AN OVERVIEW OF
DERIVATIVE MARKET IN NEPAL

A THESIS

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RECOMMENDATION

This is to certify that the thesis

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

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VIVA- VOCE SHEET

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DECLARATION

I hereby declare the work reported in this thesis entitled **"An Overview of Derivative Market in Nepal"** submitted to Office of Dean, Central Department of Management T.U., for partial fulfillment of the requirement of Masters of Business Studies (MBS) is my original work prepared under the guidance and supervision of Dr. N.K. Pradhan of Shanker Dev Campus.

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ABBREVIATION

CBOT:	Chicago Board of Trade
CFD:	Contract of Difference
CFX:	Commodity Future Exchange Ltd.
CME:	Chicago Mercantile Exchange
COMEN:	Commodities & Metal Exchange Nepal Ltd.
ECX:	Everest Commodity Exchange Ltd.
FUI:	Financial Information Unit
IOSCO:	International Organization of Securities Commission
Ltd.:	Limited
MEX:	Mercantile Exchange Nepal Ltd.
NDEX:	Nepal Derivative Exchange Ltd.
NSE:	Nepal Spot Exchange Ltd.
OTC:	Over the counter
Pvt.:	Private
SEBON:	Securities Board of Nepal
WEX:	Wealth Exchange Pvt. Ltd.
&:	And

CHAPTER I

INTRODUCTION

1.1 INTRODUCTION OF DERIVATIVE MARKET

A derivative is a financial instrument which derives its value from the value of some other financial instrument or variable. For example, a stock option is a derivative because it derives its value from the value of a stock. An interest rate swap is a derivative because it derives its value from one or more interest rate indices. The value(s) from which a derivative derives its value is called its underlier(s) such as commodity derivatives, foreign exchange derivatives, equity derivatives, interest rate derivatives, , or credit derivatives**.**

A derivative instrument is a contract between two parties that specifies conditions (especially the dates, resulting values of the underlying variables, and notional amounts) under which payments are to be made between the parties. Derivatives are broadly categorized by the relationship between the underlying asset and the derivative (such as forward, option, swap); the type of underlying asset (such as commodity derivatives , foreign exchange derivatives, equity derivatives, interest rate derivatives, or credit derivatives); the market in which they trade (such as exchange-traded or over-the-counter); and their pay-off profile.

The derivative market is the financial market for derivatives, financial instruments like futures contracts or options, which are derived from other forms of assets. The term derivative refers to how the prices of these contracts are derived from the price of some underlying security or commodity or from some index, interest rate, exchange rate or event. It includes futures, forwards, options and swaps.

Today, derivatives are used to hedge the risks normally associated with commerce and finance. Farmers can use derivatives to hedge the risk that the prices of their crops fall before they are harvested and brought to the market. Moreover, with the globalization of emerging markets exchange risk has become an important part of the market and of institutions which operates in the economy. The well regulated forward and future markets are essential for efficient management of risk. Without such market, the firms and institutions are handicapped with regard to their competitors across the world. Unhedged foreign exchange exposure if widespread can also snowball into system through a vicious cycle of technical bankruptcy. Today, derivative has become part and parcel of the day to day life for ordinary people for sharing and transferring risk. Therefore, derivatives play a useful and important role in hedging and risk management, but they also pose several dangers to the stability of financial markets and thereby the overall economy.

Derivatives can be used for speculation (“bets”) or to hedge ("insurance"). For example, a speculator may sell deep in-the-money naked calls on a stock, expecting the stock price to fall, but exposing him to potentially unlimited losses. Very commonly, companies buy currency forwards in order to limit losses due to fluctuations in the exchange rate of two currencies.

Derivatives are used by investors for the following purposes:

- 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 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;
- 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)

Derivatives allow risk related to the price of the underlying asset to be transferred from one party to another, which is called hedging. For example, a wheat farmer and a miller could sign a futures contract to exchange a specified amount of cash for a specified amount of wheat in the future. Both parties have reduced a future risk: for the wheat farmer, the uncertainty of the price, and for the miller, the availability of wheat. However, there is still the risk that no wheat will be available because of events unspecified by the contract, such as the weather, or that one party will renege on the contract. Although a third party, called a clearing house, insures a futures contract, not all derivatives are insured against counter-party risk.

