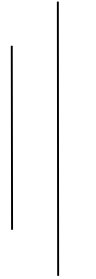


"A STUDY OF DERIVATIVE MARKET IN NEPAL"

A THESIS



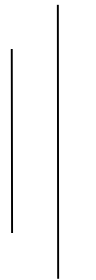
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Submitted to:

Office of the Dean

Faculty of Management

Tribhuvan University

*In partial fulfillment of the requirement for the Degree of
Master of Business Studies (M.B.S)*

Old Baneshwor, Kathmandu

April, 2013

RECOMMENDATION

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A STUDY OF DERIVATIVE MARKET IN NEPAL

Has been prepared as approved by this Department in the prescribed format of Faculty of Management. This thesis is forwarded for examination.

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VIVA-VOCE SHEET

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A STUDY OF DERIVATIVE MARKET IN NEPAL

And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as the partial fulfillment of the requirements for the Master in Business Studies (MBS)

Viva-voce committee

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Member (Thesis Supervisor)

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Date:.....

DECLARATION

Hereby I would like to declare, this thesis entitled “A Study of Derivative Market in Nepal” submitted to Office of the Dean, Faculty of Management and Tribhuvan University is my original work as partial fulfillment of the requirements for the Master’s Degree of Business Studies (MBS), under the supervision and Guidance of Mr. Baburam Karki of Goldengate Int’l College.

.....

Shirshak Kumari Gurung

April, 2013

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Shirshak Kumari Gurung

Goldengate Int'l College

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ABBREVIATIONS

NDEX	:	Nepal Derivative Exchange
MEX	:	Mercantile Exchange Nepal
COMEN	:	Commodity and Metal Exchange Nepal
CM	:	Clearing Member
NCM	:	Non Clearing Member
KCH	:	Kastamandap Clearing House
TM	:	Trading Member
SEBON	:	Security Board of Nepal
R&D	:	Research and Development
HCB	:	Himalayan Commodity Broker
NYMEX	:	New York Mercantile Exchange
MCX	:	Multi Commodity Exchange
CFX	:	Commodity Future Exchange
ADX	:	Asian Derivative Exchange
ECX	:	Everest Commodity Exchange
NRB	:	Nepal Rastriya Bank

CHAPTER - I

INTRODUCTION

1.1 Background of the Study

The origin of derivatives can be traced back to the need of farmers to protect themselves against fluctuations in the price of their crop. From the time it was sown to the time it was ready for harvest, farmers would face price uncertainty. Through the use of simple derivative products, it was possible for the farmer to partially or fully transfer price risks by locking in asset prices. These were simple contracts developed to meet the needs of farmers and were basically a means of reducing risk.

A farmer who sowed his crop in June faced uncertainty over the price he would receive for his harvest in September. In years of scarcity, he would probably obtain attractive prices. However, during times of oversupply, he would have to dispose off his harvest at a very low price. Clearly this meant that the farmer and his family were exposed to a high risk of price uncertainty.

On the other hand, a merchant with an ongoing requirement of grains too would face a price risk that of having to pay exorbitant prices during dearth, although favorable prices could be obtained during periods of oversupply. Under such circumstances, it clearly made sense for the farmer and the merchant to come together and enter into a contract whereby the price of the grain to be delivered in September could be decided earlier.

What they would then negotiate happened to be a futures type contract, which would enable both parties to eliminate the price risk.

In 1848, the Chicago Board of Trade, or CBOT, was established to bring farmers and merchants together. A group of traders got together and created the 'to-arrive' contract that permitted farmers to lock in to price upfront and deliver the grain later. These to-arrive contracts proved useful as a device for hedging and speculation on price changes. These were eventually standardized, and in 1925 the first futures clearing house came into existence.

Today derivative contract exists on a Varsity of the commodities such as corn, pepper, cotton wheat, silver gold etc. Besides this derivatives contracts also exists in financial underlying like stocks, currencies etc. Due to the vast development in derivative markets in recent year it is believe that more than one trillion dollar is traded annually.

Thus in term of finance we can define derivative as the security or the contract whose value is designed in such a way that its price is derived from the price of an underlying assets.

www.wisegeek.com defines derivative as “the investment markets that are geared toward the buying and selling of derivatives. Derivatives are securities, or financial instruments, that get their value, or at least part of their value, from the value of another security, which is called the underlier. The underlier can come in many forms including, commodities, mortgages, stocks, bonds, or currency. The reason investors may invest in a derivative security is to hedge their bet. By investing in something based on a more stable

underlier, the investor is assuming less risk than if she invested in a risky security without an underlier”.

www.investopedia.com defines derivative as “A security whose price is dependent upon or derived from one or more underlying assets. The derivative itself is merely a contract between two or more parties. Its value is determined by fluctuations in the underlying asset. The most common underlying assets include stocks, bonds, commodities, currencies, interest rates and market indexes. Most derivatives are characterized by high leverage.

In derivative market future contract, forward contract, option contract, swap contract are traded. Derivatives are generally used as an instrument to hedge the risk but sometimes can be also used as speculation. For example, A Japanese investor purchasing shares of a European company off of a European exchange (using Euro, Yen to do so) would be exposed to exchange-rate risk while holding that stock. To hedge this risk, the investor could purchase currency futures to lock in a specified exchange rate for the future stock sale and currency conversion back into yen.

Derivative products initially emerged as hedging devices against fluctuations in commodity prices, and commodity-linked derivatives remained the sole form of such products for almost three hundred years. Financial derivatives came into spotlight in the post-1970 period due to growing instability in the financial markets. However, since their emergence, these products have become very popular and by 1990s, they accounted for about two-thirds of total transactions in derivative products. In recent years, the market

for financial derivatives has grown tremendously in terms of variety of instruments available, their complexity and also turnover. In the class of equity derivatives the world over, futures and options on stock indices have gained more popularity than on individual stocks, especially among the institutional investors, who are major users of index-linked derivatives. Even small investors find these useful due to high correlation of the popular indexes with various portfolios and ease of use. The lower costs associated with index derivatives.

Talking about the derivative market of Nepal, future contract are traded through exchange and commodity derivative are traded. Till date there are four derivative exchanges are in Nepal namely Commodity and Metal Exchange Nepal (COMEN), Mercantile Exchange Nepal (MEX), Nepal Derivative Exchange Nepal (NDEX), Commodity and Future Exchange Nepal (CFX).

Commodity & Metal Exchange Nepal (COMEN) was the first derivative exchange blushed which was established in late 2005. Commodity and Metal exchange Nepal was established as the portfolio investment for the client to trade normally in commodities like gold, silver copper zinc etc.

The second commodity exchange which was established in Nepal was Mercantile Exchange Nepal (MEX). Till now, it is the biggest derivative exchange of Nepal. Just like COMEN it was also a portfolio investment service to the costumer. But MEX introduced more commodities compared to COMEN. Today around 21 commodities are

traded in MEX. MEX was established in mid-2007. MEX was established with authorized capital 100 million.

The third derivative exchange of Nepal was Nepal Derivative Exchange (NDEX). Just like COMEN and MEX it was the portfolio investment service for the client. It also introduced similar commodities like gold, silver, crude oil, corn, soybeans etc. like COMEN and MEX. It introduced less commodities compared to MEX but more commodities compared to COMEN. Today around 14 commodities are traded in NDEX.

The four derivative exchange of Nepal Commodity Future Exchange Nepal (CFX), it was established in June 2011 but it was officially started from December 2011. It also introduced commodity derivative like gold, silver, zinc, lead, copper, crude oil etc. Just like COMEN it introduced only metal and energy product. But it is believed that it is going to launch agro product very soon.

It is believed that more than 10 derivative exchanges are soon going to be operated in Nepal very soon.

1.2 Statement of the Problem

Derivatives are often highly complex financial instruments that “drive” their value from some underlying assets. Instead of trading the asset itself, market participants agree to exchange some financial or other value at a future date based on the underlying asset. The payments between the counterparties may or may not correspond to the performance of the underlying asset.

Derivatives facilitate the buying and selling of risk and it is considered to have a positive impact on the economic system. Although someone loses money while someone else gains money with a derivative, under normal circumstances, trading in derivatives should not adversely affect the economic system. Former Federal Reserve Board Chairman Alan Greenspan also commented in 2003 that he believed that the use of derivatives has softened the impact of the economic downturn at the beginning of the 21st century. (Alan Greenspan Speech on May 8 to the 2003 Conference on Bank Structure and Competition)

Derivatives are basically used by investors to

- Provide leverage or gearing, such that a small movement in the underlying value can cause a large difference in the value of the derivative.
- Speculate and to make a profit if the value of the underlying asset moves the way they expect (e.g., moves in a given direction, stays in or out of a specified range, reaches a certain level)
- Hedge or mitigate risk in the underlying, by entering into a derivative contract whose value moves in the opposite direction to their underlying position and cancels part or all of it out.
- Obtain exposure to underlying where it is not possible to trade in the underlying (e.g. weather derivatives)
- Create option ability where the value of the derivative is linked to a specific condition or event (e.g., the underlying reaching a specific price level)

In Nepal, the derivatives currently being in practice are the futures contracts. This study is regarding derivative market in Nepal, a new source of investment. In Nepalese context,

most of the investors are unaware of derivative market and the people who are aware of this market what are their trading strategies and how do they trade are still not well functioned. Thus, the study attempts to answer does the derivative market function well in Nepal?

1.3 Objective of the Study

In this thesis, the use of derivative products in Nepal will be studied as investing alternatives open to Nepalese investors. The objectives are pointed out as follows:

- To know the current status of derivative market of Nepal.
- To understand the work flow of derivative market and the market operation.
- To learn the process of trading in this market.
- To know why investors are trading in derivative market.

1.4 Significance of the Study

Derivative instrument are one of the most traded instrument in the world. Derivatives are used as the risk minimizing tools by traders through which they can hedge their price risk and protect themselves from adverse price risk. It has been introduced in Nepal by Commodity and Metal Exchange Nepal in late 2005. Thus this report covers overall the process of derivative markets in Nepal, the way of trading and the reason investor are shifting towards this market

1.5 Limitation of the Study

There could be a lot many issues to be considered in Derivative Market of Nepal. However, the study is only focused on their performances in terms of the returns provided to investors. So, the study has its limitations:

- This study is conducted on only three derivative exchanges.
- This study was conduct on limited time.
- This report is prepared on the answer of only limited respondents.
- This research is only conducted in Kathmandu Valley.

1.6 Organization of the Study

This study has been organized in six different chapters, which are as follows:

Chapter 1: Introduction

This chapter will include background of study, a brief history of derivatives, the problems, objectives and significance of the thesis as well the limitations.

Chapter 2: Literature review

This chapter will be devoted to conceptual framework and brief review of related and important literature.

Chapter 3: Research methodology

It will describe the research methodology employed in the study and include research design, sources of data, as well as the methods and tools of analysis.

Chapter 4: Presentation and data analysis

Data processing, data analysis and interpretation will be presented in this fourth chapter.

The major findings of the study will also be presented in this chapter.

Chapter 6: Discussions, Interpretations, Implication, Conclusion and Recommendation

The last chapter will contain the findings of the study after which major conclusion are drawn and the recommendations were specified.

