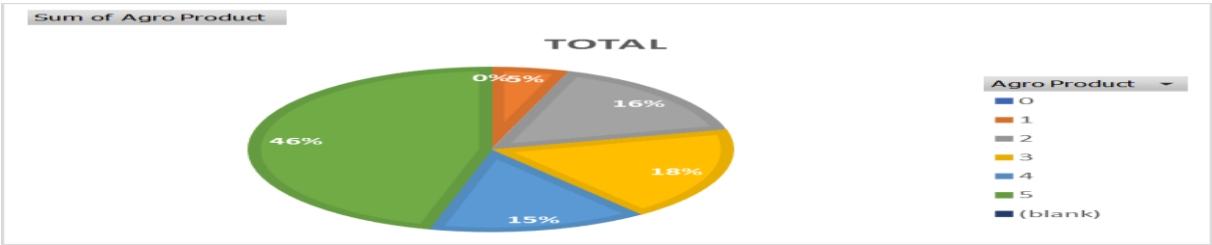


Figure:4.20

Interpretation:

From the above figure 46% investor very likely invest in agriculture commodity which is highest investment in all other commodities. 15% likely invest in agriculture commodity. 18% Neither likely nor unlikely. 16% unlikely invest in agriculture commodities.5% very unlikely invest in agriculture commodities.

4.5: Preference for Investment

Table 4.5: **Preference for Investment:**

Commodities	%
Non-Ferrous	20%
Bullion	21%
Energy	12%
Oil	16%
Spices	15%
Agro Product	16%

Own Source:

Preference for the investment

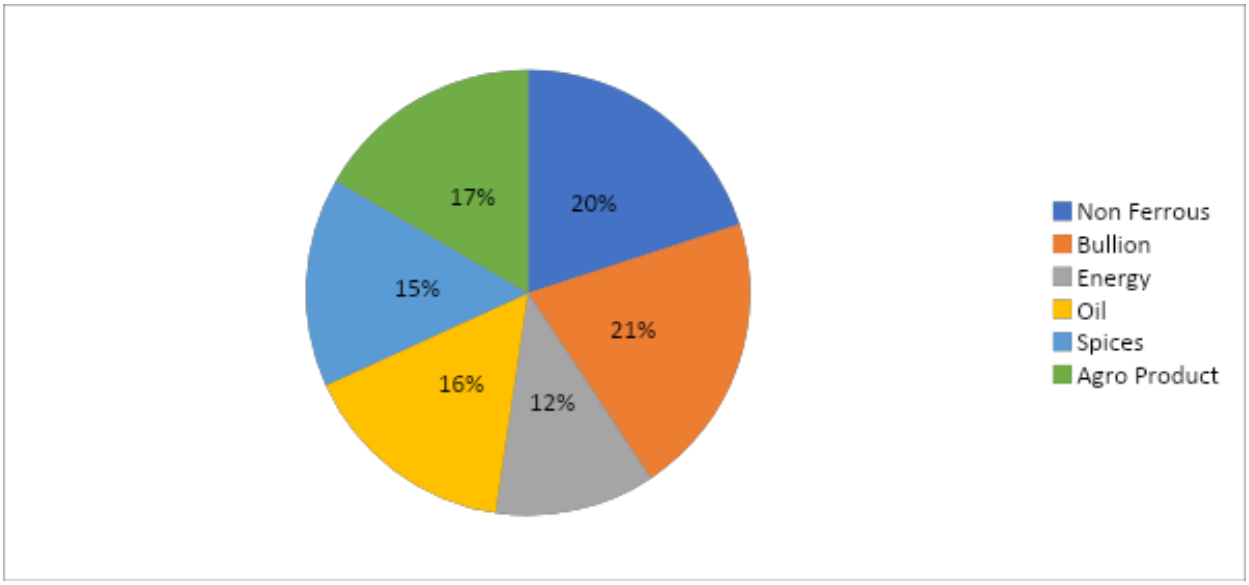


Figure:4.21

Interpretation:

From the above figure we can says that Overall 21% investor invest in Bullion which is highest investment's 20% investor invest in Non-Ferrous. 12% investor invest in Energy.16% investor invest in Oil. 15% investor invest in Spices and 16% in Agro Commodities.

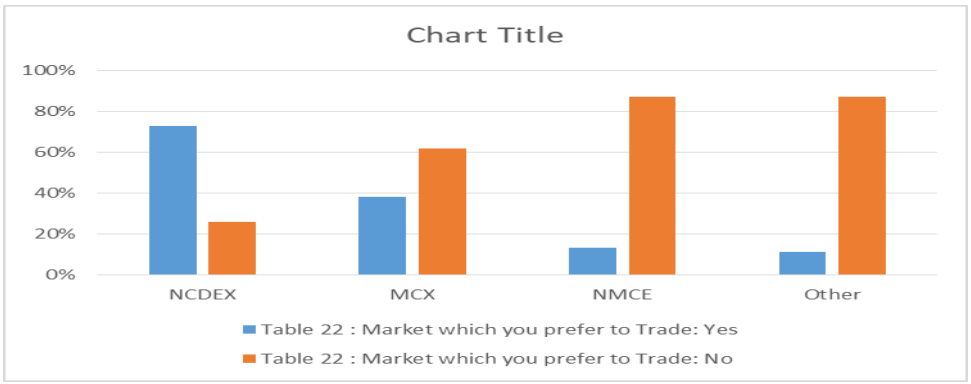
4.6.: Which Market you prefer to Trade:

Table 4.6 : Which market you prefer to Trade:

Market	Yes	No
NCDEX	73%	26%
MCX	38%	62%
NMCE	13%	87%
Other	11%	87%

Own Source:

Figure : 4.22 In which **Market you prefer to Trade:**



Null Hypothesis is :

: Trade preferences are equal

: Trade preferences are not equal

Interpretation

From the above figure we can says that 73% Investor invest in NCDEX where as 26% says that they are not interested to invest in NCDEX. 38% Investor says that they invest

in MCX whereas 62% says that they are not investing in MCX. 13% investor invest in NMCE whereas 87% investor says that they are not investing in NMCE. 11% investor says that they invest in other market where as 87% investor says that they are not investing in other market.

4.6.1 : Chi-Squae Test of Association :

Table 4.7 : Chi-Square Test for Association: C3, Worksheet columns

Market	**Yes**	**No**	**All**
NCDEX	112	48	160
	52.25	103.75	
MCX	60	100	160
	52.25	103.75	
NMCE	25	135	160
	52.25	103.75	
Other	19	141	160
	52.25	103.75	
All	216	424	640
Cell Contents:		Count expected counts	

Own Source:

Null Hypothesis is :

: Trade preferences are equal

: Trade preferences are not equal

Pearson Chi-Square = 168.599, DF = 3, P-Value = 0.000

Likelihood Ratio Chi-Square = 173.982, DF = 3, P-Value = 0.000

Decision: Reject H0 at 5% level of significance because p-value=0.00.

Hence majority of people wants to trade with NCDEX.

Interpretation:

N= 640 Calculated Test Value= 168.599, df = 3, P Value =0.000

The critical Value of X with 3 degree of freedom at Alpha -Significance is 168.599, whereas the calculated value is 173.982 which is greater than the critical value, hence

the null hypothesis is rejected. Then we can conclude that there are significant differences in the preferences. We also reject the H0 hypothesis that trade preference are equal.

4.7: Preference of Trade

Table 4. 8 : Preference of Trade:

Market	Yes	No	
NCDEX	70	90	160
MCX	35	125	160
BSE	95	65	160
NSE	81	79	160

Own Source:

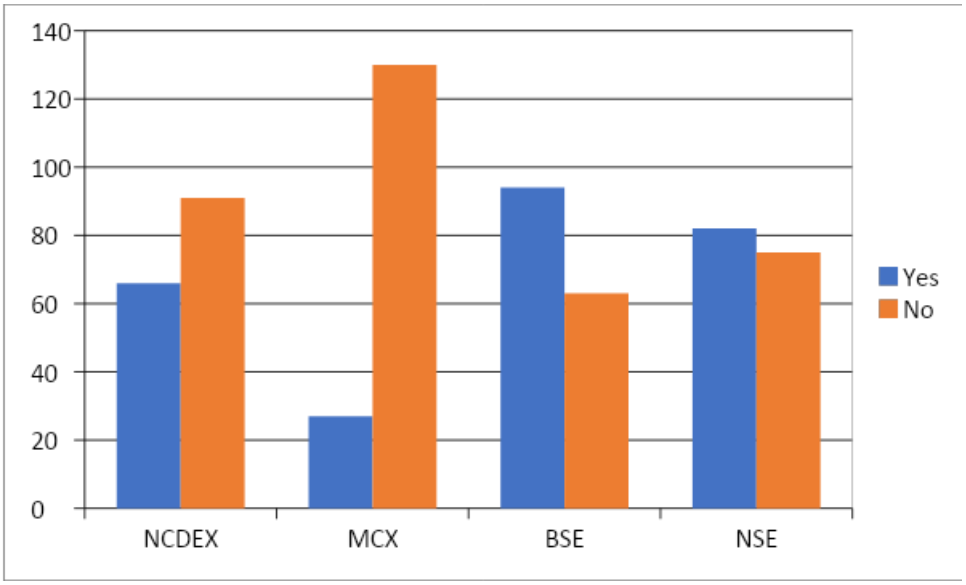


Figure : 4.23

: preference of trade market are equal

: preference of trade market are not equal

From the above figure we can conclude that Investor are investing in Shares Market as compared to commodity. In NCDEX 70% investor says that they trade in NCDEX where as 90% says that they are not trading in NCDEX.35% says that they trade in MCX whereas 125 says that they are not at all trade in MCX. 95% investor says that

they are trading with BSE whereas 65% says that they are not trade with BSE. 81% say that they trade with NSE and 79% says that they are not at all trade with NSE.

Table 4.9 : Chi-Square Test for Association Pref for trade mark is equal or different C3, Worksheet columns

Details	Yes	No	All
Commodity	**48**	**112**	**160**
	134.5	**179.5**	
Stock	90	**70**	**160**
	134.5	**179.5**	
All	138	**182**	**320**

Own Data source

Figure:

: Preference of trade market is equal

: Preference of trade market differs.

Interpretation:

From the above figure we can says that out of 160 investor there are 48 investors invest in commodity market. Whereas 112 says that they are not interested to invest. There are 90 investor who invest in stock market. Whereas 70 says that they don't invest in stock market.

Pearson Chi-Square = 44.799, DF = 1, P-Value = 0.000

Likelihood Ratio Chi-Square = 45.396, DF = 1, P-Value = 0.000

Decision: Reject H0 at 5% level of significance because p-value=0.00.

Hence we reject that the preference of trade market are equal. That means there are significant differences in the preference.