From another perspective, the farmer and the miller both reduce a risk and acquire a risk when they sign the futures contract: the farmer reduces the risk that the price of wheat will fall below the price specified in the contract and acquires the risk that the price of wheat will rise above the price specified in the contract (thereby losing additional income that he could have earned). The miller, on the other hand, acquires the risk that the price of wheat will fall below the price specified in the contract (thereby paying more in the future than he otherwise would have) and reduces the risk that the price of wheat will rise above the price specified in the contract. In this sense, one party is the insurer (risk taker) for one type of risk, and the counter-party is the insurer (risk taker) for another type of risk.

Hedging also occurs when an individual or institution buys an asset (such as a commodity, a bond that has coupon payments, a stock that pays dividends, and

so on) and sells it using a futures contract. The individual or institution has access to the asset for a specified amount of time, and can then sell it in the future at a specified price according to the futures contract. Of course, this allows the individual or institution the benefit of holding the asset, while reducing the risk that the future selling price will deviate unexpectedly from the market's current assessment of the future value of the asset.

Derivatives can serve legitimate business purposes. For example, a corporation borrows a large sum of money at a specific interest rate. The rate of interest on the loan resets every six months. The corporation is concerned that the rate of interest may be much higher in six months. The corporation could buy a forward rate agreement (FRA), which is a contract to pay a fixed rate of interest six months after purchases on a notional amount of money. If the interest rate after six months is above the contract rate, the seller will pay the difference to the corporation, or FRA buyer. If the rate is lower, the corporation will pay the difference to the seller. The purchase of the FRA serves to reduce the uncertainty concerning the rate increase and stabilize earnings.

Derivatives can be used to acquire risk, rather than to hedge against risk, which is called speculation. Thus, some individuals and institutions will enter into a derivative contract to speculate on the value of the underlying asset, betting that the party seeking insurance will be wrong about the future value of the underlying asset. Speculators look to buy an asset in the future at a low price according to a derivative contract when the future market price is high, or to sell an asset in the future at a high price according to a derivative contract when the future market price is low.

Individuals and institutions may also look for arbitrage opportunities, as when the current buying price of an asset falls below the price specified in a futures contract to sell the asset.

The use of derivatives also has its benefits that they facilitate the buying and selling of risk and many financial professionals consider this 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 because it is not zero-sum in utility.

1.2 HISTORICAL BACKGROUND AND RECENT GROWTH OF DERIVATIVE MARKET IN NEPAL

The derivative market was originated when the farmers were in problem due to the price risk. So, markets for futures trading were developed initially to help agricultural producers and consumers manage the price risks they faced harvesting, marketing and processing food crops each year. Today, futures exist not only on agricultural products, but also a wide array of financial, stock and foreign exchange markets.

The world's oldest established futures exchange, the Chicago Board of Trade, was founded in 1848 by 82 Chicago merchants. The first of what were then called "to arrive" contracts were flour, timothy seed and hay, which came into use in 1849.

The official merger of Chicago Mercantile Exchange (CME) and CBOT Holdings Inc. in 2007, are now collectively known as CME group Inc., the world’s largest and most diverse derivatives exchange.

In most of the countries the derivative market has been regulated by their respective securities board or by another separate entity. But, in the context of Nepal there is not any regulatory body for the regulation of the derivative market. All the exchanges and other supportive entities to the exchanges are registered in the Company Registrar Office and are self regulated. Securities

Board of Nepal (SEBON) has been trying to formulate and implement the rule and regulations for the effectiveness of the derivative market in Nepal as soon as possible.

In Nepal, commodities exchanges — Commodities & Metal Exchange Nepal Ltd (COMEN), Mercantile Exchange Nepal Ltd (MEX), Nepal Derivative Exchange (NDEX), Nepal Spot Exchange (NSE), Wealth Exchange Private Limited (WEX), Commodity Futures Exchange Limited (CFX) and Everest Commodity Exchange Limited (ECX) — are working to provide investment opportunities to many people. The majority of transactions of commodity exchange are in gold, silver, platinum, copper, crude oil, natural gas, agricultural products such as corn, flour, soybean, cotton, coffee, etc.