CHAPTER - II

REVIEW OF LITERATURE

2.1 Definition of Derivative

In term of finance, derivative can be defined as the financial instrument whose value depends upon the value of the value of the underlying variables (price of the currency, stock, commodities etc.). Future contract and option contract are traded under the exchange whereas forward and swap contact are traded Over the Counter (OTC).

As we know that spot prices gives too much fluctuations depending not only on demand and supply but also some other kinds of factors such as natural disaster, wars, political situation etc. Derivatives are an offshoot of spot contract and it serves as the risk management tools. A Japanese exporter who is to receive sale product in dollar, may wish to sell dollar on a future date as a protection against adverse change in exchange rate.

Derivative markets have become popular over the past 15 to 20 years. All the traders find it more attractive in many situations to trade in derivative

The 1970s is when derivatives gained widespread use. Several factors were at play to propel derivative markets. First, many governments began to deregulate pricing and controls in markets introducing higher volatility. Tedious calculations were required utilizing probability theories to help predict future price movements. Luckily, at this time the computer becomes more wide spread allowing the complex models and computations to be solved quickly and efficiently. Then in 1973, Fischer Black and Myron Scholes

would publish their paper, "The Pricing of Options and Corporate Liabilities", which established methodologies to help determine option prices. The paper also shows using options on equities that it is possible to create a hedged position - something fairly well known in agricultural commodities. That same year and coincidentally, the Chicago Board of Trade opens the Chicago Board Options Exchange. With a methodology to price options, computers to crunch the numbers, and a market to trade- things boomed. Over the next few decades, there would be derivatives on almost anything with a market willing to trade.

The next big development for derivatives would be electronic trading. Launched initially by the Chicago Mercantile Exchange in 1992, electronic trading has gained wide acceptance. Benefits have been greater liquidity, reduced transaction cost, and higher transparency. Today, trading in virtually any derivative, commodity, or security can be done from one's living room.

2.2 Types of Derivative Contract

Generally there are four types of Commodity Contract, they are:

1. Forward contract
2. Future contract
3. Swap contract
4. Option contract

2.2.1 Forward Contract:

Forward contract are those type of contract where buyer and seller agrees to buy or sell the assets at a certain future time for an agreed price. The contract may be between two financial institutions or a financial institution or any individual client. It is not traded on an exchange but it is traded Over the Counter (OTC) product.

A forward contract is an agreement negotiated between two parties for the delivery of a physical asset (e.g. oil or gold) at a certain time in the future for a certain price, fixed at the inception of the contract. The Parties agreeing to the forward contract are known as counterparties. No actual transfer of ownership occurs in the underlying asset when the contract is initiated. Instead, there is simply an agreement to transfer ownership of the underlying asset at some future delivery date. (Kolb & Overdahl, 2007)

The key elements of forward contracts are:-

- The date on which the commodity will be bought/ sold is determined in advanced.
- The price to be paid/ received at the future date is determined at present.

For example: In the month of July, a person agrees to buy one tone of wheat from a farmer in the following March at the price of Rs 4,000. Then, this is known to be forward contract. Now, the farmer will receive Rs 4,000 even if the market price of the wheat in March is Rs 4,500 or Rs 3,500.

2.2.2 Future Contract:

In a simple language, future contract can be explained as the agreement between the buyer and seller to buy or sell the financial instrument or physical commodities for the future delivery at the agreed price. The assets may be currencies, commodities like gold, silver, copper, crude oil, natural gas etc.

A futures contract is a type of forward contract with highly standardized and precisely specified contract terms. As in all forward contracts, a future contract calls for the exchange of some good at a future date for cash, with the payment for the good to occur at that future date. The purchaser of futures contract undertakes to receive delivery of the good and pay for it, while the seller of a futures contract promises to deliver the goods and receive payment. The price of the good is determined at the initial time of contracting. (Kolb & Overdahl, 2007)

We can also define future contract as a contract between buyers or seller to buy or sell a standard amount of a standardized or pre-determined grades of certain commodity at a pre determined future date at an agreed price.

The main difference between forward and future contract is that unlike a forward contract, the exactly delivery date is not specified in future, but the contract is referred by its delivery month. In future contract the exchange specifies certain standard feature of future contract to facilitate trading i.e. the quantity of the underlying assets, unit of the price and the settlement.

The key elements of future contract are:-

- There is no reference to an agreement between two parties this is because future contracts are often entered into through an intermediary body i.e. exchange/clearing house which acts as the buyer to each seller to each buyer.
- There is a standard amount for contracts in each commodity which lasts for 2-3 month.
- The purchase or sale is at location specified by the exchange.

Futures contracts are used to hedge the entire price change of a commodity, a foreign currency, or a financial instrument since the contract value and underlying price change symmetrically

2.2.3 Swap Contract:

A swap contract is an agreement to exchange future cash flows. Swaps are used to exchange cash flows based on all sorts of things- stock returns, the price of electricity, etc- but typically we're talking about cash flows stemming from interest payments. (Durbin, 2006)

We can also define swap as the contract where two parties exchange two different streams of cash flow over a definite period of time through the mediator of a financial institution. It can be also viewed as the portfolio of a future contract. It is traded over the counter. Swaps are usually entered into at-the-money (i.e. with minimal initial cash payments because fair value is zero), through brokers or dealers who take an upfront cash payment or who add just the rate to bear default risk. The two most prevalent swaps are

interest rate swaps and foreign currency swaps, while others include equity swaps, commodity swaps, and swap options. Swap options are options on swaps that provide the holder with the right to enter into a swap at a specified future date at a specified future date at specified terms (stand-alone option in a swap) or to extend or terminate the life of an existing swap (embedded option on a swap).

Swap contracts are used to hedge entire price changes (symmetrically) related to an identified hedged risk, such as interest rate or foreign currency risk, since both counter parties gain or lose equally.

Generally, there are two types of swap i.e. Interest swap and Currency swap.

2.2.4 Option Contract:

An option contract is an agreement between two parties, which gives the buyer of the option the right, but not the obligation, to buy or sell an asset at fixed price at a given point in future. The seller has the obligation to sell or buy the assets from the buyer.

An Option Contract grants its holder the right, but not the obligation, to buy or sell something at a specified price, on or before a specified date. The person who acquires the right is known as the option buyer and the counter party is known as the seller. The price at which the sales take place is known as the strike price, and is specified at the time the parties enter into the option. The option contract also specifies a maturity date. (Durbin, 2006)

In option, the purchaser of an option has the right, but not the obligation, to buy or sell a specified quantity of a particular commodity, a foreign currency, or a financial instrument, at a specified price, during a specified period of time (American Option) or on a specified date (European Option). An option may be settled by taking delivery of the underlying or by cash settlement, with risk limited to the premium.

Generally, there are two types of option Call option and Put option. The call options are that type of option where the option buyer has the right to buy the commodity at the predetermined price whereas in the put option the buyer has the right to sell the commodity. And option contracts are used to hedge a one-directional movement in the underlying commodity, foreign currency, or financial instrument.

Over-the counter (OTC) derivatives are contracts that are traded (and privately negotiated) directly between two parties, without going through an exchange or other intermediary. Products such as swaps, forward rate agreements, and exotic options are almost always traded in this way. The OTC derivative market is the largest market for derivatives, and is largely unregulated with respect to disclosure of information between the parties, such as hedge funds. Reporting of OTC amounts are difficult because trades can occur in private, without activity being visible on any exchange. Because OTC derivatives are not traded on an exchange, there is no central counter-party. Therefore, they are subject to counter-party risk like an ordinary contract. Since, each counter party relies on the other to perform.

2.3 Types of Traders in Derivative Market

Generally speaking, there are three types of traders in commodity market:

- I. Speculators
- II. Hedgers
- III. Arbitrageurs

2.3.1 Speculators:

Speculators are those kinds of traders who predict the market. Generally, they predict the market by analyzing the historical trend of the market. Sometime they are also known as the gamblers.

We can also define speculator as those kinds of traders who bet of the price of a stock or currencies going up or down in the future. They may choose any kind of contract either forward, future, option or swap.

According to www.investopedia.com, speculators are a person who trades derivatives, commodities, bonds, equities or currencies with a higher-than-average risk in return for a higher-than-average profit potential. Speculators take large risks, especially with respect to anticipating future price movements, in the hope of making quick, large gain. Speculators are typically sophisticated; risk-taking investors with expertise in the market(s) in which they are trading and will usually use highly leveraged investments such as futures and options

The main role of speculator in commodity market is that they risk their own capital in the hope of profit and as the result they provide liquidity to the market and make easier for other traders like hedgers and arbitrageurs to offset the risk.

For example: if any person who enters in long position in a future contract in silver at Rs 1,500 per 10 gm makes profit if the price on the maturity of contract rises to Rs 2,500 per 10 gm. He buys at the rate of Rs 1,500 as per contract and sells at the rate of Rs 3,500. Further, there is no initial payment required for a future contract except to maintain initial margin as prescribed by the exchange.

2.3.2 Hedgers:

Hedgers are those kinds of traders who do not take risk in the market. We can also define hedgers as the traders who are exposed to the market risk due to the long/short positions held by them and seek to reduce the risk through the derivative.

According to www.investopedia.com, hedgers are those kinds of investors who invest to reduce the risk of adverse price movements in an asset. Normally, a hedge consists of taking an offsetting position in a related security, such as a futures contract.

Hedging is the strategy designed to minimize exposure to an unwanted business risk, while still allowing the business to profit from an investment activity

The traders of equity shares as well as others who are interested in economy are interested on the movement of stock market indices. Investors' interest in stock market indices largely results from the increasing popularity of the "index" portfolio

management style, which consists of building portfolios that mirror stock market indices. Although, exchange traded index funds are not available in Nepal, the recent regulation on Mutual Funds has opened door to establish such funds. Moreover, there are few organizations which are managing portfolios for investors and some of them are providing guaranteed return for the investors. This could be risky in the decreasing market especially for those who are holding portfolios with index fund or for mutual funds and investment companies who are holding portfolio whose performance is highly correlated with index movement

For example, suppose a portfolio manager manages Rs. 500 million portfolios with portfolio risk beta of 1.2. Suppose again that the market is bullish for the long time, but the portfolio manager predicts the possibility that over the next 5 months, there would be a sharp downturn. If the index or market goes down by 25%, then the worth of the portfolio will be down by $1.2 \times 25\%$ which equals to 30%. This is a situation of extreme risk for a portfolio manager. If there is no mediating cost, then the easy way would be to sell the portfolio today and reinstate the same after 5 months. But due to the mediating and other costs, investing in stock index futures will hedge such risk. To hedge this risk, the portfolio manager can sell stock index future and take the short position. When the portfolio value falls along with decline in the broad market, the futures contract will provide an offsetting profit and if the index value increases the increased worth of the portfolio will compensate the loss on index future. If the portfolio is constructed by investing in the same stocks with equal weights as they are in index basket, then the risk can be exactly offset.

2.3.3 Arbitrageurs:

Arbitrageurs are that kind of trader who takes an advantage of the location. It means that they involve making risk less profit from entering into buy and sell transaction simultaneously in two or more markets.