Preference of trade in the market

Figure: 4.24

4.8 : Risk Factor :

Table 4.10 : Risk factor:

Rows: C3 Columns: Worksheet columns

Details	Yes	No	All
Equity	109	51	160
	34.86	121.14	
Commodity	78	82	160
	34.86	121.14	
Bank Deposit	9	151	160
	34.86	121.14	
Mutual Fund	31	129	160
	34.86	121.14	
LIC	6	154	160
	34.86	121.14	
Real Estate	18	142	160
	34.86	121.14	
Life Insurance	9	151	160
	34.86	121.14	
All	244	848	1092

Own Source:

Figure :

Cell Contents: Count

Expected count

: Risk in the Investment is equi probable.

: Risk in the Investment is not equi- probable.

Pearson Chi- Square = 365.991, DF = 6, P-Value = 0.000

Likelihood Ratio Chi- Square = 358.295, DF = 6, P- Value = 0.000

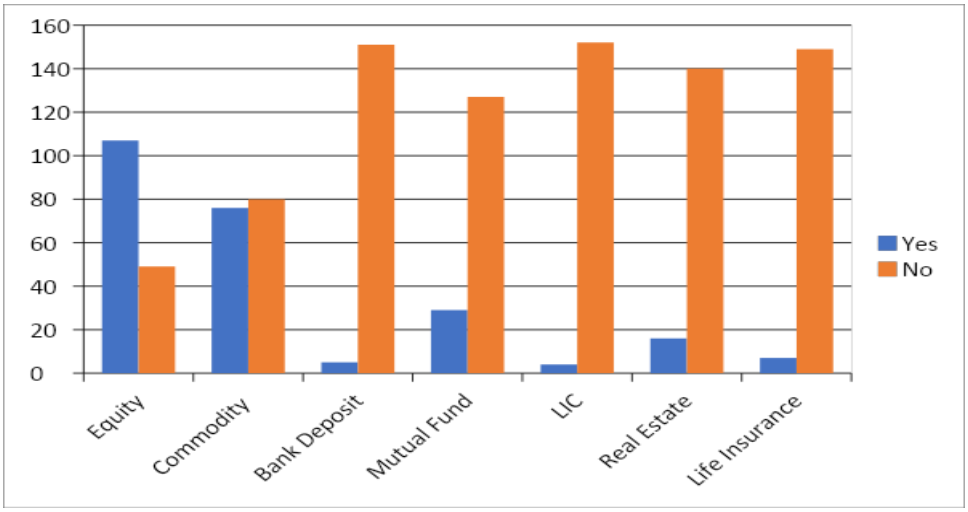


Figure 4.25

Interpretation:

Decision: Reject at 5% level of significance because p-value=0.00.

Hence majority of people feel that there is more risk in equity market

From the above figure we can conclude that

Interpretation:

From the above figure we can says that there is risk in the market and as we have heard from many author there is risk and return relationship. High Risk High Return Commodity market risk is equi probable 77 % risk is there and 80% return is also there. Equity market 108% risk is there though 45 return is there. Bank deposit have very low risk. Mutual fund , LIC and real estate and Life Insurance is also show low risk. Where as investors says that in Real Estate & Mutual fund there is risk as compared to Bank Deposit, and life Insurance. Hence Risk in investment is not equi- probable is rejected.

4.9: Types of trading available in Commodity Market:

Table 4.11 : Types of Trading available in commodity market:

Chi- Square Test for Association: C1, Worksheet Columns:

Rows: C1 Columns: Worksheet Columns

	Yes	**No**	**All**
Intraday	75	85	160
	50.75	106.25	
Positional	49	111	160
	50.75	106.25	
Delivery	30	130	160
	50.75	106.25	
Future & Option	55	105	160
	50.75	106.25	
All	209	431	640

Own Source:

: Type of trading is equi-probable.

: Type of trading is not equi-probable.

Pearson Chi-Square = 32.690, DF = 3, P-Value = 0.000

Likelihood Ratio Chi-Square = 33.725, DF = 3, P-Value = 0.000

Decision: Reject 5% level of significance because p-value=0.00.

Hence intraday trading is more preferable.

Type of Trading:

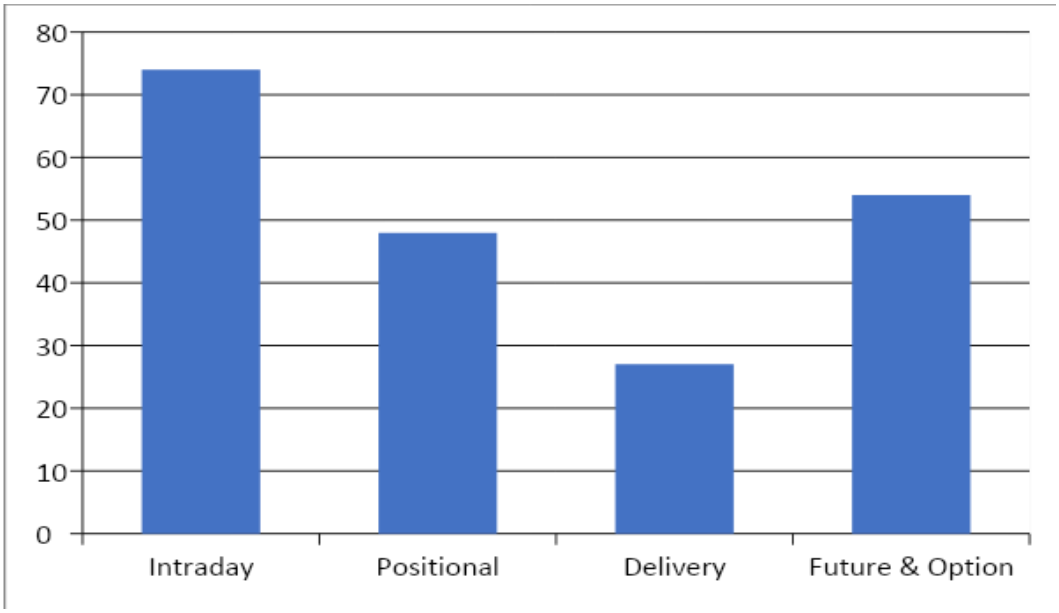


Figure: 4.26

Interpretation:

From the above figure we can says that Investor prefer Intraday for trading. Investors second option is Future and Option Third option is Positional and Last preference is Delivery. These preferences are based on risk so we can say that in intraday trading there are less risk whereas in Delivery there is high risk. We can says that as per Chi Square Test H0 is Types of trading are Equi probable are rejected. Hence Hypothesis is rejected.

4.10: Commodity Market Attraction:

Table 4.12 : Commodity Market Attraction:

Chi-Square Test for Association: C1, Worksheet columns

Rows: C1 Columns: Worksheet Column

	Yes	**No**	**All**
High Long Term Gain	86	74	160
	57.50	52.50	
Quick Short Term Gain	67	93	160

	57.50	52.50	
All	153	167	320

Own Source:

Cell Contents: Count

Expected count

: Commodity Market Attraction is equi-probable.

: Commodity Market Attraction is not equi-probable

Pearson Chi-Square = 3.079, DF = 1, P-Value = 0.079

Likelihood Ratio Chi-Square = 3.086, DF = 1, P-Value = 0.079

Decision: We could not reject at 5% level of significance because p-value=0.07.

Hence Commodity Market Attraction is equi-probable.

Commodity Market Attraction:

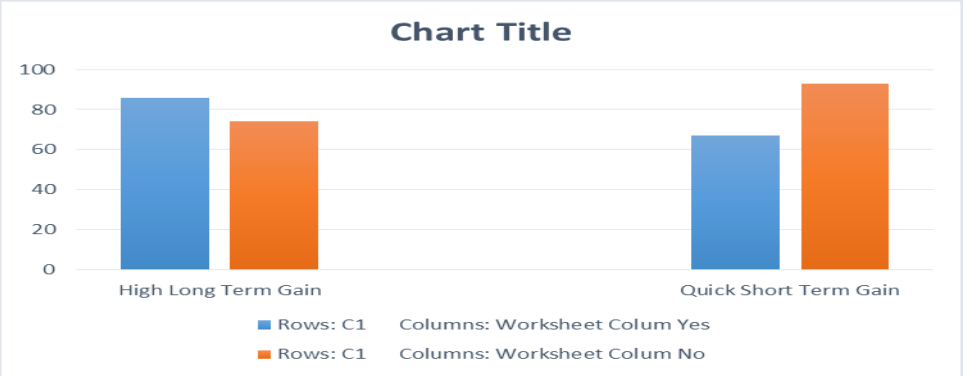


Figure (4.27)

Interpretation:

From the above figure we can says that Investor are invest in commodity market because of High Long Term Gain and Quick Short Term Gain. 86% investor say yes for High Long Term Gain and 74% Investor say no to High Long Term Gain. Whereas 67% investor says Yes to Quick Short Term Gain whereas 93% investor say No to Quick Short Term Gain. And also as per Chi Square Test we could not reject H) at 5%

level of Significance because P- Value is =0.07. Hence we could not reject H0 because Commodity Market Attract is equi – probable.

4.11: Time To Trade in the Market:

Table 4.13 : Time to Trade

Rows : C1 Columns: Worksheet Columns

Details	Yes	No	All
Daily	111	49	160
	78.50	78.50	
often	49	111	160
	78.50	78.50	
All	160	160	320

Own Source:

Cell Contents: Count

Expected Count

Chi-Square Test for Association: C1, Worksheet columns

: Time to trade is equi-probable.

: Time to trade is not equi-probable

Pearson Chi-Square = 47.401, DF = 1, P-Value = 0.000

Likelihood Ratio Chi-Square = 48.672, DF = 1, P-Value = 0.000

Decision: Reject H0 at 5% level of significance because p-value=0.00.

Hence majority of people prefer to trade Daily, and few people prefer to trade often.