In Nepal, derivative is traded from very early days in unorganized form but commodity market is introduced by Commodities & Metal Exchange Nepal Ltd (COMEN) for the first time in Nepal in more organized form in 14th December 2006. COMEN have been providing trade services in agriculture goods. It has many firsts to its credit - the first structured new generation exchange befitting an ever-evolving nascent market place established since 2006, to provide world class on-line service based on Futures Trading of permitted commodities with efficient Clearing and guaranteed settlement to ensure continual improvement of customer services and remain quality leader amongst all commodity exchanges.

With new vision and new technology Mercantile Exchange Nepal Ltd. (MEX) has been established. MEX has also made immense contribution in raising awareness about and catalyzing implementation of policy reforms in the commodity sector. MEX is the first Exchange to take up the issue of differential treatment of speculative loss. It is also the first Exchange to enroll participation of high net-worth corporate securities members in commodity derivatives market.

Nepal Derivative Exchange (NDEX) is an Electronic Commodity and derivative Market which provides online state-of-the-art platform for traders to buy and sell Commodities and derivatives products efficiently and at a justified price. NDEX aims to facilitate trading on commodities, metals, energies, currencies and others. NDEX was developed considering all the sophisticated needs of traders. It contains tools and information that a trader needs to successfully engage in trading and investment. Here one will find the easy-to-use and pioneering trading software that gives fast and accurate prices of various products. At NDEX, people can trade in its products through its software and fulfill their respective needs. NDEX is a professionally managed on-line multi commodities and derivatives exchange. NDEX is a public limited company incorporated on November 20, 2008 under the Companies Act, 2063.

Nepal Spot Exchange Limited (NSE) is a state-of the-art; professionally organized, structured and managed online commodity spot exchange marketplace established in 2010. It has commenced operations and has plans to encompass the entire spectrum of commodities across the country to bring home the advantages of an electronic spot trading platform to all market participants in the agricultural and non-agricultural segments.

Wealth Exchange (WEX) is professionally organized First Online Commodity Spot Trading Exchange in Nepal. Wealth Exchange offers precious metals and Contracts on Difference (CFD) trading on state of the Art, user friendly and most popular platforms in the world; MetaTrader 4 to deliver efficient services to its clients with high quality price feeds which is quite stable and competitive in local market. Wealth Exchange also provides all types of information and simple delivery system to ensure that clients receive the maximum benefits in trading. WEX has highly professional and experience management team and Executives to serve clients with best customer care and professional advice.

Commodity Futures Exchange (CFX) is a future based exchange established in June 2011 under Company Act 2063. CFX has been organized under relevant

rules and regulations. It has committed to an open future market and the construction of a harmonious market environment. It adheres to the guidelines of “legislation, supervision, self regulation and standardization”. It endeavors to become a transparent and product inclusive future exchange that focuses on the metals, energy and agricultural products. It is committed to establish a secure, orderly efficient market mechanism and an open, fair and equitable environment. It is backed by a dedicated group of professionals who are active participants and have decades of experience in the commodity market.

Everest Commodity Exchange Ltd Nepal (ECX) is an electronic commodity futures exchange in Nepal. The Exchange has its objectives to facilitate online trading, clearing and settlement operations for commodity futures across the country. ECX Nepal has a team of professionals with longer experience in derivative and commodity futures market field with having remarkable educational background. ECX was established on 9th March 2011 and came to operation in June 2012. ECX offers different commodities across various segments such as bullion, metals, energy to trade on its platform and also have plan to introduce few agro-based commodities to trade in near future. The Exchange introduces standardised commodity futures contracts on its platform. ECX is the first exchange in Nepal to initiate base price from its parent exchange in no latency.

1.3 FOCUS OF THE STUDY

The main focus of the study would be to identify the present situation of derivative market in Nepal and challenges and opportunities for the growth of derivative market. Moreover, it also focuses on the how these derivative markets is helping in the economic development of the nation. By the help of this research we can get more but not the detail information on derivative market in Nepal.

This study will be useful to those who involved in the derivative market, government and other interested person those who want to know about the current situation of the derivative market of Nepal. It also provides the information about the prospective of development of the derivative market in Nepal for the overall development of the nation.