According to www.wisegeek.com, arbitrageurs are the activity of exploiting imbalances between two or more markets. Foreign money exchangers operate their entire businesses on this principle. They find tourists who need the convenience of a quick cash exchange. Tourists exchange cash for less than the market rate and then the money exchanger converts those foreign funds into the local currency at a higher rate. The difference between the two rates is the spread or profit.

2.4 Product of Derivative

Generally there are three types of derivative product

- Currency Derivative
- Commodity Derivative
- Credit Derivative

2.4.1 Currency Derivative:

Currency derivative is a type of derivative contract between seller and buyer whose value is to be derived from the underlying asset, the currency amount. It is traded over the counter and only authorized dealer offer these type of contract.

Currency derivative are a type of financial agreement that is based around the relationship between two foreign currencies. The agreement usually involves two traders making a deal to exchange currencies at a fixed rate on a future date. The difference between this rate and the actual market rate on this date will determine who comes off better from the agreement. Either party can sell his position in the agreement to a third party before the agreed completion date, thus making the agreement itself a financial asset (www.wisegeek.com).

Currency derivative are transferable futures contract that specifies the price at which a currency can be bought or sold at a future date. Currency future contracts allow investors to hedge against foreign exchange risk. Because currency futures contracts are marked-to-market daily, investors can exit their obligation to buy or sell the currency prior to the contract's delivery date. This is done by closing out the position. With currency futures, the price is determined when the contract is signed, just as it is in the forex market, only and the currency pair is exchanged on the delivery date, which is usually sometime in the distant future. However, most participants in the futures markets are speculators who usually close out their positions before the date of settlement, so most contracts do not tend to last until the date of delivery (www.investopedia.com).

2.4.2 Commodity Derivative:

Commodity derivatives are also one of the types of derivative. Commodity derivatives are the derivative products where the underlying product is commodity. Trading of commodity derivative is done through commodity exchange.

Commodity derivative are “Commodity derivatives are investment tools that allow investors to profit from certain items without possessing them. This type of investing dates back to 1848 when the Chicago Board of Trade was established. Initially, the idea behind commodity derivatives was to provide a means of risk protection for farmers. They promise to sell crops in the future for a pre-arranged price”.

Commodity derivative are traded in future and are also traded in margin. Commodity derivative allows investor to trade with small margin of money to invest in huge commodity.

2.4.3 Credit Derivative:

Credit derivative are also a kind of derivative contract where the underlying assets is credit and payoff depends upon sudden events such as bankruptcy or natural disaster.

2.5 Commodity Market

Commodity markets are the place where raw or primary products are exchanged. In commodity market future contract are traded. Normally it is exchange that lay down rules and regulation of the commodity price including the procedure for trading, clearing, delivery and the settlement.

Commodity markets are the global supply and demand for undifferentiated materials. A commodity is any item that is the same regardless of its origin. Things like raw metals, fabric or electricity are the same all over the world, no matter who mined, manufactured or generated them. Since these items are all essentially the same, they can be exchanged

independent of origin. A commodity market is also the primary location where these commodities are exchanged (www.wisegeek.com).

Commodity markets are the physical or virtual marketplace for buying, selling and trading raw or primary products. For investors' purposes there are currently about 50 major commodity markets worldwide that facilitate investment trade in nearly 100 primary commodities. Commodities are split into two types: hard and soft commodities. Hard commodities are typically natural resources that must be mined or extracted (gold, rubber, oil, etc.), whereas soft commodities are agricultural products or livestock (corn, wheat, coffee, sugar, soybeans, pork, etc).

Commodity markets are similar to stock market. Just like the stock market the broker sells the stocks to the client (customer) whereas in commodity market the commodity broker sells commodity to the client (customer). Just like stock market stock exchange maintains rule and regulation of stocks like that commodity exchange maintains rules and regulation of the commodity market.

Normally, non branded commodities are traded in commodity market. Raw materials, such as oil, and agricultural products, like soybeans and sugar, make up a largest portion of the commodity market. Livestock, like cattle and pigs, makes up a smallest part, as does electricity, cotton cloth and ethanol. Certain common materials, like milk, are not trading commodities, as the price and source of the milk varies significantly from area to area.

Different kinds of commodity products are traded in commodity exchange precious metal product such as gold, silver, platinum base metal product such as copper energy product such crude oil, heating oil, natural gas agro product such as corn, sugar, wheat, soybean, coffee etc. As we know that agro commodities have short storage of life, so the product must be sold after the harvest because most of the producers (farmers) do not have the capabilities to hold it, which give volatile to the spot market.

2.6 Commodity Trading

Commodity trading takes place by the open outcry system on the floor of the exchange. The client places the order through the broking agency that passes the order to the floor trader. He executes the order to the other floor trader. Electronic trading system is used for commodity trading. At the end of the day clearing house settles the account of the traders.

Commodity trading is an investing strategy that involves the buying and selling of goods that are classified as commodities. There are many similarities between commodity trading and the trading activity involved with stocks. One key difference has to do with the difference between what is traded (www.wisegeek.com).

A commodity is normally defined as something that is considered to be of value, has a quality that is more or less consistent, and is produced in large amounts by a number of different producers. When people choose to invest in commodities, they normally think in terms of items that are resources that may be purchased for a wide range of uses. For

example, corn is considered a commodity and is traded on the basis of the wide range of goods that can be produced using corn as a base ingredient.

In order to trade commodities, it is necessary to participate in transactions conducted on a commodity exchange. Functioning in a manner very similar to a stock exchange, there are exchanges that deal directly with commodities all over the world. However, it is not necessary to limit the commodity trading to one particular exchange. Investors are free to buy and sell on several exchanges if they so desire and are recognized by the exchange.

The process of commodity trading is directly affected by the current relationship between supply and demand for a given commodity. Any factor that limits the supply may cause the value of the remaining quantities of the commodity to gain in value very quickly. For example, if a natural disaster wiped out a significant portion of wheat, the worth of remaining wheat resources would be in greater demand. As a result, the price for the commodity would rise and any investor with investments in the wheat market would stand a good chance of earning a substantial return.

At the same time, a glut of a commodity that exceeds the current level of demand may drive the unit price down. This could result in a loss to the investor, assuming the price falls below what was originally paid for the investment. Often, the commodities investor will have to decide whether to absorb the loss or prevent additional losses by selling at the current lower unit price. If there appears to be no hope for the commodity to recover within a reasonable amount of time, the investor is likely to sell. However, if there are indicators that the commodity will recover and demand will rise within a short period of

time, there is a good chance that the investment will remain in place in hopes of recouping all losses at a later date.

As with stock trading, commodity trading involves some degree of risk. Investors do monitor the relationship between supply and demand and how that factor impacts the information currently available through a commodities price index. While commodities are usually considered more consistent and stable than some other forms of investing, there is always the chance that natural disasters, changes in consumer tastes, or political issues may negatively impact the worth of any commodity.

2.7 Advantages of Commodity Trading

Some of the advantages of commodity trading are as follow:-

1. Price risk management & Price discovery
2. Trader can benefit from the price fluctuation.
3. High financial leverage
4. Commodities as an asset class for diversification of portfolio risk
5. Useful to the producer & consumer
6. Corporate entities can benefit by hedging
7. Useful to exporters
8. Improved product quality
9. Credit accessibility

10. Two way trading
11. We can gain profit even if the market is bearish trends.

2.8 Commodity Exchange

Just like stock exchange, commodity exchange is that exchange where commodities are traded. The major difference with stock exchange is that in stock exchange shares are traded whereas in commodity exchange commodities like gold, silver, crude oil, wheat, corn, etc are traded.

Commodity exchange is defined as “an entity, usually an incorporated non-profit association that determines and enforces rules and procedures for the trading of commodities and related investments, such as commodity futures. Commodities exchange also refers to the physical center where trading takes place”
(www.investopedia.com)

Commodity exchange are trading organizations that engage in transactions that involve the buying and selling of futures and options related to the commodities market. Generally, the commodity exchange will maintain a physical location where trading activity takes place. Increasingly, a commodity exchange will also provide online access to trading activity, including the ability to trade on the exchange by electronic means.
(www.wisegeek.com)

Generally speaking commodity exchanges performs two major functions price discovery of the commodities and price risk management of the respective commodities. In term of

agro commodities like wheat, corn, soybeans, sugar, chilies etc can take an advantage from commodity exchange. Farmer, traders and other market participants have become vulnerable to volatile the commodity price due to erratic moment in world commodities price.

Commodity trading in an exchange environment and with trading rules can be traced back to Venice in the 12th Century. Forward and options contracts were traded on commodities, shipments and securities in Amsterdam after 1595. The Japanese traded futures-like contracts on warehouse receipts or rice in the 1700s. Dojima Rice Exchange was established in 1710 in Osaka, Japan. The United States followed in the early 1800s. Forward contracts were standard at the time. However, most forward contracts weren't honored by both the buyer and the seller. For instance, if the buyer of a corn forward contract made an agreement to buy corn, and at the time of delivery the price of corn differed dramatically from the original contract price, either the buyer or the seller would back out. Additionally, the forward contracts market was very illiquid and an exchange was needed that would bring together a market to find potential buyers and sellers of a commodity instead of making people bear the burden of finding a buyer or seller. In 1848, the Chicago Board of Trade (CBOT) was formed. Trading was originally in forward contracts, the first contract (on corn) was written on March 13, 1851. In 1865, standardized futures contracts were introduced. The Chicago Produce Exchange was established in 1874, renamed the Chicago Butter and Egg Board in 1898 and then reorganized into the Chicago Mercantile Exchange (CME) in 1919. In 1972, the International Monetary Market (IMM), a division of the CME, was formed to offer

futures contracts in foreign currencies: British pound, Canadian dollar, German mark, Japanese yen, Mexican peso, and Swiss franc. In 1881, a regional market was founded in Minneapolis and has operated continuously since then; today the Minneapolis Grain Exchange (MGEX) is the only exchange for hard red spring wheat futures and options. The 1970s saw the development of the financial futures contracts, which allowed trading in the future value of interest rates. These had an enormous impact on the development of the interest rate swap market. Today, the futures markets have far outgrown their agricultural origins. With the addition of the New York Mercantile Exchange (NYMEX) the trading and hedging of financial products using futures dwarfs the traditional commodity markets, and plays a major role in the global financial system.

2.9 Clearing House/Member

All settlement function of the traders is looked by the clearing member. As the name says, clearing house the main job of clearing house is to clear all the transactions of the traders. The main task of the clearing house is to track of all the transactions that take place during a day so that the net position of each of its member can be calculated. As we know that commodity trading is done through internet so the clearing house also provides user name and password to the client.

The clearing house is the guarantor for all the transactions that takes place in the exchange

www.wisegeek.com explain Clearing house as clearing members are individuals or companies that hold a certain class of membership in a clearinghouse. The vast majority

of clearinghouse memberships are held by companies, owing to the requirements that most exchange clearinghouse organizations have in place for membership. Privileges extended to the clearing member include the ability to buy and sell underlying securities in accordance with any current regulations that are in place.