Time To Trade:

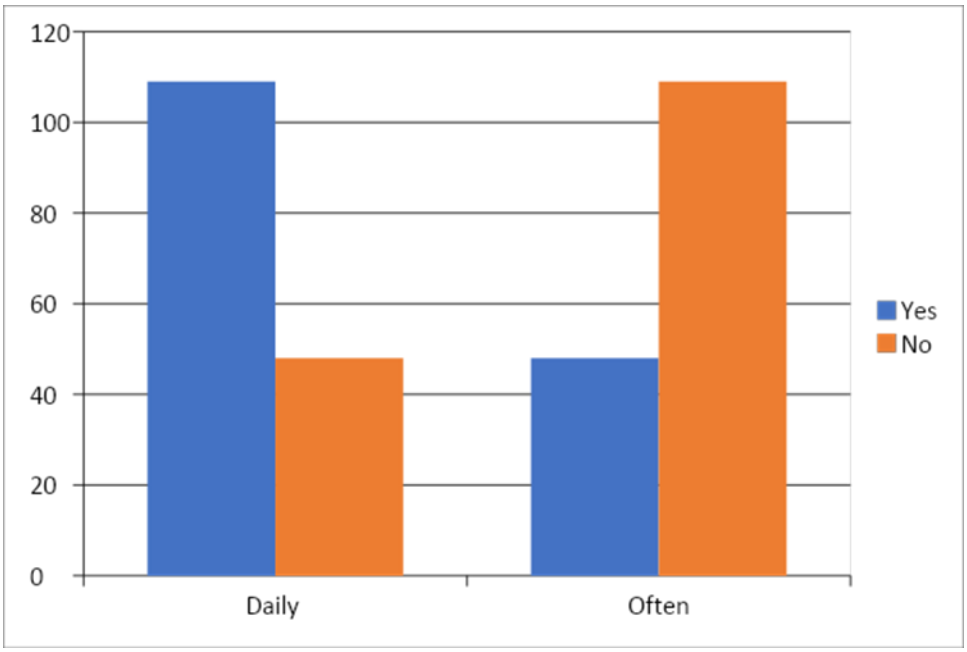


Figure: 4.28

Interpretation :

From the above figure we can says that There are investor who says that they 111 Investor invest in daily, whereas 48% investor says that they are not investing in daily. Where as there are 48% investor says that they invest in often. Where as there are 111 investor who says that they are not invest often. Hence we reject H0 because time to trade is equi probable.

4.12: All the Commodities have same risk to trade:

Table 4.14 : All the commodities have same risk to trade.

Chi-Square Test for Association: C1, Worksheet columns

Rows: C1 Columns: Worksheet columns

Details	Yes	No	All

Precious Metal	94	66	160
	46.50	110.50	
Base Metal	35	125	160
	46.50	110.50	
Agro Commodity	43	117	160
	46.50	110.50	
Energy Product	14	146	160
	46.50	110.50	
All	186	454	640

Own Source:

Cell Contents: Count

Expected count

Pearson Chi-Square = 105.629, DF = 3, P-Value = 0.000

Likelihood Ratio Chi-Square = 106.304, DF = 3, P-Value = 0.000

Decision: Reject 5% level of significance because p-value=0.00.

Hence there is less risk to trade the precious metal as compared to energy products.

All the commodities have same risk to trade

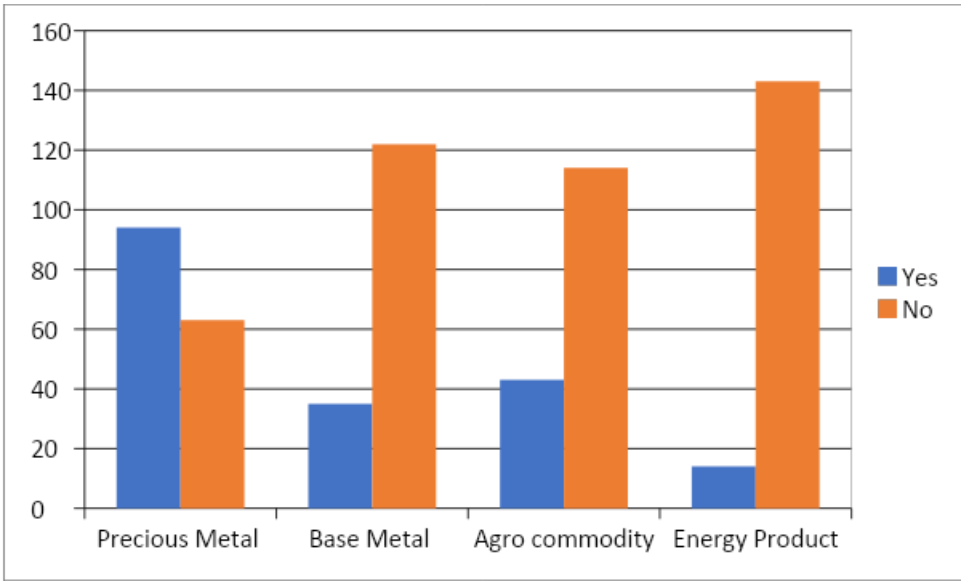


Figure: 4.29

: All of these products have same risk to trade.

: All of these products have different risk to trade.

Interpretation:

There are four types of commodities like Precious Metal, Base Metal, Agro Commodity and Energy Product We use chi square test and formulate two hypothesis H0 is All of these products have same risk to trade H1 is all these products have different risk to trade. we found that test has reject H0 at 5% level of significance because p value is =0.00 hence there is less risk to trade the precious metal as compared to energy products.

4.13: Limit to buy order will reduce the risk of investor?

Table 4.15: Limit to buy order will reduce the risk of investor?

N	**46**	**28%**
Y	**114**	**71%**
(blank)		
Grand Total	**160**	**100%**

Source: Own Source

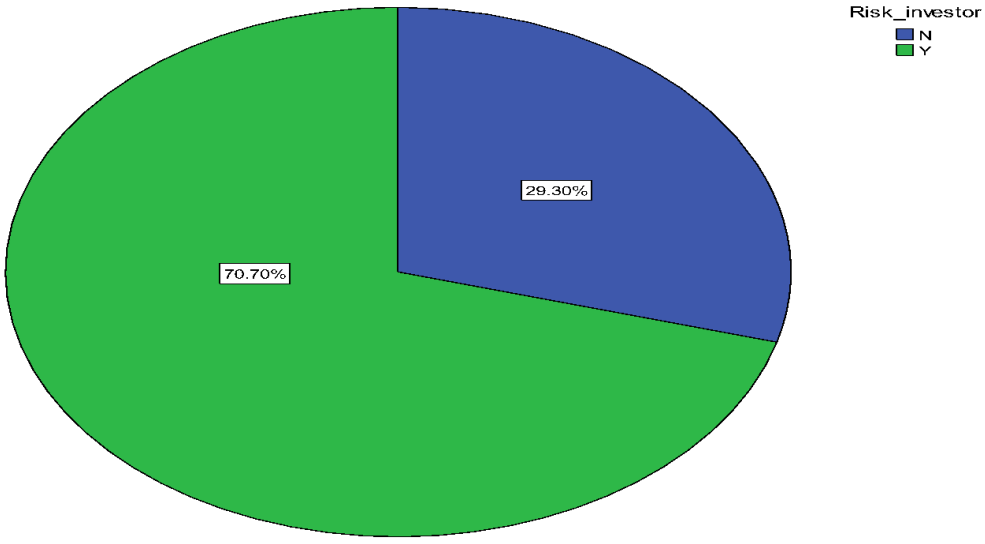


Figure: 4.30

Interpretation:

From the above figure we can conclude that 71% investor says that limit to buy will reduce. Whereas 28% says that limit to buy order will not going to reduce the risk.

4.13.1: Limit to order will reduce price of market to volatility:

Table 4.16 :Limit to order will always reduce price or market to volatility.

N	**56**	**35%**
Y	**104**	**65%**
(blank)		
Grand Total	**160**	**100%**

Own Sources:

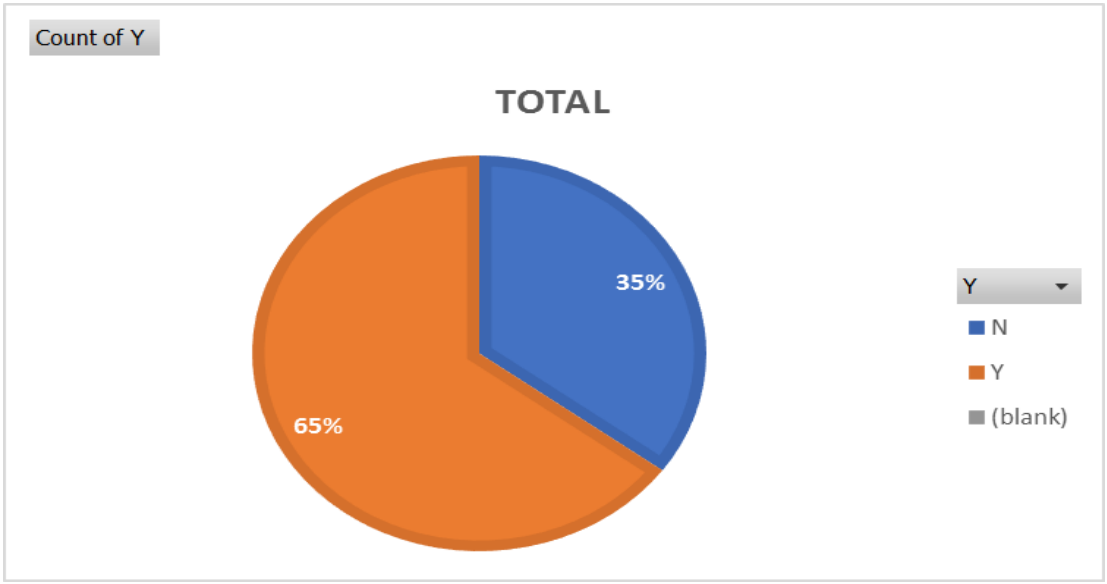


Figure: 4.31

Interpretation:

From the above figure we can conclude that 65% investor says that limit to order will always reduce price of market to volatility. 35% investor says that limit to order will always reduce price of market to volatility.

4.13.2: Limit to order will give chance to investor to do analysis about market.

Table 4.17 :Limit order will give chance to investor to do analysis about market.

Row Labels	Count of Y	%
N	49	31%
Y	111	69%
(blank)		
Grand Total	160	100%

Own Source:

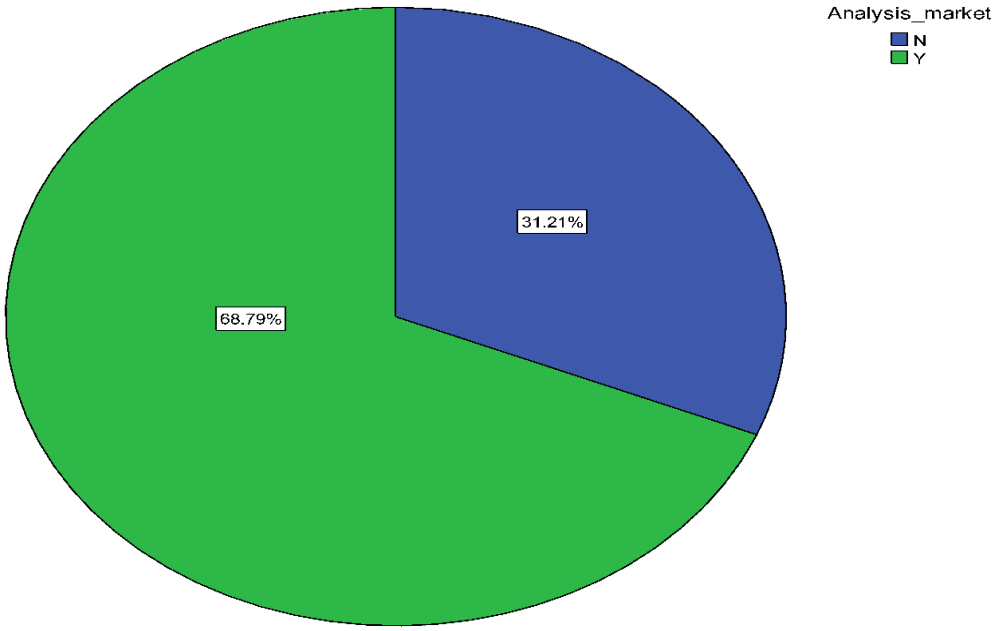


Figure:4.32

Interpretation:

69% investors says that limit to order will give chance to investor to do analysis about market.