Along with the privileges associated with client trades, the clearing member also assumes responsibility for all transactions that are executed under the terms of the membership. In the case of a company that is a clearing member, the company will be responsible for backing all obligations associated with the execution of orders on behalf of their clients. The clearing member generally makes arrangements with the client to ensure that the obligations to the clearinghouse will be met in a timely manner.

The clearing member will need to meet a number of requirements that are based in cash flow and a generally strong fiscal position. Because a clearing member can accept trades that are executed on the floor of an exchange, this condition of verifiable financial strength is understandable. A solid base of cash assets helps to ensure that the clearinghouse can place an equitable degree of confidence in the member. At the same time, clients of the clearing member can rest assured they are executing orders through a reliable and stable entity.

A clearing member also assumes a certain degree of risk. In the event that a client of the clearing member is unable to meet his or her obligations for some reason, the clearing member is still responsible to the clearinghouse for settling the debt. Once the matter is closed with the clearinghouse, the clearing member is free to use appropriate legal

recourse to remuneration from the client in default. However, the clearing member may be unable to collect the outstanding balance from the client. When this is the case, the loss may be partially covered by insurance, or written off as a bad debt or loss for tax purposes (www.wisegeek.com).

“An agency or separate corporation of a futures exchange responsible for settling trading accounts, clearing trades, collecting and maintaining margin monies, regulating delivery and reporting trading data. Clearing houses act as third parties to all futures and options contracts - as a buyer to every clearing member seller and a seller to every clearing member buyer”.(www.investopedia.com)

2.10 Non Clearing Member

They are the brokerage agency. They facilitate the buyer and seller of commodity derivative between buyer and seller. Just like stock market the buyer or seller cannot buy or sell the stock without going to stock broker like that in commodity market also buyer or seller cannot buy or sell the commodity without the help of Non Clearing member. They bring the buyer and seller under one roof. They buy and sell the commodity contract by taking certain amount of commission from the traders. Before taking the license of the exchange they should follow certain rules and regulation of the exchange.

2.11 Clients

Clients are those people who want to trade in the commodity. They are also known as the investors. Just like stock market if any investor wants to invest in stock market they

cannot invest directly and to invest it they need to go through broker agency like that in commodity market also they need go through a broker agency.

2.12 Issue and Challenges

Along with the benefits there are some risks of the commodity derivative market as well. The serve global financial crises of 2008 have put derivative regulation as a hot subject of talks, debates and conversation in various economic, regulatory market circles across the globe. With this regulatory tightening was made in United States as well as other developed markets around the globe. For the past five years, commodity derivative market is burgeoning in Nepal without any regulatory framework. The major issue in case of commodity derivative market in Nepal is not the loose/deficient regulation rather it is the loose/deficient regulation which is more dangerous. Hence the need of the hour is to support, develop and enhance the well-functioning and regulated commodity derivative market in Nepal.

The essence of commodity market lies in hedging, arbitrage and speculation. Due to lack of required infrastructures like clearing house, ware house, inspector, central counter party, settlement guarantee fund, disaster recovery mechanism, arbitrary margin determination process, lack of independent product quality assurance and grading institution- standardization/specification, absence of facility of availing reference price and availing depth of the market, less transparency in margin requirements, absence of publishing every day open interest, less transparency in clearing and settlement process, absence of trade related information, and training and awareness building institute,

Nepalese commodity market lacks the scope of hedging and arbitrage. Currently the commodity exchanges of Nepal are highly concentrated in trading future contracts of metals, fuels and some foreign market based agro products.

The price determination of foreign commodities is also not clear, some exchanges have been pegging the NPR vice-versa Indian Rupees to obtain the exchange rate between NPR and USD, and other are using the market exchange rate. Trading platforms and system are yet to be certified and audited respectively. Similarly, it is not yet clear whether they have proper contract derivation mechanism, margin fixation mechanism and disaster recovery mechanism. Amid these deficiencies, the estimated daily average turnover of the overall commodity market is NPR 50 million, higher than that of stock market daily turnover of NPR 30 million. Stock market is three and half decade old whereas commodity market had started since 2006 in Nepal. The rapid growth of the Nepal commodity market has not been accompanied by the real sector's growth including commercialization of agriculture and overall performance of economy. The deficiencies and rapid growth show commodity derivative market is being purely speculative market in Nepal. In order to prevent the economy from the unwanted consequences of excessive speculative commodity derivative market and also for sustainable and credible development of commodity derivative market in Nepal, there is a need for regulatory mechanism with the proper rules and regulation as well as autonomous regulator.

In order to safeguard against uncontrolled speculation certain regulatory measures are introduced from time to time in the global derivative markets. They include limit on open

position of the individuals' operator to prevent over trading; limit of price fluctuation to prevent abrupt upswing or downswing in prices special margin deposit to be collected on outstanding purchases or sale to curb excessive speculative activity through financial restraints, minimum/maximum prices to be prescribed to prevent future prices from falling below the levels that are unremunerative and from rising above the levels are not warranted by genuine supply and demand factor. During shortage, extreme steps like skipping trading in certain deliveries of the contract, closing the markets for a specified period and even closing out the contract to overcome emergency situation are taken. Briefly, commodity derivative market regulation makes sure that the prices discovered for future delivery of the underlying assets are best reflectors of the future situation, traders and producers/ processors are able to manage their risks in a cost effective way and the risks spread thinly within the economy, reduces market instability and hence, financial, economy, and political instability. (MEX Year book 2011, Page no 21-22).

2.13 Initiatives and Prospects of Commodity Derivative Market Regulation

To ensure effective and efficient functioning of commodity derivative market, it is necessary that an independent regulator regulates market where participants are prone to collective irrationality. The independent regulator could stop markets/participants from becoming victims of herd mentality and, thus, play an instrumental role in maintaining efficiency of market in its economic functions

Government of Nepal has committed to introduce rules and regulation for this market and also has included in tax network. Securities Board of Nepal (SEBON) being a

Government agency regulating capital market has been involved in drafting the amendment in Securities Act, 2007 and drafting commodity derivative market regulations. The drafting process has been already completed which has been submitted to the Ministry of Finance for fulfilling the legislative process and approval. Now it is Government prerogative for fulfilling the legislative process of the amendment in the Securities Act and approving commodity derivative market regulations. Further, SEBON has also assessed commodity derivative market in the country with the stakeholders' consultation and prepared supplementary report on five years capital market development master plan, which is implemented through Government budgetary announcement of the current fiscal year.

Commodity derivative is subject to a comprehensive regulatory regime administered and enforced by the government entities that includes, among other things fit and proper criteria for industry participants; functions, duties and powers of exchanges and intermediaries; reporting and record keeping requirements; procedures governing the trading, treatment of customer funds and property; definition of commodity market and commodity intermediaries; licensing and revocation of licenses of commodity exchanges and intermediaries; listing, sales practice, trading limit, administrative measures taken against industry intermediaries, and other conduct of business standards; report on transactions; provisions designed to protect the integrity of the markets; provision for compensation; statutory prohibitions on fraud, abuse, and market manipulation. In addition, a self-regulatory organization (SRO) may also be set up for self-regulation and

enforcement of obligations with respect to operation of the market in a sound manner and free from trading, market or customer abuses.

After the establishment of regulatory set up, the Registrar of Companies will register commodity exchanges with the recommendation of regulator and exchanges have to maintain capital base and necessary infrastructures as per specified provision. Regulator can ask any information needed for inspection and investigation of the market, specify necessary conditions on minimum capital and economic resources considering the status, fair transactions and interest of clients, and regulator with the consideration of Government policy, market status, and investors' interest can issue directives on the transactions of commodities for taking or not taking any action. Regulator will have major concern on fraud transactions, price fluctuations/ market manipulation, misstatement, insider trading and accordingly imposes civil and criminal offences against these activities. Regulator will have power in appointing auditor for examining books of accounts of commodity exchanges and intermediaries, and restructuring board of directors of commodity exchanges and intermediaries, and requiring bye laws on listing, clearing & settlement, transfer and establishment and operation of investors' protection funds. Regulator may also restrict trade for specified days consulting with commodity exchanges.

For the benefits of commodity derivative market to the large populace, there is a need to identify tradable commodity useful to all public or economy. Presently investors are overwhelmingly entering in commodity derivative market, however, they are quite

unaware to the rights and protection, they do not have united voice, and grievances are being presented only in informal way. Software used in the commodity exchanges should be user friendly, presently it is not being clear whether the exchanges using software are user friendly. Regulator, if provisioned will not delay in conducting system audit of commodity derivative exchanges. Government of Nepal needs to be serious to have strong regulator for the commodity derivative market along with adequate human resources, technical sophistication and required infrastructures like ware house and inspectors. Further, just assigning the commodity derivative market regulatory responsibility to any regulator is not sufficient in any case. If it is taken in that easy way, it will further deteriorate the credibility and sustainability of the whole financial market and consequently irrecoverable impact in the economy of the country. (MEX Year Book 2011, Page no 22-23).

2.14 Size of the Commodity Market

The global volume of commodities contracts traded on exchanges increased by a fifth in 2010, and a half since 2008, to around 2.5 billion million contracts. During the three years up to the end of 2010, global physical exports of commodities fell by 2%, while the outstanding value of OTC commodities derivatives declined by two thirds as investors reduced risk following a five-fold increase in value outstanding in the previous three years. Trading on exchanges in China and India has gained importance in recent years due to their emergence as significant commodities consumers and producers. China accounted for more than 60% of exchange-traded commodities in 2009, up on its 40%

share in the previous year. Commodity assets under management more than doubled between 2008 and 2010 to nearly \$380bn. Inflows into the sector totaled over \$60bn in 2010, the second highest year on record, down from the record \$72bn allocated to commodities funds in the previous year. The bulk of funds went into precious metals and energy products. The growth in prices of many commodities in 2010 contributed to the increase in the value of commodities funds under management. (MEX Year Book 2011, page no 33).

2.15 What Commodity Markets do?

A well-developed and effective commodity futures market, unlike physical market, facilitates offsetting the transactions without impacting on physical goods until the expiry of a contract. Futures market attracts hedgers who minimize their risks, and encourages competition from other traders who possess market information and price judgment. While hedgers have long term perspective of the market, the traders, or arbitragers as they are often called, hold an immediate view of the market. A large number of different market players participate in buying and selling activities in the market based on diverse domestic and global information, such as price, demand and supply, climatic conditions and other market related information. All these factors put together result in efficient price discovery as a result of large number of buyers and sellers transacting in the futures market.

Futures market, as observed from the cross-country experience of active commodity futures markets, helps in efficient price discovery of the respective commodities and does

not impair the long run equilibrium price of commodities. At times, however, price behavior of a commodity in the futures market might show some aberrations reacting to the element of speculation and ‘bandwagon effect’ inherent in any market, but it quickly reverts to long-run equilibrium price, as information flows in, reflecting fundamentals of the respective commodity. In futures market, speculators play a role in providing liquidity to the markets and sometimes benefit from price movements, but do not have a systematic causal influence on prices

An effective architecture for regulation of trading and for ensuring transparency as well as timely flow of information to the market participants would enhance the utility of commodity exchanges in efficient price discovery and minimize price shocks triggered by unanticipated supply demand mismatches. (MEX Year Book 2011, page no 33).

2.16 Remark on Commodity Market

In the past few years of establishment, Nepalese commodity market has grown rapidly. Due to the possibility of buying the commodity of high cost, just by keeping the margin has attracted many investors. The commodities that are traded in an exchange are of different sizes and cost, which allows investors to select the commodity on the basis of the price change, price of the product, time duration and so on.

SEBON is governing body that regulates the commodities exchanges. It also helps to improve the investors’ faith in the business. They should organize the awareness program regarding the commodity market and its opportunities and threats. Price discovery mechanism should be made by the interaction of demand and supply of the buyer and

seller for the safeguard of the interest of the farmers. So that the seller gets the full value of its product while the buyers pay the real value of the product without exploitation by the middlemen. Similarly the exchanges should facilitate a warehouse so that the physical delivery of the goods can be possible especially for agro-based products.

SEBON has issued 1st draft of Commodities Market Operation Regulation 2011 that includes the regulation, including others, about the commodities that can be traded in the market. The draft also states that only those commodities approved by and registered at SEBON can be traded. Also, installation of the online trading system in the market has been made mandatory. It incorporates the policies of good corporate governance, share capital, professional qualifications and experience required in the commodities market.

The world population has reached to 7 billion that requires food security. The commodities used in daily consumption for livelihood are also actively and mainly traded in the commodities market. The commodities price which is determined from the interaction of investor in the commodities market is governed by more profit. It helps to boost the price up resulting inflation and high commodities price that directly hit hard on the livelihood of billions of poor people. Unlike the speculation in the share market, the commodities market is more sensitive affecting many aspects of the social lives. So speculation, undue profiteering attempts should not be in the commodities market. The regulation and supervision of this market should be effective, transparent. The state leadership and policy makers should be cautious to prevent excessive speculation in agricultural commodity markets. Excessive speculation in commodities should be

regulated to prevent the speculative bubbles that have been destructive for food and energy security. This should be a crucial talking point amongst the stakeholders and policy-makers.

Although commodity prices have been on the rise globally since 2001, of which Nepal was not an exception. There is plenty of economic justification for it. Most consumers and manufacturers around the world are managing somehow to absorb the sharp price rises in energy and food. Talk of a possible commodity-market bubble has been going on for some time. With the break up between commodity prices and other financial assets, particularly real estate and stocks, the talk is now becoming more important.

The Nepalese investors eyeing to park their investments on the commodities shall consider the following global phenomena. (MEX Year Book, 2011, Page no 25-26).

2.17 Why are Derivatives Dangerous?

Although derivatives, a powerful tool in financial/commodity market, can help make the economy function by reducing risk for farmers, investors, investment funds, oil companies, startup employees, and more, however, if left unchecked and not effectively regulated, they can introduce “systematic risk”. In addition, if the few firms are involved in a massive portion of the total derivatives traded and if one of them went bankrupt, this may lead to the chain effect and cause all of the others to fail, wiping out entire financial system. For example, failure of Lehman Brothers caused global financial crisis. Besides, as derivatives are very versatile instruments it's used by a trader as a speculator rather

than hedging and arbitrage, the losses may be even worse. So, derivatives are more risky if it is misused. (MEX Year Book 2011, Page no 29)

2.18 Need of Analysis

Since, the derivatives products are versatile instruments, if rational analysis is used, it provides significant benefits and thus profit to the participants deciding to form a portfolio of commodity futures. However, the opposite is also true and lack of analysis can result in significant losses. Thus, fundamental and technical analysis of the derivative market is required to forecast the prices of the underlying asset and a properly balanced portfolio could ensure minimization of market risk as well as liquidity risk.

Maximum gain from futures could be realized only when we can forecast the changes in prices of the underlying assets more correctly. Traders/investors must be capable of analyzing the causes of price change and trend in international markets in the future. Failure to analyze in correct way may cause losses from derivatives products

There are uncertainties in the future dynamics of process. Thus, increases/ decreases in the underlying assets (agricultural such as food and cash crops, metals and bullions, minerals, vegetable oilseeds and oil, tropical beverages) may be attributed to many causes such as the sudden changes and shift in demand and supply factors, changes in climatic conditions, price trend in the international markets, prediction of production, stock shortage, persistent underinvestment due to depressed prices in the international markets, conflict between neighboring countries supplying the product in the international markets and threat of war, import policy and export policy of major importing and exporting

countries, global economic downturn and financial crisis and recovery. Further, increase in commodity derivatives as an asset in the portfolio has attributed to changes in price level, growing financialization of commodity markets has led much to the uncertainties in the price formation of the products and lastly resulted in price shocks. (MEX Year book, 2011).

CHAPTER -III

RESEARCH METHODOLOGY

The methodology chapter includes the analyses of all the methods which have been adopted and by which theoretical and practical data related with the topic has been obtained. In fact, methodology can be taken as action plan prior to conducting the research. The foremost objective of research methodology is to explain and justify the method being used for research. Adams and Schvaneveldt (1985) believes that research is planned when there is some unanswered question or issue arises and people engaged with that become unsatisfied with the available answers. Research has been considered a as matter of common sense by group of people but in fact it is more than a matter of common sense as it has certain aims and objective, based on certain theory and done with a specified methodology. Methodology is defined as a tool for obtaining related and important information for the research (Adams and Schvaneveldt 1985).

3.1 Research Design

A research is a systematic and in-depth study or research of any particular topic by formulating hypothesis, collecting information, analyzing and interpreting them through valid results. Research methodology is a technique used for conducting research which provides various methods for the collection, presentation, interpretation and analysis of data. For this, various financial and statistical tools are used to analyze the data and

conclude the findings. This section, research methodology, deals with the explanation and justification of samples, data and information used in the study. Firstly, the section discussed on the sample used in the study. It includes nature of sample, number of sample used and information regarding the population. Further, the chapter describes about the methodology used about nature and sources of data.

3.2 Methodology of the Study

The study is purely based on the exploratory design finding the answers of research questions. The problem is properly diagnosed through exploring as much information as possible through different areas. An exploratory research was conducted to get the information. Judgmental method used to identify the sample elements for collection of data. The methodology adopted includes:

	Primary Data	Secondary Data
Internal Source	<ul style="list-style-type: none"> • Interview with the investors of this market. 	<ul style="list-style-type: none"> • Brochures • Firms monthly statements/ Year book

External Source	<ul style="list-style-type: none"> • Survey and questionnaire 	<ul style="list-style-type: none"> • Newspaper articles and published journals • Internet • Business magazines and other related research reports
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3.3 Population and Sample

Till now there are four derivative exchanges in Nepal in operation namely Commodity and Metal Exchange Nepal, Mercantile Exchange Nepal, Nepal Derivative Exchange and Commodity Future Exchange. All the investors who are trading from those exchanges are taken as a sample population.

3.4 Source of Data

The study is primarily based on the secondary data. For the research purpose stratified sampling was used the main reason for using this sampling because we have to select respondent from heterogeneous population. It means that we have to select only those kind of population who are trading in this market.

3.5 Data Collection Procedure

An interview schedule as well as questionnaire was designed in the view of the data requirement. The interview schedule was administered to the owners and investors of

derivative market. Among the entire respondent who were approached for the interview readily agreed to respond to the questions. They were assured that their responses would be kept confidential. The average time taken for an interview was 15 minutes. Further, some logical hypotheses were developed so as to satisfy the collected data.

3.6 Questionnaire Distribution

A total 20 sets of questionnaire was distributed to the sample population. The answers generated from the questionnaire was then analyzed and graphically presented so as to provide valuable information to the end users. The main objective of the questionnaire distribution was to assess the error free result.

3.7 Methods of Analysis

The collected data will be thoroughly checked, compiled and presented in appropriate table and figure to facilitate analysis and interpretation. Analysis was done descriptively as well as statistically. For the analysis, statically tools such as Mean will be used.

CHAPTER- IV

DATA ANALYSIS AND PRESENTATION

In the previous chapter we defined how the research was designed and how the sampling was done and data were collected. Here, in this chapter those collected data are systematically presented and are analyzed accordingly to meet the objective of the research. This segment of research includes the data and information obtained from primary and secondary source with the help of survey by using the questionnaires and is evaluated accordingly in a meaningful way. In this chapter all the derivative exchange are listed along with their workflow, and the product they offer to the clients, the commission taken by the broker, also the process for the client to trade in this market.

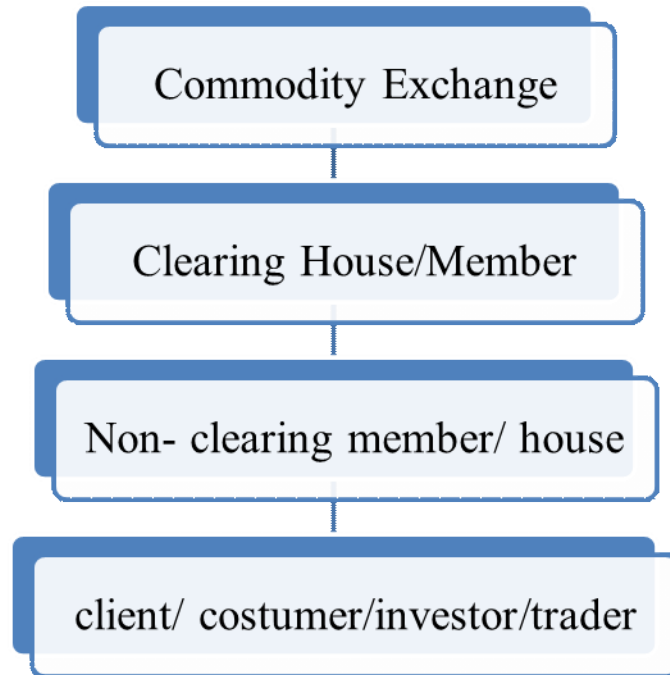
4.1 Presentation of Data

In this section data are presented in variety of forms i.e. tables, figures, pie chart, etc. In this chapter all the derivative exchange are listed along with their workflow, and the product they offer to the clients, the commission taken by the broker, also the process for the client to trade in this market.

4.2 Hierarchy of Commodity Derivative Trading

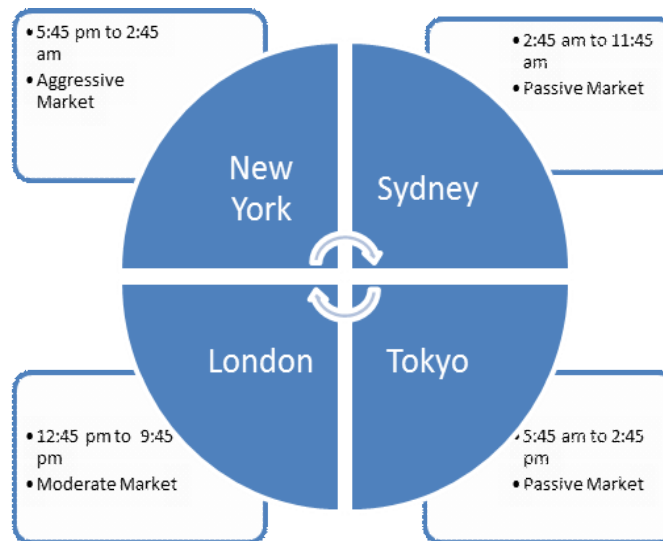
This figure deals with the first objective of the study i.e., the work flow of derivative exchange of Nepal.