From the above figure we can conclude that 31% investors says that limit to order will not give chance to investor to do analysis about market.

4.14: Agriculture market is less volatile than other market?

Table 4.18 : Agriculture market is less volatile than other market?

Row Labels	Total	%
N	91	57.96%
Y	69	42.04%
(blank)		
Grand Total	160	100%

Own Source:

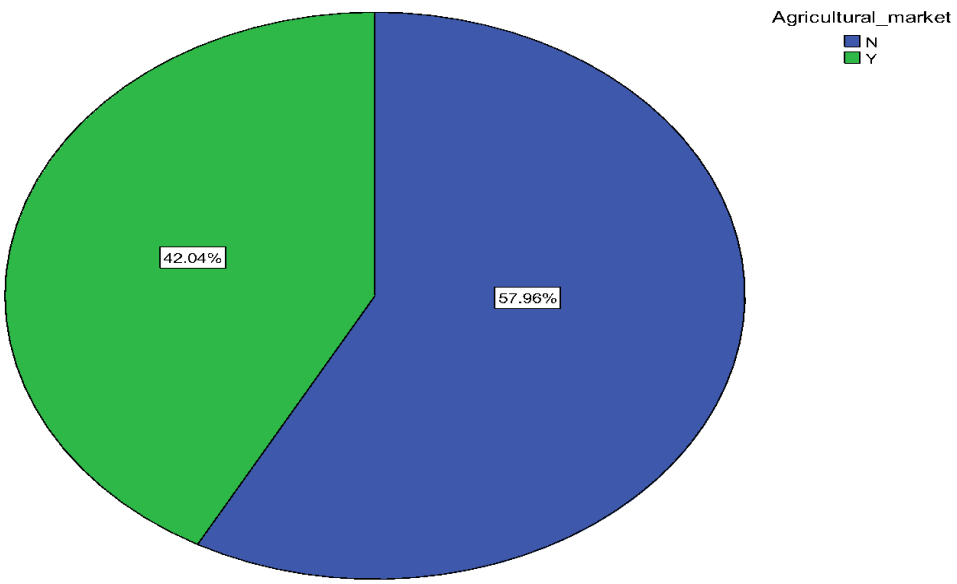


Figure:4.33

Interpretation:

From the above figure we can conclude that 42% investor says that agriculture product is less volatile whereas 58% investor says that agriculture product/commodities are more volatile.

4.15: Other Commodities are more Volatile than Agri Commodities?

Table 4.19: Other Commodities are more Volatile than Agri Commodities?

Row Labels	Total	%
N	**84**	**52.23 %**
Y	**76**	**47.77 %**
(blank)		
Grand Total	**160**	**100%**

Own Source:

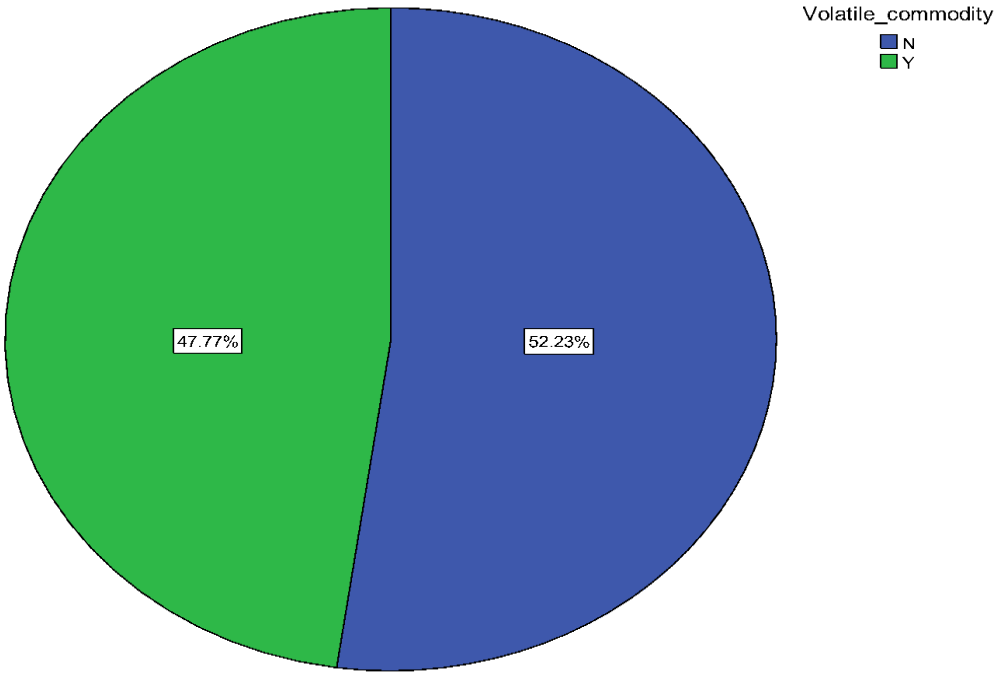


Figure:4.34

Interpretation:

From the above figure we can conclude that 47.77% investor says that other commodities are more volatile than Agriculture Commodities whereas 52.23% investor says that other commodities are not that volatile like Agriculture Commodities.

4.16: **When Market is not volatile or stable at that time market to buy is better option.**

Table 4.20: When Market is not volatile or stable at that time market to buy is better option.

Row Labels	Total	%
N	**90**	**62.23%**
Y	**70**	**47.77%**
(blank)		
Grand Total	**160**	**100%**

Own Source:

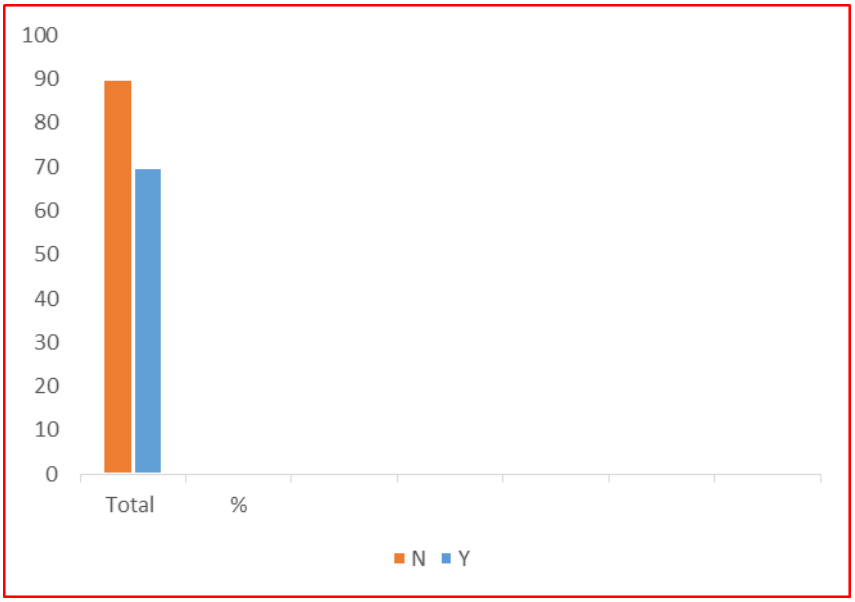


Figure: 4.35

Interpretation:

From the above figure we can say that 62% investors says that when market is not volatile or stable at that time market to buy is better.47% says that when market is not volatile or stable at that time market to buy is not better.

4.17: Preference for SPAN given by MCX:

Table 4.21 : Preference for SPAN given by MCX :

Row Labels	Total	%
N	**54**	**31.21%**

Y	**106**	**68.79 %**
(blank)		
Grand Total	**160**	**100%**

Own Source

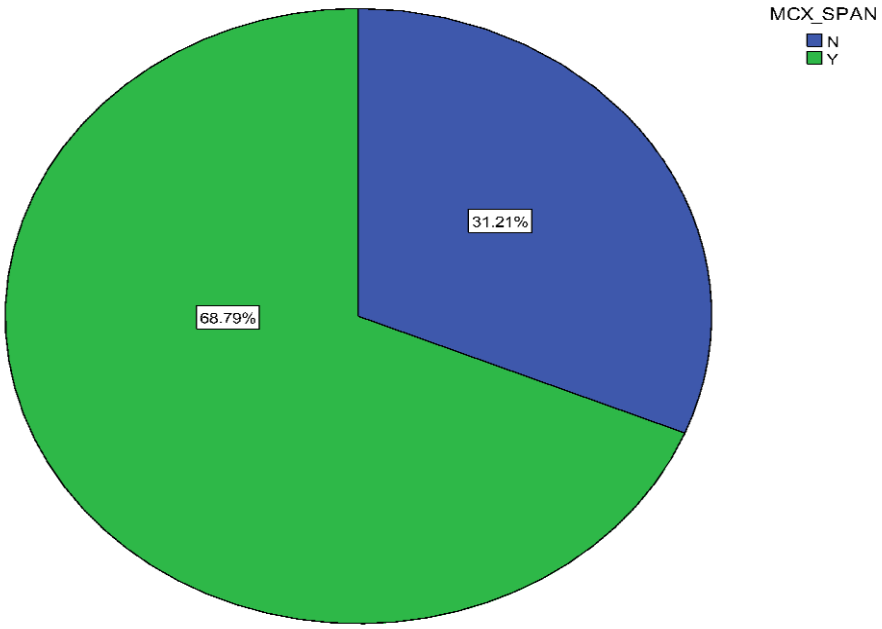


Figure 4.36

From the above figure we can say that 68.79% investor says that MCX is using SPAN (Standard Portfolio Based Approach) 31% says that MCX is not using SPAN (Standard Portfolio Based Approach)

4.18: Investors view regarding preopen market time:

Table 4.22: Investors view regarding Preopen market time:

Row Labels	Total	%
N	**71**	**43.31**
Y	**89**	**56.69**
(blank)		
Grand Total	**160**	**100%**

Own Source:

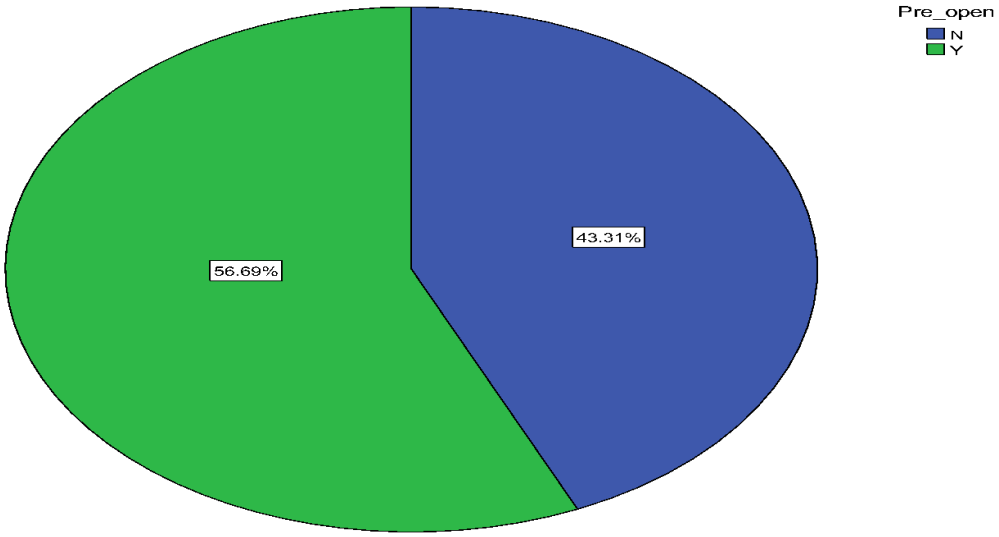


Figure 4.37

Interpretation:

From the above figure we can says that 43% investor says that preopen market time that is 10 minutes is not short or it is ok. Whereas 56% investor says that Preopen market time of 10 minutes is too short.

4.19: Agriculture Commodity Trading time should increase:

Table 4.23: Agriculture Commodity Trading time should increase:

Row Labels	Total	%
N	**74**	**45.22 %**
Y	**86**	**54.78%**
(blank)		
Grand Total	**160**	**100%**

Own Source:

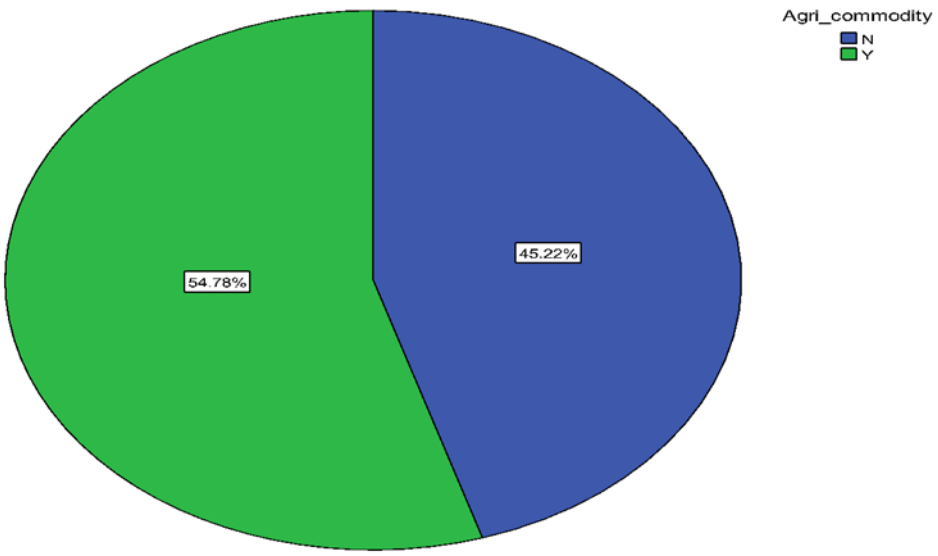


Figure:4.38

Interpretation:

From the above figure we can says that 45% investor feel that Agri Commodity trading time should not increase. Whereas 54% investor says that trading time should increase.

4.20: Agriculture Commodity are available for future trading:

Table 4.24: Agriculture Commodity are available for future trading:

Row Labels	Total	%
N	**62**	**38.22%**
Y	**98**	**61.78%**
(blank)		
Grand Total	**160**	**100%**

Own Source:

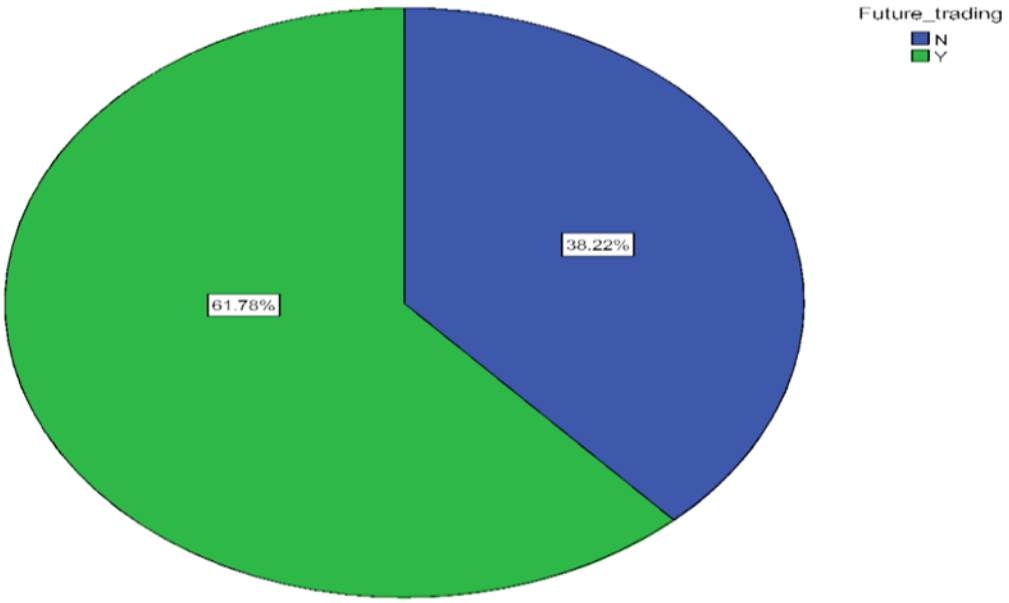


Figure :4.39

Interpretation:

From the above figure 38% investors says that agro commodity should not be trade for future trading whereas 61.78% investor says that Y agro Commodity are available for future trading.

4.21: Trading should be on all 7 Days:

Table 4.25: Trading should be there in all 7 Days:

Row Labels	Total	%
N	**82**	**52.23%**
Y	**78**	**47.77%**
(blank)		
Grand Total	**160**	**100%**

Own Source:

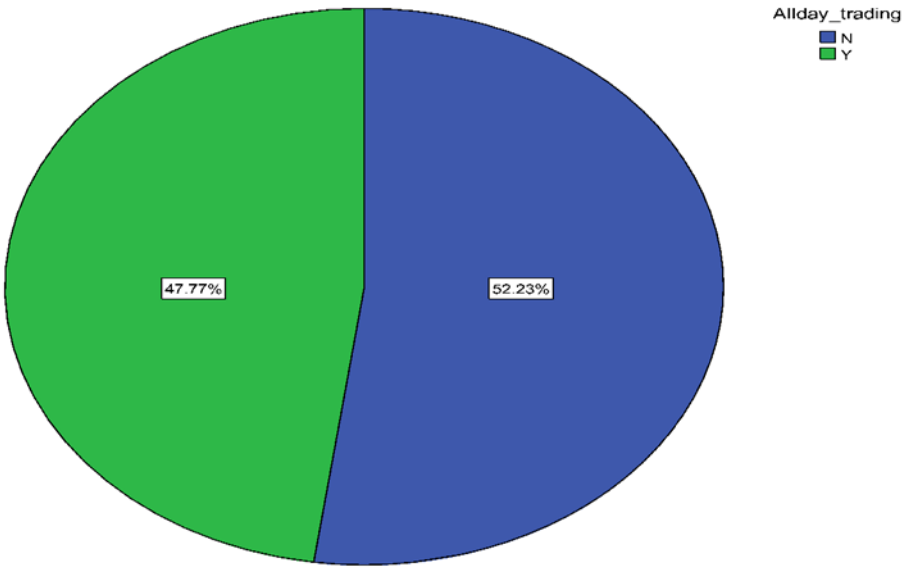


Figure: 4.40

Interpretation:

From the above figure we can says that 52% investors says that trading should not be for 7 days whereas from the above figure 48% investors says that Trading should be there for whole week.

4.22: Training House should Increase Training:

Table:4.26 Training House should increase Training:

Row Labels	Total	%
N	**64**	**40.13%**
Y	**96**	**59.87%**
(blank)		
Grand Total	**160**	**100%**

Own Source:

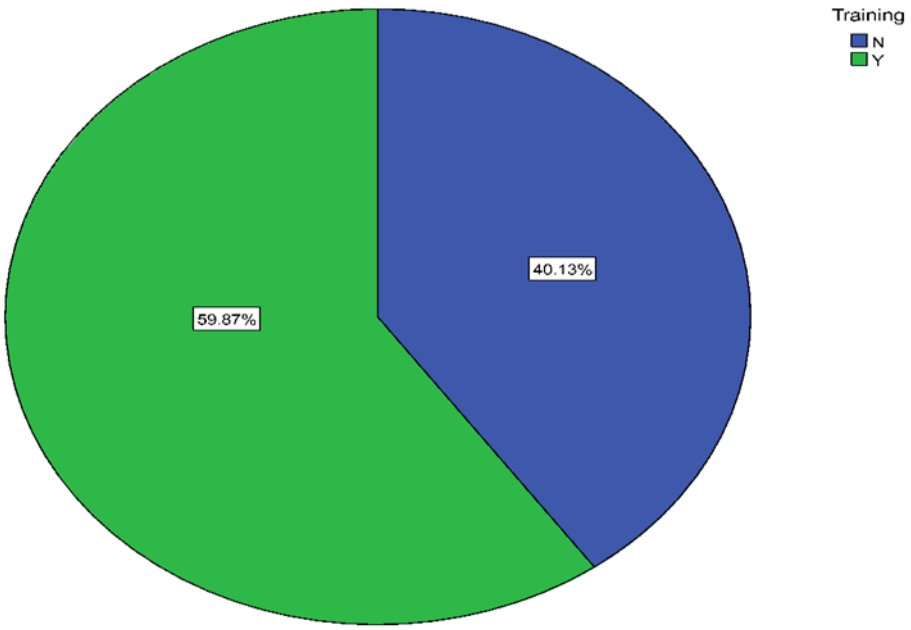


Figure: 4.41

Interpretation:

From the above figure we can says that 60% investor says that there should be proper training. Whereas 40% investor says that training is not required for investing in commodity market.