Figure 1: Hierarchy of Commodity Derivative Trading



Thus from the above figure, we can know that commodity exchange acts as the main body in this market, and under commodity exchange Clearing house and Non clearing house acts as a supporting body to the investors.

Figure 2: Time Schedule of Commodity Market in Nepal



From the above figure, we can understand that commodity market runs 24 hour a day. Also from the above figure we can know that in Nepal market starts at 2.45am from Australia and ends at 2.45am from New York. Thus, in this way we can know that the commodity market runs 24 hour a day.

4.3 Nepalese Scenario

The history of derivative market in Nepal is not too old. Commodity derivative contract was introduced in Nepal in late 2006 by Commodity and Metal Exchange Nepal (COMEN). Future contract are traded though the exchange in Nepal. Till date there are three derivative exchanges are in Nepal and only commodity derivative are traded in Nepalese Exchange.

Derivative Exchanges of Nepal are listed below:-

- Commodity and Metal Exchange Nepal (COMEN)

- Mercantile Exchange Nepal (MEX)
- Nepal Derivative Exchange (NDEX)

4.3.1 Commodity and Metal Exchange Nepal (COMEN):

Commodity and Metal Exchange Nepal Ltd. (COMEN) was the first derivative exchange to be registered in 14 December 2006, for the trading of commodity and derivatives in Nepal. COMEN have three levels of market participation members. Currently base metals such as Aluminum, lead, zinc, copper, nickel are traded, precious metals gold and silver are traded and energy products such as crude oil and natural gas are traded. Currently 9 commodities items are traded in COMEN. Every commodity exchange has got its banking partner so the banking partner of the COMEN is Nepal SBI Bank. It means all the transactions of COMEN are done through Nepal SBI bank. It is situated at Lal Durbar, Kathmandu, Nepal. It monitors, regulate, and supervise all the company, licensed by it as trading or clearing broker for transparency in the commodity exchange. Settlement process was done in cash.

It serve the risk management needs of customers around Nepal by offering the widest range of commodities as products available on any exchange ,traded via COMEN trading floor. In addition, it's clearing committee matches and settles all trades and guarantees the credit worthiness of every transaction that takes place in the market. It has wide range of commodities for trading as financial instruments. Its future allows investors to transfer risk, optimize portfolio performance and adjust underlying exposures with low transaction cost.

As we know that commodity trading is done through electronic via internet so the exchange gives its own software to the broker and investors can trade by themselves also or they can fully depend upon the brokers but one of the major disadvantage of COMEN broker is that investors are not allowed to trade only broker trades on behalf of investor.

4.3.1.1 Product and Commission per Lot in COMEN

Different commodity exchanges offers different products to the client and client can trade this product through the respective exchange software which will be provided them by the broker.

Table 1: Product and Commission of COMEN

Commodity	Commission per lot	Initial Margin
Gold	Rs 500+ VAT	40,000
Silver	Rs 350+ VAT	60,000
Copper	Rs 150+ VAT	40,000
Crude oil	Rs 250+ VAT	30,000

Source: comen.com.np

The above figure shows the commission taken by the brokers for trading respective commodities and the minimum amount that is required to maintain by client to trade respective commodities. For example if client/traders want to trade in gold then they must

maintain Rs 40,000. Thus, COMEN software will automatically cut off the broker's commission and deposit it in brokers account.

4.3.1.2 Work flow of COMEN

The following figure deals with the one of the first objective of our research the work flow of one of the commodity exchange of Nepal:

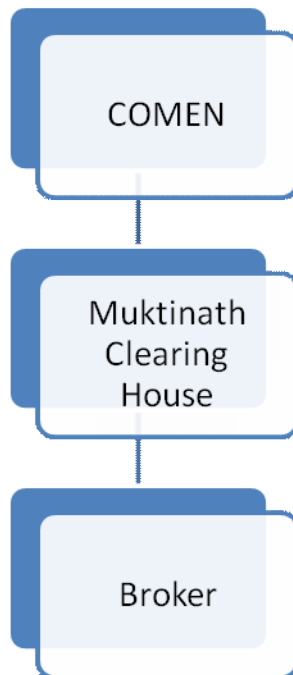


Figure 3: Work flow of COMEN

From the above figure, we can analysis that if any investors wants to trade from COMEN then he must follow following steps.

- Contact the COMEN broker.
- Investors must have a bank account in Nepal SBI bank.

- Deposit minimum initial margin i.e. if they want to trade in 1 kg gold then they must deposit minimum 40,000.
- After all the document process they can trade through COMEN platform.

4.3.2 Mercantile Exchange Nepal (MEX):

Mercantile Exchange Nepal (MEX) is the second commodity exchange of Nepal and probably the biggest commodity exchange in Nepal. It has got the larger number of commodity compared to COMEN. Although, it was established in 14th August 2007 but officially it started from 5th January 2009. It also offered the portfolio investment service to the investor. They gave many choices of commodities for the client to trade. They introduced precious metal such as gold, mini gold, small gold, silver, mini silver, platinum and palladium, energy product such as crude oil, mini crude oil, Brent crude oil, natural gas, mini natural gas, heating oil, industrial product such as copper, mini copper, food grain product such as wheat and corn, oil seed product such as soybean, vegetable oil product such as soybean oil, fiber product such as cotton, also other product such as coffee, sugar and cocoa. All together it introduced 23 commodities product. Just like COMEN settlement process was done in cash.

Earlier it was located in Krishna Tower, Buddhanagar but currently it is located in Charkahal, Dillibazar. As we know that every commodity exchange has got its banking partner so the banking partner of MEX is Laxmi Bank Limited and Bank of Kathmandu. It means if any investors wants to trade through MEX then he/she must open account in Laxmi Bank Limited or Bank of Kathmandu.

4.3.2.1 Product and Commission Per lot of MEX

Just like COMEN, MEX also offers different kinds of products to the client:

Table 2: Commissions taken by MEX Broker

Commodities	Commission(Rs)	Initial Margin	Contract size
Gold	1200+VAT	63,000	1 kg
Mini Gold	Rs 1000+ VAT	35,000	200gm
Small Gold	Rs 600+ VAT	7500	50 gm
Silver	1000+ VAT	65,000	30000 gm
Mini Silver	600+ VAT	24,000	10,000gm
Platinum	1200+ VAT	70,000	1000gm
Palladium	1200+ VAT	40,000	1000 gm
Copper	1000+ VAT	25,000	1000 kg
Mini Copper	600+ VAT	17,500	500 kg
NYMEX Crude Oil	1200+ VAT	64,000	250 U.S Barrel
Brent Crude Oil	1200+ VAT	64,000	250 U.S Barrel
Mini Crude Oil	600+ VAT	14,000	50 U.S Barrel

Natural Gas	1200+ VAT	60,000	2,500Mmbtu
Mini Natural Gas	600+ VAT	12,000	500 Mmbtu
Heating Oil	1200+ VAT	55,000	10,000
Soybean	600+ VAT	30,000	22,000kg
Soybean Oil	600+ VAT	65,000	22,000kg
Coffee	1000+ VAT	40,000	5000kg
Cocoa	600+ VAT	35,000	500 kg
Sugar	1000+ VAT	32,000	20,000 kg
Cotton	1000+ VAT	40,000	10,000kg
Wheat	600+ VAT	30,000	20,000kg
Corn	600+ VAT	25,000	40,000 kg

Source: mexnepal.com

In the above table, we can see the different commodities which can be traded in MEX platform. Different commodities have different contract margin. It means if a trader/investors wants to trade in gold then he must have initial amount Rs 63,000. Thus, talking about commission the software will automatically deduct broker commission. Every commodity is traded on contract basis.

4.3.2.2 Work Flow of MEX

The following figure deals with the one of the first objective of our research the work flow of one of the commodity exchange of Nepal:

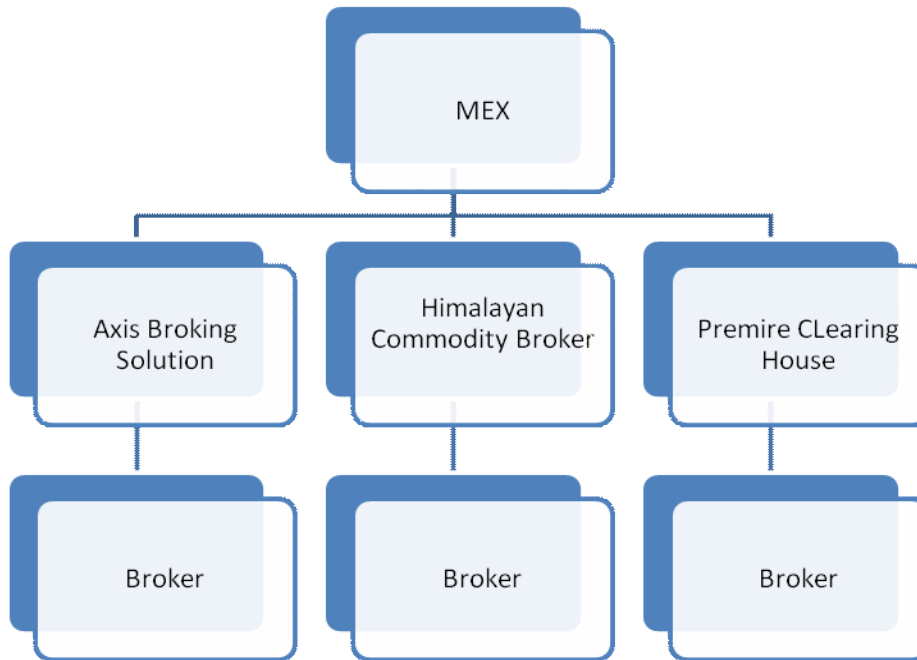


Figure 4: Work flow of MEX

4.3.2.3 Steps of Trading Through MEX

- Contact the broker who is working under the license under MEX.
- Client must have account in Laxmi bank of Bank of Kathmandu.
- Must deposit minimum amount in broker segregate for example if client wants to trade only in Gold then he/she must deposit RS 70,000.

- After the document process broker provides individual software to the client and with the help of that software client can trade under MEX.

4.3.3 Nepal Derivative Exchange (NDEX):

Nepal Derivative Exchange (NDEX) is the third derivative exchange to be established in Nepal. Although it was established November 2008 but it was officially it started from 4th January 2010. Just like other two commodities exchanges of Nepal it introduced commodities derivative. It introduced more commodities then COMEN but less commodities then MEX. It offered precious metal such as exposure gold, regular gold, mini gold, small gold, regular platinum, regular platinum, regular silver, mini silver and exposure silver, industrial metals such as regular copper, mini copper and exposure copper, energy product such as regular crude oil, exposure crude oil, mini crude oil, heating oil and natural gas, agro product such as corn, soybean, soybean oil and wheat, soft agro product such as coffee and fiber product such as cotton.