4.23: Due to cancellation of the pending order you can reduce risk do you agree.

Table: 4.27 Due to cancellation of the pending order you can reduce risk do you agree.

Row Labels	Total	%
N	**84**	**52.23 %**
Y	**76**	**47.77 %**
(blank)		

Grand Total	**160**	**100%**

Own Source:

Graph :

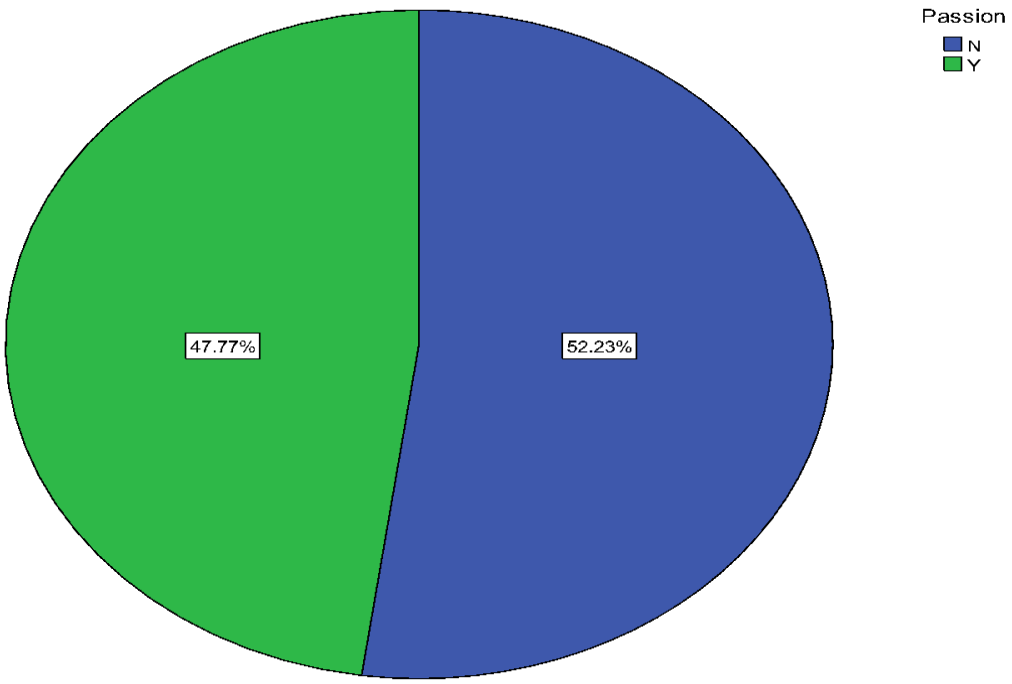


Figure:4.42

Interpretation:

From the above data we can says that 47.77% investors says that due to cancellation of the pending order you can reduce risk. whereas 52% investor says that due to cancellation of the pending order investor can not reduce risk.

4.24: Taking stop loss will be the better position in commodity market

Table 4.28 : Taking stop loss will be the better position in commodity market:

Row Labels	Total	%
N	**36**	**21.66**
Y	**124**	**78.34**
(blank)		

Grand Total	**160**	**100%**

Own Source:

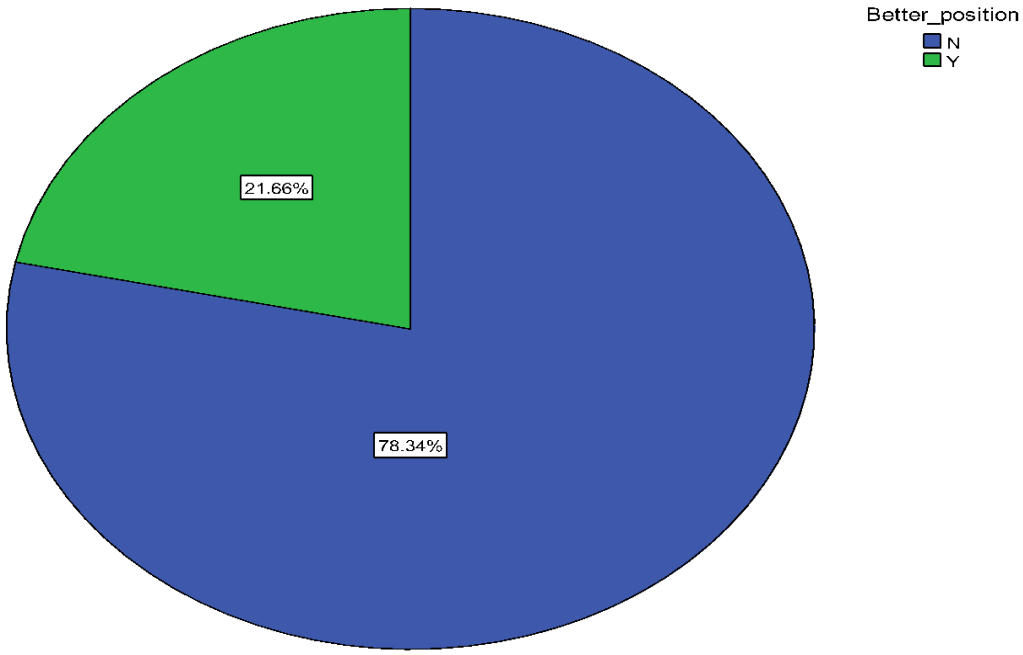


Figure: 4.43

Interpretation:

From the above figure we can says that 78% investors says that taking stop loss will be better position in commodity market. whereas 22% investor says that taking stop loss will not be better position in commodity market.

4.25: Trading will reduce cost:

Table 4.29 . Future Trading will reduce cost:

Row Labels	Total	%
N	**93**	**57.96 %**
Y	**67**	**42.04 %**
(blank)		
Grand Total	**160**	**100%**

Own Source:

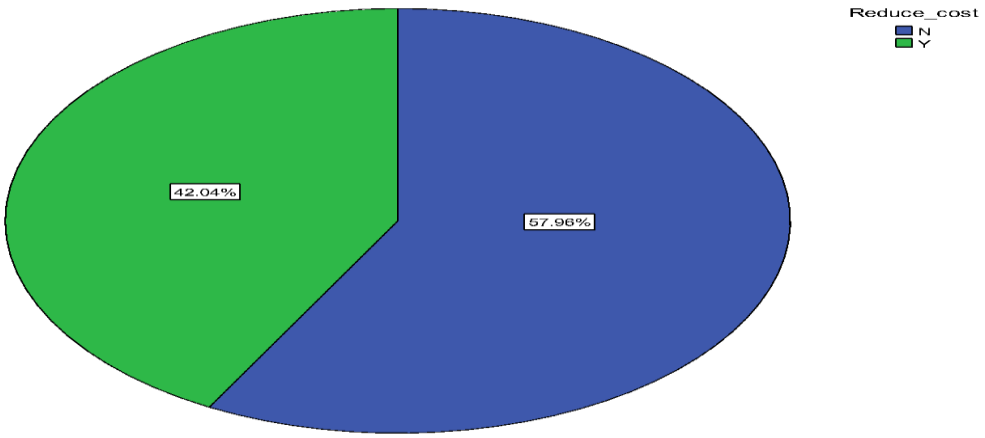


Figure:4.44

Interpretation:

From the above figure we can says that 42% investor says that Future Trading will reduce the cost. Whereas 57.96% investors say that Future trading will not going to reduce the cost.

Table 4.30 : Limit to buy order will reduce the risk of investor:

N	46	28%
Y	114	71%
Grand Total	160	100%

Source: Own Source Interpretation:

From the above figure we can conclude that 71% investor says that limit to buy will reduce the risk. Whereas 28% says that limit to buy order will not going to reduce the risk.

4.3: Hypothesis:

4.3.1: Hypothesis I:

Table : **4.3.1 : Hypothesis 1:**

Respondent No	Rate the Regulation on Commodity market in India on 5point scale 1 Less regulated 5 as most regulated	Rate the regulation on Stock market in India on 5point scale 1 Less regulated 5 as most regulated
1	1	4
2	1	4
3	1	4
4	2	5
5	2	5
6	2	5
7	1	4
8	2	4
9	1	4
10	1	4
11	1	5
12	1	4
13	1	4
14	1	4
15	2	5
16	2	5
17	2	5
18	1	4
Variance	**0.25**	**0.25**
Mean	**1.39**	**4.39**

Source: Own source

Conclusion:

4.3.1.1: Analysis :

The average of Commodity market index volatility is 1.39 which means it is less regulated. The average of stock market index volatility is 4.39 which means it is most regulated. The variances are equal.

4.3.1.2.: **Null Hypothesis:**

H0: The regulations of Commodity Market and Stock Market are same

4.3.1.3. **: Alternate Hypothesis:**

H1: The regulations of Commodity Market and Stock Market are different

Test: being unequal variances the t test with unequal variances is used.

Table 4.3.2 Analysis t-Test: Two-Sample Assuming Equal Variances.

	Rate the Regulation on Commodity market in India on 5point scale 1 Less regulated 5 as most regulated	**Rate the regulation on Stock market in india on 5point scale 1 Less regulated 5 as most regulated**
Mean	1.39	4.39
Variance	0.25	0.25
Observations	18.00	18.00
Pooled Variance	0.25	
Hypothesized Mean Difference	0.00	
Df	34.00	
t Stat	-17.94	
P(T<=t) one-tail	0.00	
t Critical one-tail	1.69	
P(T<=t) two-tail	0.00	
t Critical two-tail	2.03	

Source: Own Source

Decision: The probability value is less than 0.01 hence the null hypothesis is rejected, and alternate hypothesis as accepted. So The regulations on Commodity Market and regulation on Stock Market are different.

4.3.2 : Hypothesis II:

Table 4.3.2: Hypothesis 2:

Respondent No	Rate the volatility of Commodity market index on 5-point scale 1 Less Volatile 5 as most volatile	Rate the volatility of Stock market index on 5-point scale 1 Less Volatile 5 as most volatile
1	3	5
2	1	5
3	1	5
4	1	4
5	2	4
6	1	4
7	1	4
8	2	5
9	1	5
10	1	5
11	1	5
12	3	5
13	1	5
14	1	5
15	1	4
16	2	4
17	1	4
18	1	4
19	2	5
20	1	5
21	1	5
22	1	5
23	1	5
24	1	4
25	2	4
26	1	4
27	1	4
28	2	5

29	1	5
30	1	5
Variance	**0.367816092**	**0.248275862**
Means	**1.333333333**	**4.6**

4.3.2.1: Analysis : The average of Commodity market index volatality is 1.33 which means it is less volatile. The average of stock market index volatality is 4.6 which means it is most volatile. The variances are unequal.