It is located in Tinkune, Kathmandu. Nepal Investment Bank limited is its official banking partner. It means if any investor want to invest in commodities through NDEX then they should have bank account in Nepal investment Bank limited.

Just like other two commodity exchange of Nepal the process of settlement was done through cash.

4.3.3.1 Products and Commission per Lot of NDEX

Table 3: Commission taken by NDEX broker

S.N	Product	Code of Contract	Initial margin	Contract size
1	Exposure Gold	Exp GOL	Rs 25,000	1 kg (1000gm)
2	Regular Gold	GOL	Rs 75,000	1 kg
3	Gold Mini	GOLM	Rs 45,000	500 gm
4	Gold	Gold10	Rs 1000	10 gm
5	Platinum	PLT	Rs 120,000	2 kg (2000gm)
6	Palladium	PAL	Rs 75,000	1 kg (1000gm)
7	Exposure Silver	Exp SIL	Rs 25,000	30 kg
8	Silver mini	SILM	Rs 15,000	5 kg
9	Silver Regular	SIL	Rs 75,000	30 kg
10	Cotton Regular	COT	Rs 90,000	10000 kg
11	Coffee Regular	COF	Rs 40,000	5000 kg
12	Exposure Copper	EXPCOP	Rs 25,000	5000 kg
13	Copper mini	COPM	Rs 15,000	1000 kg
14	Regular copper	COP	Rs 75,000	5000 kg
15	Crude Regular	CRU	Rs 75,000	250 BBL

16	Exposure Crude	EXPCRU	Rs 25,000	250BBL
17	Crude MINI	CRUM	Rs 30,000	50BBL
18	Heating oil	HEA	Rs 75,000	8400 US GALLON
19	Natural Gas	NAG	Rs 75,000	250 MMBTU

Source: ndex.com.np

The above figure shows the commission taken by the brokers for trading respective commodities and the minimum amount that is required to maintain by client to trade respective commodities. For example if client/traders wants to trade in 1 kg of gold then they must maintain Rs 75,000. Thus NDEX software will automatically cut off the broker's commission and deposit it in brokers account.

4.3.3.2 Workflow of NDEX

Thus the following figure deals with the one of the first objective of our research the work flow of one of the commodity exchange of Nepal

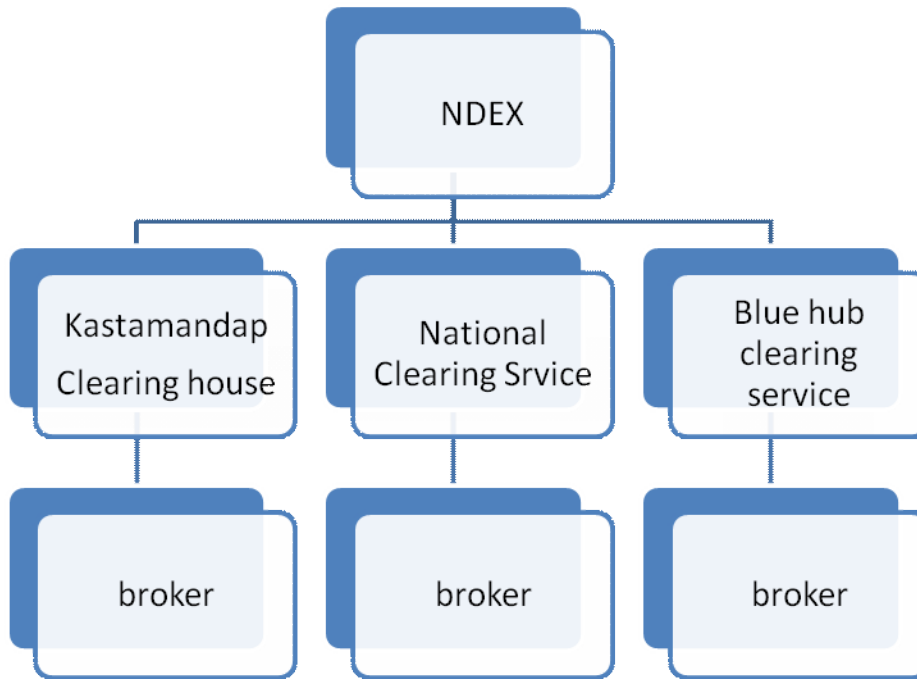


Figure 5: Work Flow of NDEX

4.3.3.3 Steps of trading through NDEX

- Contact the broker, who is working under the license under NDEX.
- Client must have account Nepal Investment Bank.
- Must deposit minimum amount in broker's segregate for example if client wants to trade only in Gold then he/she must deposit Rs 70, 000.
- After the document process broker provides individual software to the client and with the help of that software client can trade under MEX.

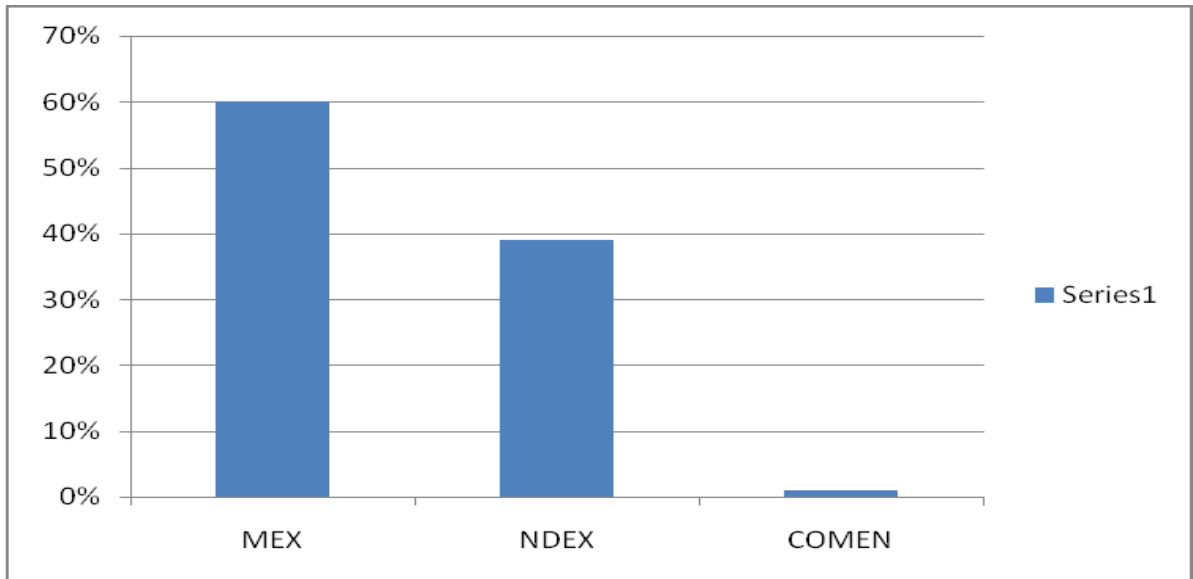
4.4 Most Traded Exchange by Investors

The following figure explain with the second objective of the study i.e. the most preferred exchange by the client for trading,

Exchange	Trade Volume
COMEN	1%
MEX	60%
NDEX	39%
Total	100 %

Table 4: Trade Volume of the Investors

Figure 6: Most Traded Exchange by Investors



The above figure which has been generated with the data captured via the questionnaire reveals that out of 100% an average of 1% traders are comfortable on trading in COMEN software whereas 60 % likes trading in MEX platform, 39% likes to trade in NDEX. The main reason of clients/investors trading from MEX and NDEX is due to the simplicity of the software they offer to the client. And the other main reason the client prefers these software is due to the maximum number of commodities they offer to the clients compared to COMEN. *(Source: Appendix 1)*

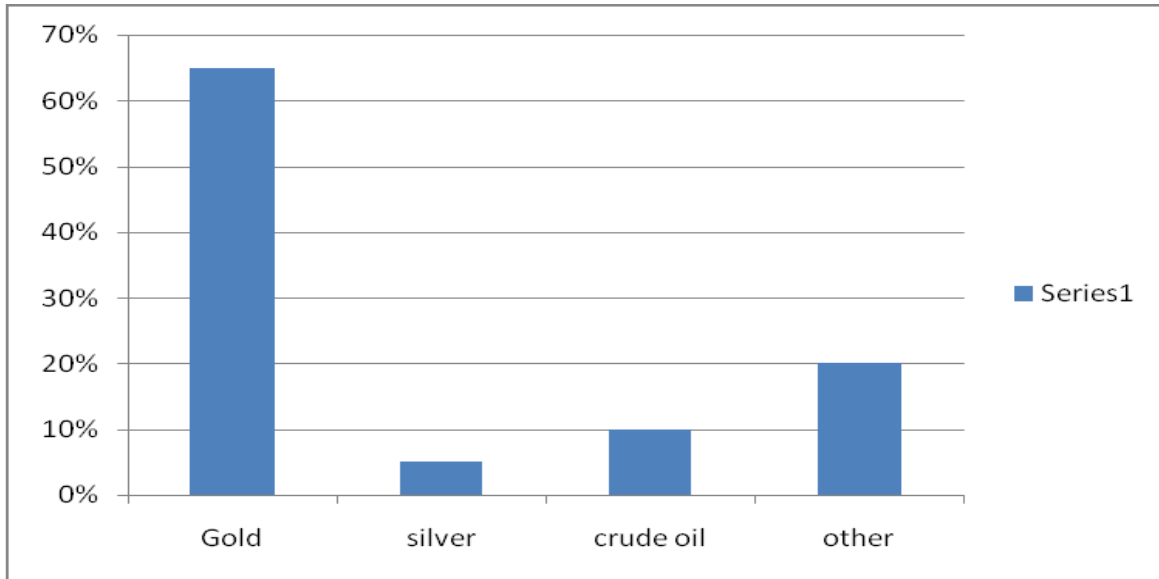
4.5 Most Traded Commodity Derivative

The following figure deals with the third objective of the study i.e. the most traded commodity derivative.

Commodities	Trade Percentage
Gold	45%
Crude Oil	20%
Silver	10%
Other	25%
Total	100%

Table 5: Trade volume of Commodities

Figure 7: Most Traded Commodities

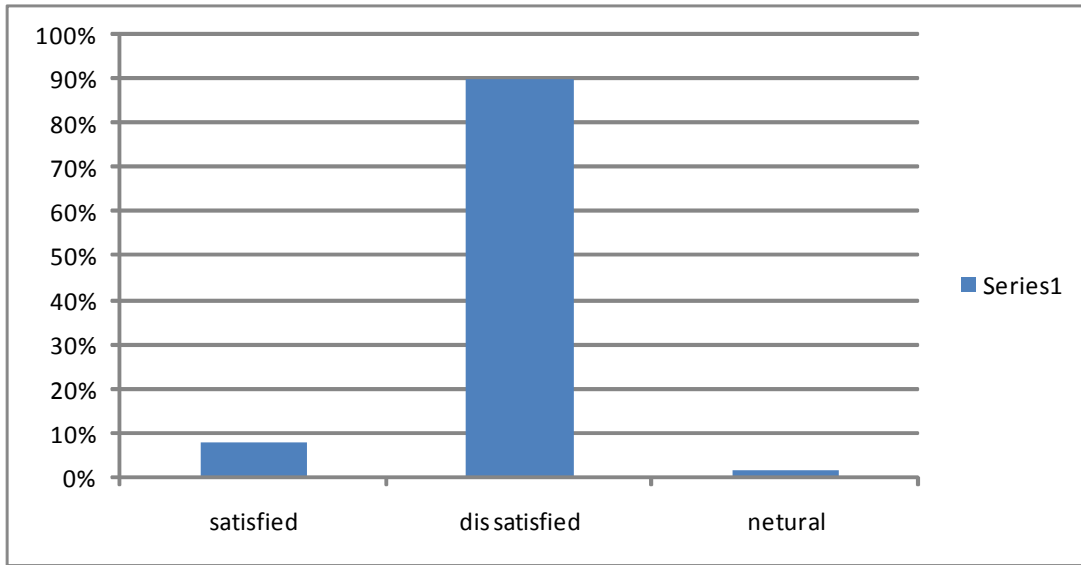


The above figure which has been generated with the data captured via the questionnaire reveals that out of 100% an average 65% of investors invest their amount to trade in gold, 10% in crude oil, 5% in silver and remaining 20% invest their amount in other commodities like heating oil, cotton, copper, natural gas, soybean oil etc. Thus by analyzing the above table we can know that almost every investor wants to invest in gold. The main reason for investing in gold is due to its market volatility and its maximum return in investor principle money. *(Source: Appendix 1)*

4.6 Clients Satisfied by the Commission Taken By the Broker per Lot

We know that nothing comes for free, so the client must pay certain amount to the broker if they trade through them thus the following figure deals with the client satisfaction by the commission taken by the broker.

Figure 8: Client satisfied by the Commission Taken by Broker per Lot



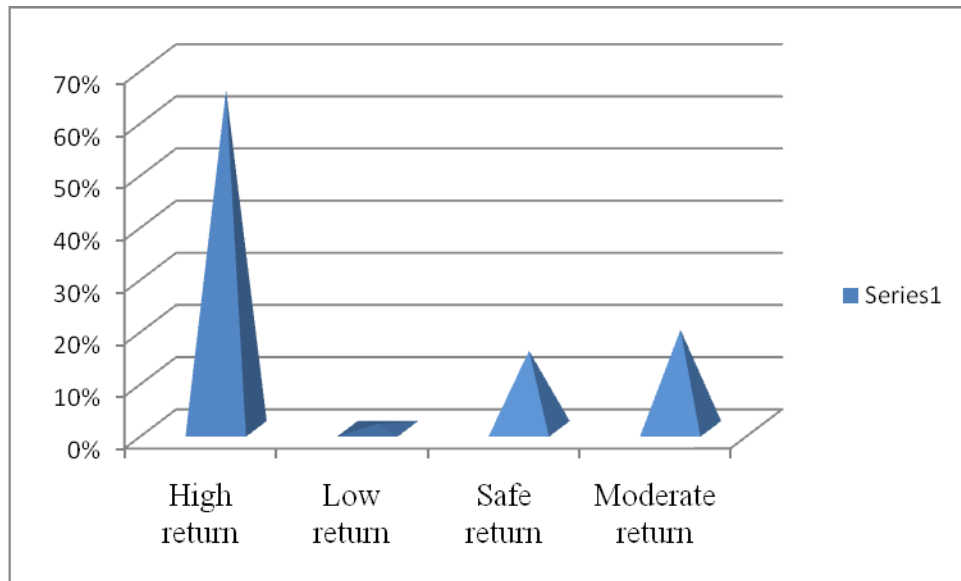
The above figure which has been generated with the data captured via the questionnaire reveals that out of 100% average, 8% are satisfied by the commission taken by the broker, whereas 90% are dissatisfied by the commission taken by the broker and 2% are neutral.

(Source: Appendix1)

4.7 Reason behind investors are trading towards This Market

The following figure deals with the final objective of the study i.e. the main reason of trading in this market.

Figure 9: Main Reason for investing in this market



The above figure which has been generated with the data captured via the questionnaire reveals that out of 100%, an average of 65% investors trades in this market due to high return, 5% trades due to low return, 15% trades due to safe return whereas 20% trades due to moderate return. *(Source: Appendix1)*

4.8 Major Findings

1. By doing this research I came to know that derivative market is new market for the Nepalese investors.
2. There are different kind of traders in derivative market like speculator, hedgers and arbitrageurs but in Nepal there are only speculators.
3. Regular gold are the most traded commodities.

4. Just like Nepal's banking sectors are regulated by Nepal Rastriya Bank and Stock Markets are regulated by Security Board of Nepal but till date there is no any proper regulating body in Nepal.
5. Due to the lack of proper warehousing every transaction are settled in cash means there is no physical delivery.
6. More than 100 million of transactions are traded in Nepal per day.
7. One of the most important reasons that the investors are shifting towards this market is due to its volatility in price.
8. One of the main reasons that many investors who likes to invest in stock are shifting towards this market is due to the fast cash settlement service. i.e. in stock market if any brokers sells his stock then he will only get his cash amount after a week whereas in this market he will get within a hour.
9. Most of the clients (investors) prefer to trade from MEX and NDEX.
10. Price of the commodities is taken from international exchange.
11. Most of the investors trade using technical analysis.
12. I came to know that many traders are in loss in this market.
13. Thus, in conclusion of this thesis I came to know that this market still lacks a potential manpower.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

Derivatives are the security or the contract whose value is designed in such a way that its price is derived from the price of underlying assets. In derivative market future contract, forward contract, option contract, swap contract are traded. Derivative are generally used as an instrument to hedge the risk but sometime is can be also used as speculation. For example For example, a Japanese investor purchasing shares of a European company off of an European exchange (using Euro. Yen to do so) would be exposed to exchange-rate risk while holding that stock. To hedge this risk, the investor could purchase currency futures to lock in a specified exchange rate for the future stock sale and currency conversion back into yen.

Derivative products initially emerged as hedging devices against fluctuations in commodity prices, and commodity-linked derivatives remained the sole form of such products for almost three hundred years. Financial derivatives came into spotlight in the post-1970 period due to growing instability in the financial markets. However, since their emergence, these products have become very popular and by 1990s, they accounted for about two-thirds of total transactions in derivative products. In recent years, the market for financial derivatives has grown tremendously in terms of variety of instruments available, their complexity and also turnover. In the class of equity derivatives the world over, futures and options on stock indices have gained more popularity than on individual stocks, especially among the institutional investors, who are major users of index-linked derivatives. Even small investors find these useful due to high correlation of the popular

indexes with various portfolios and ease of use. The lower costs associated with index derivatives.

Talking about the derivative market of Nepal Commodity & Metal Exchange Nepal (COMEN) was the first derivative exchange blushed which was established in late 2005. COMEN was established as the portfolio investment for the client to trade normally in commodities like gold, silver copper zinc etc.

The second commodity exchange which was established in Nepal was Mercantile Exchange Nepal (MEX). Till today it is the biggest derivative exchange of Nepal. Just like COMEN it was also a portfolio investment service to the costumer. But MEX introduced more commodities compared to COMEN. Today around 21 commodities are traded in MEX. MEX was established in mid-2007. MEX was established with authorized capital 100 million.

The third derivative exchange of Nepal was Nepal Derivative Exchange (NDEX). Just like COMEN and MEX it was the portfolio investment service for the client. It also introduced similar commodities like gold, silver, crude oil, corn, soybeans etc. like COMEN and MEX. It introduced less commodities compared to MEX but more commodities compared to COMEN. Today around 14 commodities are traded in NDEX.

Nepalese investors are not fully aware of this market. Investors are trading on fully speculation basis means they are trading without proper analysis. Since every price of the commodities are taken (derived) from international exchanges so the local market doesn't affect the price of any commodity.

5.2 Conclusions

On the basis of major findings the following conclusion has been drawn,

- a) Derivative market is the new source of investment market for Nepalese Investors.
- b) Nepalese investors are diverting towards these market is due to high return. Many investors are trading in this market due to friend recommendation.
- c) All the settlement process in this market is done through cash. It means that due to lack of proper warehouse system investors are not getting physical delivery of the product they trade.
- d) As we maintained earlier this is a complete new market for Nepalese investor so this market still lacks a potential manpower and good management system.
- e) Government is still not being able to regulate this market due to which some potential investors are shifting away from this market.
- f) Derivative exchanges are not promoting the local agro product to the Nepalese investors.
- g) This market has been also serving as a self-employment opportunity to the employment Nepalese investors.

5.3 Research Implication

Since this study is purely academic research its findings and conclusions cannot be generalized. The main focus of the research was to identify the work flow of this market

in Nepal, the reasons behind clients shifting towards this market. Out of six commodity exchange of Nepal this research has been conducted only on first three commodity exchange of Nepal, thus for further research, researchers can conduct research on new commodity exchanges of Nepal.

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Appendix 1

Dear Respondent,

I am a MBS student of Goldengate Intl College, Affiliated to Tribhuwan University, Balkhu, Nepal. As the part of fulfillment of my study, I have been assigned to conduct a research on Derivative Markets of Nepal. I would like to request you to go through the questionnaire below and answer them all. Answers of your experiences will be useful to me. Your personal Information will be kept confidential and used only for research purpose in aggregation. This questionnaire includes only the people who have bought Life insurance policies.

Name (Optional): _____

Address: Kathmandu Bhaktapur Lalitpur

1. Sex

I. Male

II. Female

2. Age

3. Education

I. Intermediate

II. Bachelor

III. Master and above

4. Occupation

I. Government employee

II. Private business

III. Real estate business

IV. Self-business

5. Family size: (Dependents: < 16 years ... 60> years)

6. Your monthly income?

Less than Rs 25000	
Rs 25001 to 50000	
Rs 50001 to Rs 75000	
Rs 75001 to Rs 100000	
Above Rs 100001	

7. Who recommended you to trade in this market?

I. Investment broker

II. Your friend

III. Family and relatives

8. How long you have been trading in this market?

I. 0-1 year

II. 1-2 year

III. 2-3 year

IV. 3-above year

9. Your main reason for trading in this market?

I. High return

II. Low return

III. Safe return

IV. Moderate return

10. Which exchange do you prefer for trading?

I. COMEN

II. MEX

III. NDEX

11. Which software do you find friendly for trading?

I. COMEN

II. MEX

III. NDEX

12. Which commodities do you often trade?

I. Precious metal

II. Energy product

III. Industrial metal

IV. Agro product

13. For investing which of the following do you prefer most?

I. Gold

II. Silver

III. Crude Oil

IV. Others

14. If you are trading in this market then are you satisfied with the commission taken by the commodity exchange?

I. Satisfied

II. Dissatisfied

III. Neutral

15. Do you recommend your friend to trade in this market?

I. Agree

II. Strongly agree

III. Disagree

IV. Strongly disagree

16. What is the main problem in derivative market of Nepal?

I. Lack of manpower

II. Lack of market awareness

III. Lack of proper management

IV. Lack of regulating body

V. All of the above

17. In your opinion who should regulate derivative market of Nepal?

I. NRB

II. SEBON

III. Any other.....

18. Your opinion about this market?

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