4.3.2.1: Null Hypothesis:

4.3.2.1:Null Hypothesis: H0: The volatility of Commodity Market and Volatality of Stock Market is same

4.3.2.3: Alternate Hypothesis: H1: The volatility of Commodity Market and Volatality of Stock Market is different

Test: being unequal variances the t test with unequal variances is used.

t-Test : Two – Sample Assuming Unequal Variances.

Table : 4.3.2.3.1 Analysis of Alternate Hypothesis:

Rate the volatility of Commodity market index on 5 point scale 1 Less Volatile 5 as most volatile		
Mean	1.333333333	4.6
Variance	0.367816092	0.248275862
Observations	30	30
Hypothesized Mean Difference	0	
Df	56	
t Stat	-22.79516183	
P(T<=t) one-tail	2.5809E-30	
t Critical one-tail	1.672522303	
P(T<=t) two-tail	5.16181E-30	
t Critical two-tail	2.003240719	
Mean	1.333333333	
Variance	0.367816092	

Decision: The probability value is less than 0.01 hence the null hypothesis is rejected and alternate hypothesis as accepted. So The volatility of Commodity Market and Volatility of Stock Market is different.

Conclusion:

Investor are investing for the getting the good profit. Investor are also interested in extra benefit.we found that investor are analyzed the data before investing in the commodity market.41% people are still keeping money in bank.we found that with commodity market investor like mutual fund also.31% investor invest in commodity market. Investor also knows that high risk and high return and therefore they invest in risky investment. Investor like gold a lot Agriculture commodities are also most preferred and therefore Investor are using NMCE .

CHAPTER 5

FINDING, CONCLUSIONS & RECOMMENDATION

5.1 Finding and Conclusions

1. At present there are 23 exchanges operating in India carrying out future trading activities in as many as 146 commodities. MCX is holding 88.70 % Market Share, Value of trade is 14881057.12. Bullion, Energy & Metal has highest 100% Market Share. Value of trade in the NCDEX is 1598425.87 and market share is 10%.
2. 64% Investors says that very likely they invest in commodity market to get Profit. 19% Investors says that they likely invest in commodity market to get profit. 5% Investors say that they neither likely nor unlikely invest in commodity market to get profit. 8% Investor says that they unlikely invest in commodity market to get profit. 4% Investor says that they very unlikely invest in commodity market to get profit.
3. 2% investor says that they unlikely invest in commodity market due to Opportunity, 0% very unlikely invest in commodity market.11% investor neither likely nor unlikely invest in commodity market.16% investor says that this particular question is not applicable for them. 34% investor says that they likely invest in commodity market due to opportunity. Whereas 37% very likely invest in commodity market.
4. 1% Investors says that they invest very unlikely in commodity market because of benefit they get from the market. 13% Investor says that they unlikely invest in commodity market.11% investor says that they will neither likely nor unlikely invest in commodity market. 49% investor says that they are likely invest in commodity market. 26% investor says that they are very likely invest in commodity market.
5. 16% Investor says that very likely they invest in commodity market because of advertisement in print media. 34% likely says that they invest in commodity market because of Advertisement. 37% investors says that they neither likely nor unlikely invest in commodity market because of Advertisement in Print

media. 11% unlikely invest in commodity market. 2% says that very unlikely invest in commodity market due to advertisement in print media.

6. It is interpreted by Investor 21% says that they very likely invest in commodity market by checking detail analysis. 35% investors say that they likely invest in commodity market by checking detail analysis. 24% investor say they neither likely nor unlikely invest in commodity market by checking detail analysis. 14% investors say that they unlikely invest in commodity market by checking detail analysis. 6% investors say they very unlikely invest in commodity market by checking detail analysis
7. We can say that Equity Market is one of the highly preferable market in India. Commodity Market is second largest preferred market where investor like to trade. Real Estate investment is third & Bank Deposits and Mutual Funds are fourth preferred market. Last Preferred investment is LIC. It means we can say that High risk High return. These days investor want more return & therefore most of the investor are younger generation and they really wanted to take risk for higher return.
8. We can say that 42% investor very likely invest in Bank Deposit. 21% investors says likely they invest in Bank Deposit. 13% investor neither likely nor unlikely invest in Bank Deposit.
9. 37% investor very likely invest in Mutual Fund. 24% likely invest their income in mutual fund. 22% investor neither likely nor unlikely invest their income in mutual funds. 13% Unlikely invest their income in Mutual Fund. 4% investor very unlikely invest their income in Mutual Funds.
10. 17% investor very likely invest in life insurance.27% likely invest in life insurance. 27% neither likely nor unlikely invest in life insurance. 20% unlikely invest in life insurance. 9% very unlikely invest their income in life insurance.
11. 21% of Investor very likely invest their income equity market whereas 38% investors say that they likely invest their income in equity market. 38% investor are in neither invest nor invest category, so this group commodity market can covert as investor in their market. but commodity market has to take efforts for it. They have to educate people.
12. 23% of income investor say that very likely they invest in commodity market. 31% likely say that they invest in commodity market and 34% neither likely nor unlikely invest in commodity market. So these are investor commodity market

have to convert as their investor by giving education to them. So, commodity market have to arrange lecture for investor.

13. Investor invest their money in commodity market for different reasons 20% take risk and invest in commodity market because logic is high risk high return. 19% invest only for return, 16% invest because of liquidity. 15% say they get tax rebate, so they like to invest in commodity market. 16% invest for marketability and 14% for enough tenure they get in commodity market.
14. When we have asked them in which commodity, they normally invest they say 20% they invest in nonferrous commodity 21% invest in Bullion. 12% invest in Energy, 16% invest in oil and 15% invest in spices 16% in Agro Products.
15. 44% very likely invest in Non-Ferrous commodity. 29% likely invest in Non-Ferrous commodity. 17% Neither likely nor unlikely invest in Non-Ferrous commodity.5% unlikely 4% very unlikely invest in commodity market.
16. We try to find that how many investors are investing in Bullions we found that 39% investor very likely invest in Bullion, 38% likely invest in Bullion whereas 14% neither likely nor unlikely invest in Bullion. So we can say that Bullion market is also upcoming market.
17. Energy is very sensitive area and prices change very fast. 13% says that very likely invest in energy. 23% likely invest in energy. 31% neither likely nor unlikely invest in energy. 10% very likely invest in energy.
18. Whether investor invest in oil we found that though risk is there fluctuation in price is there 21% very likely invest in oil, 33% likely say that they invest in oil and 33% and undecided investor it means they are neither likely nor unlikely invest in oil.
19. Spices are good commodities to invest in commodity market we found that 35% very likely invest in commodities 30% likely invest in spices and 21% are neither likely nor unlikely invest in spices.
20. We tried and found preference of investor to invest in overall commodity market, we found that 46% investor very likely invest in agro commodity which is highest investment in all other commodities. 15% likely to invest in agro commodity. 18% Neither likely nor unlikely. 16% unlikely invest in agro commodities.5% very unlikely invest in agro commodities. It means agro commodities has demand because in this particular market investor have to take We try and found that what are the preference of investor and we found that

20% Investor like to invest in Non-Ferrous commodity 21% investor invest in Bullions, 12% investor invest in Energy, 16% invest in oil, 15% invest in spices and 16% invest in Agro Product.

21. We try to find which market people prefer to invest we found that 73% say that they prefer NCDEX 38% say that they prefer MCX and 13% say that they prefer NMCE.

22. N= 624 ,Calculated Test Value= 168.599, df = 3, P Value =0.000
The critical Value of X with 3 degree of freedom at Alpha -Significance is 168.599, whereas the calculated value is 173.982 which is greater than the critical value, hence the null hypothesis is rejected. Therefore we can conclude that there are significant differences in the preferences. We also reject the H0 hypothesis that trade preference are equal.

23. We did chi square test to check association. So hypothesis was H0 Trade preferences are Equal. H1 Trade preferences are not equal. We found that hypothesis was rejected because Decision: Reject H0 at 5% level of significance because p-value=0.00.Hence majority of people wants to trade with NCDEX are equal we decided hypothesis H1 is preference to trade market are equal HO Preference to trade market are not equal.

24. we can conclude that Investor are investing in Shares Market as compared to commodity Market. We can conclude that Investor are investing in Shares Market as compared to commodity. In NCDEX 70% investor says that they trade in NCDEX where as 90% says that they are not trading in NCDEX.35% says that they trade in MCX whereas 125 says that they are not at all trade in MCX. 95% investor says that they are trading with BSE whereas 65% says that they are not trade with BSE. 81% say that they trade with NSE and 79% says that they are not at all trade with NSE.

25. From the above figure we can says that out of 160 investor there are 48 investors invest in commodity market. Whereas 112 says that they are not interested to invest.

There are 90 investor who invest in stock market. Whereas 70 says that they don’t invest in stock market.Pearson Chi-Square = 44.799, DF = 1, P-Value = 0.000Likelihood Ratio Chi-Square = 45.396, DF = 1, P-Value = 0.000

Decision: Reject H0 at 5% level of significance because p-value=0.00. there are significant differences in the preference.

We also try to find that whether investors prefer commodity market or stock market we found that investor prefer stock market to invest rather than investing in commodity market. There is 112 rejections for commodity market. Whereas there are 70 rejections for stock market.

26. We also tried and check risk factor and we decided two hypothesis H0 ; Risk in the investment is equi probable, H1 Risk in the Investment is not equi probable. We found that it has reject at 8%, Level of significance, because p value =0 Hence majority of people feel that there is more risk in equity market.

we can say that there is risk in the market and as we have heard from many author there is risk and return relationship. High Risk High Return Commodity market risk is equi probable 77 % risk is there and 80% return is also there. Equity Market 108% risk is there though 45 return is there. Bank deposit have very low risk. Mutual fund , LIC and real estate and Life Insurance is also show low risk. Whereas investors says that in Real Estate & Mutual fund there is risk as compared to Bank Deposit, and life Insurance. Hence H0 Risk in investment is not equi- probable is rejected.

27. We try to find out types of trading available in commodity market. We decided H0 types of trading is equi probable and H1 types of trading is not equi probable we found that test has reject H0 at 5% level of significance p – value = 0.00 Hence intraday trading is preferable.

we can say that investor prefer Intraday for trading. Investor's second option is Future and Option Third option is Positional and Last preference is Delivery. These preferences are based on risk so we can say that in intraday trading there are less risk whereas in Delivery there is high risk. We can says that as per Chi Square Test H0 is Types of trading are Equi probable are rejected. Hence Hypothesis is rejected

28. We also try and find the attraction towards commodity market and we formulate two Hypothesis H0 commodity market attraction is equi probable. H1 commodity market attraction is not equi probable. We found that we could not

reject H0 at 5% level of significance because P value =0.07 Hence commodity market attraction is equi probable.

29. We try to find out time required for trade and we formulated two hypothesis H0 : Time to trade is equi – probable. H1 = Time to trade is not equi probable. Test has Reject H0 at 5% level of significance because p-value =0.00 Hence majority of people prefer to trade daily, and few people prefer to trade often.

30. There are precious metal, Base Metal, Agro Commodity and Energy Product We try chi square test to check which product has hi risk and which one has low risk we set hypothesis H0 All of these products have same risk to trade and H1 is all of these products have different risk to trade. we found that test has reject H0 at 5% level of significance because p value is =0.00 hence there is less risk to trade the precious metal as compared to energy products.

31. Limit to buy order will reduce the risk of investor, 71% investor say Y to this question and only 28% say N. Limit to order will also reduce the price of market to volatility.

    Limit to order will also reduce the price of market to volatility. Limit to order will also give chance to investor to do analysis about market.

32 Most of the investor like 66% says that Agri market is less volatile. also 57% investors say Agri market is not volatile.

33. 75% investors says that other commodities are more volatile than Agri Commodities whereas 82% investor says no to other commodities are more volatile than Agri Commodities.

34. 62% says that when market is not volatile or stable at that time market to buy is better option. Whereas 47% says that no to when market is not volatile or stable at that time market to buy is better option.

35. 79% investor says that MCX is using SPAN (Standard Portfolio Based Approach) 31% says that MCX is not using SPAN (Standard Portfolio Based Approach)

36. 43% investor says that preopen market time that is 10 minutes is not short or it is ok. Whereas 56% investor says that preopen market time of 10 minutes is too short.

37. 45% investor also feel that Agri Commodity trading time should not increase, whereas 54% investor say that trading time should increase.

38. We also try and find out that Agri Commodity should available for future market or not .

    and we found that 35% investor say no and 61% investor says that yes Agri Commodity should available for future market.

39. We found that 59% people are saying training house should increase training whereas 40% says that training is not required but we can say that on other data finding we can say that training is must.

40. Due to cancellation of the pending order you can reduce risk. we found that 47% investor says that cancellation of the pending order will reduce risk whereas 52% say it will not going to reduce risk.

41. we found that 78% investors says that taking stop loss will be better position in commodity market. whereas 22% investor says that taking stop loss will not be better position in commodity market.

42. At end 42% investor says that Future trading will reduce the cost. 57.96% says that it will not going to reduce the cost.

5.2 Hypothesis:

All the hypotheses postulated in the beginning of the study through rigorous review of literature & ground familiarity were tested and found valid as evident from the empirical investigation.

The average of commodity market volatility is less regulated . The average of stock market is most regulated.

The probability value is less than 0.01 hence the Null hypothesis is regulated and alternate hypothesis is accepted.

The regulation of on commodity market is regulated on stock market are different.

The probability value is less than 0.01 hence the null hypothesis is rejected and alternate hypothesis as accepted. So volatility of commodity market and volatility of stock market is different.

5.3 Contribution to the knowledge

The research has been useful in carrying out a through analysis of the Commodity Market. Though the focus has been on the period 2011-2013. Many of the insights listed under findings and conclusions are unique since they are based on primary survey of Commodity Market investors. Many of myths related to importance of the factors have been dispelled. The phenomenon of market risk in Indian environment has been studied and well understood.

5.4 Recommendations/Suggestions

1. Agricultural activity is uncertain, and it get shocks like weather and endogenous uncertainties like output per unit of input. In India agricultural risks are exacerbated by a high level of dependence on monsoon, imperfect market, infrastructure and lack of financial services including design of risk mitigation instruments, such as derivatives, credit, and insurance.
2. Risk factor Model can be developed. Commodity Market and its trading strategies are the further research which other researcher can study.
3. SEBI should provide training so trader will get a proper knowledge through proper channel. It will help the trader to get a better return. Trader even can select exact commodity for trading. This is how market will grow in proper way. It will also helpful for economy to grow fast.
4. More transparency is required it will be helpful for investor, trader and for overall market.

5.4.1 Scope for further research:

Conceptual Scope: We wanted to study the Risk Factor, Perception of the Commodity Market & Preferences of Investors.

Contextual Scope: We wanted to study Trends in the commodity market, volatility, price uncertainty & adjoined regarding the market.

Demographic Scope: what are the trend regarding the commodity market during 2011 to 2013.

5.4.2 Limitation of the study

The present study has the following limitation and scope for further research

- For an intensive study of agri commodities and few other commodities the present study For an intensive study of agriculture, the present study focuses only on Pune and Mumbai due to the constraints of time and resources.
- The finding of the research can be applicable only for selected commodities in such areas where similar type other commodities are also needed to study in future.
- The data on different aspects of agricultural practices related only to Pune and Mumbai and specifically for the year 2013-14, Hence the validity is area and time specific and subjected to changes over time and space,
- The above discussion indicates that there is still a wide scope for undertaking further research related to market development in micro and macro level. Horizon of the study area and the field of study can be extended for further research. There is a scope for further research relating to the analysis of the contribution of education for market development by extending the study to cover some other regions in the state of Pune and /or in any other part of the country, An intensive study of specific commodity agriculture or other commodities can also be undertaken to facilitate policy formulation for impressive commodity development, Similar studies can also be undertaken to facilitate policy formulation for impressive Agri commodity , precious commodity market development. Similar study can also be undertaken to establish relationship of agriculture and precious commodities with specific level and type of education for different area/segments. It can also be applied for any physical division.

Conclusion:

Author found that there is risk in the investment but Agriculture commodity is commodity where risk is not there. But other ferrous commodities are their where risk is their because investor have to take the delivery.Volatility is also less is agriculture commodity as compared to other commodity. Turnover shows that MCX has higher turnover in commodity market.

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QUESTIONAIR COMMODITY MARKET

This is to inform you that I Vijaya Hake am doing Ph.D. from Tilak Maharashtra Vidyapeeth in Financial Management. My thesis subject is about Commodity Market. I write this to request you to complete this survey questionnaire.

Kindly download the questionnaire which is in the word format, fill in your answer and mail back the questionnaire to me.

Thanks you for taking the estimated 8 – 10 minutes to complete this survey, We promise strict confidentiality concerning your responses. Please answer each of the questions to the best of your ability. If a specific point is particularly proprietary, please feel free to skip that point.

I really appreciate your cooperation and assistance.

With the Best Regards,

Yours Truly

Vijaya Hake

---

1. Name of the Investor:
2. Address:
3. From when Investment started

1. How important were the following Motivations for investing in commodity market? (1 Not important 5 very important)

						Enter your choice
To get the profit?	1	2	3	4	5	
To get extra benefit	1	2	3	4	5	
Because of opportunity	1	2	3	4	5	
Because of advertisement in print media	1	2	3	4	5	
Because you get detail analysis	1	2	3	4	5	
	1	2	3	4	5	

2. What is percentage of your income do you invest? (% wise) (1 lower 5 higher)

	0-20	21-40	41-60	61-80	80-100	Enter your choice
Bank Deposit	1	2	3	4	5	
Mutual Fund	1	2	3	4	5	
LIC (Public & Private)	1	2	3	4	5	
Real Estate	1	2	3	4	5	
Life Insurance	1	2	3	4	5	
Equity Market	1	2	3	4	5	
Commodity Market	1	2	3	4	5	

3. Which among these investment criteria you usually prefer?

	1 Not Imp			4. Very important		Enter your choice
Risk	1	2	3	4	5	
Return	1	2	3	4	5	
Liquidity	1	2	3	4	5	
Tax rebate	1	2	3	4	5	
Marketability	1	2	3	4	5	
Tenure	1	2	3	4	5	

4. In which commodity do you most prefer to invest? (Mention name of Commodity (I is least traded 5 most actively traded commodity)

	1	2	3	4	5	
Non Ferrous						
Bullion						
Energy						
Oil						
Spices						
Agro Product						

5. In which market do you prefer to trade ? Why (Give reason in short)

NCDEX	
MCX	
NMCE	
Others	

6. Which type of market do you prefer to trade?

NCDEX	
MCX	
BSC	
NSC	

7. Where do you find more risk

Equity	
Commodity	
Bank Deposit	
Mutual Fund	
LIC (Public & Private)	
Real Estate	
Life Insurance	

8. How much % of profit do you get approximately through following commodity (Mark √ Mark & mention in short?)

Nonferrous – Aluminum, Aluminum Mini, Copper, Copper Mini, Lead, Lead Mini, Nickel, Nickel Mini, Zinc, Zinc Mini
Bullion- Gold, Gold Mini, Gold Guinea, Gold Petal, Silver, Silver Mini,
Silver Micro,
Energy – Crude Oil, Curde Oil Mini, Natural Gas
Oil – CPO, Mentha Oil, Soya Oil
Spices – Cardamom, Jeera, Turmeric, Coriander
Agro Product – Barley, Sugar, Muster Seed, Castor Seed, Maize, Soyabean, Wheat, Chana, Guar Gum, Guar Seed.

9. Which type of trading do you prefer the most?

Intraday	
Positional	
Delivery	
Future & Option	

10. What attract you towards Commodity Market? (Mark tick √ Mark)

High Long Term Gain	
Quick Short Term Gain	

11. How often do you trade?(Make tick √ Mark)

Daily	
Often	

12. Which commodity as per your thinking easy to buy and easy to sell or less risky to trade? (Mark tick √Mark)

Precious Metals	
Base Metal	
Agro Metal	
Energy Product	

13. Give your answer in form of (Yes/No)

Limit to buy order will definitely reduce the risk of investor?

Yes ( ) No ( )

14. Limit order will always reduce price if market is volatile?

Yes ( ) No ( )

15. Limit order will give chance to investor to do analysis about market?

Yes ( ) No ( )

16. Agriculture Market is less volatile than other market

Yes ( ) No ( )

17. Which other commodities are more volatile than agriculture commodity.

Yes ( ) No ( )

18. When market is not volatile or stable at that time market to buy is better option.

Yes ( ) No ( )

19. MCX is using SPAN (Standard Portfolio based approach do you agree?

Yes ( ) No ( )

20. Preopen market is for 10 minutes is too short. Do you agree?

Yes ( ) No ( )

21. Do you think agriculture commodity trading time that is upto trading time that upto 5.00 pm should increase?

Yes ( ) No ( )

22. Agri commodity are available for future trading do you agree?

Yes ( ) No ( )

23. Do you think there should be all 7 days trading's?

Yes ( ) No ( )

24. Do you think Trading House should increase training?

Yes ( ) No ( )

25. Due to cancellation of the pending order you can reduce risk do you agree?

Yes ( ) No ( )

26. Taking bigger position in commodity market is problem , do you agree?

Yes ( ) No ( )

27. Taking stop loss will be the better position in commodity market do you agree?

Yes ( ) N0 ( )

28. Future will reduce cost?

Yes ( ) No (0

29. Do you think you get benefit of spreading IOC order?

---

30. In Commodity Market there is unlimited risk do you agree?

Yes ( ) N0 ( )