1.4 STATEMENT OF THE PROBLEM

Economic development is the prime concern of every nation of the world. So, every nation should involve in the modern and innovative development tool for boosting up its economy. Commodity derivatives have achieved one of the fastest growth rates, probably the highest among any other developmental initiatives undertaken either in agricultural sector or in financial sector of a developing economy like India, Nepal and others. But in the present context of Nepal the derivative market is not growing as it should be. Only few people are involved in the derivative market and also no clear rules and regulations are formulated for its proper functioning. Further, there is not much research carried out on the prospective of derivative market in Nepal. So, there should be participation of the both government and those intellectual group for development of the derivative market to boost up the economy. This research would help in recommending the suggestions to the government to formulate the policies to carry out the derivative trading in more transparent and fair way in other to protect the interest of investors and also for the development of capital market in Nepal.

In view of the discussion of problem taken from the above studies, research questions will be as follows:

- What is the current status of derivative market in Nepal?
- What are the problems faced by the investors those involved in the derivative market?

- What are the prospective for the development of derivative market in Nepal?

1.5 OBJECTIVE OF THE STUDY

The specific objectives of the research study will be as follows:

- To know the present status of Derivative market in Nepal
- To identify the challenges and opportunities for the growth of derivative market in Nepal
- To identify the problems in the growth of derivative market in Nepal
- To provide necessary suggestions and recommendations

1.6 LIMITATION OF THE STUDY

The study will have the following limitations:

- This study will be based on primary data and the reliability will depends on it
- Some secondary data will also be taken into consideration
- Only few samples will be taken for opinion survey
- Availability of sufficient resources is also one limitation of the study.
- The non- availability of various references and resources acts as constraints

1.7 RESEARCH METHODOLOGY

Various data regarding the current situation of derivative market in Nepal shall be taken from various secondary publications such as from the website of derivative exchange companies, news paper article, journals and related publications. Opinion survey of respondents from Kathmandu valley shall be taken for knowing the current status, prospective for the development and problems relating the development of the derivative market in Nepal. The respondents will be experts in derivative market, investors, researchers and those involved in the derivative market.

1.8 ORGANISATION OF THE STUDY

The whole study will be organized into five chapters which will be as follows:

- Introduction
- Review of literature
- Research methodology
- Data presentation and analyses
- Summary, conclusions and recommendations

CHAPTER II

REVIEW OF LITERATURE

In introduction chapter we have described about the introduction of derivative market, history of the study, focus of the study, statement of the problem, objective of the study and limitation of the study. This chapter deals with the review relating to the derivative market in more detail and descriptive manner. For this purpose various books, journal, articles from newspapers, magazines and other related studies have been reviewed. In the context of Nepal no specific research studies have been available regarding derivative market and its importance for the economic development of the nation. A lot of effort has been made to over various aspects of the study so that adequate feedback could be obtained to broaden the base and input to the study.

2.1 CONCEPUTUAL REVIEW

2.1.1 Derivative Market

Derivatives are financial instruments that derive their value from an underlying asset. The underlying asset can be a stock issued by a company, a currency, gold, debt etc. It is the contractual agreement between two parties to buy or sell the underlying assets at a predetermined price at future in expiry date.

The value of derivative instrument changes according to the changes in the value of underlying assets. Derivative is traded in many exchanges around the world. Derivative market is one of the fastest growing markets in the world. Trillion dollars of transaction takes place every day.

The derivative transactions in Nepal are held for speculative motive only. So, the regulation needs to steer exchanges to facilitate commodities trading for hedging and arbitrage purpose too. Then only will its economic utility be realized.

Forward, future, options and swaps are the types of commodity derivative whereas only future derivatives are traded in current context of Nepal. The types of derivative instruments are described in details are as follows:

2.1.2 Forward

A forward contract or simply a forward is a non-standardized contract between two parties to buy or sell an asset at a specified future time at a price agreed upon today. This is in contrast to a spot contract, which is an agreement to buy or sell an asset today. The party agreeing to buy the underlying asset in the future assumes a long position, and the party agreeing to sell the asset in the future assumes a short position. The price agreed upon is called the delivery price, which is equal to the forward price at the time the contract is entered into.

The price of the underlying instrument, in whatever form, is paid before control of the instrument changes. This is one of the many forms of buy/sell orders where the time and date of trade is not the same as the value date where the securities themselves are exchanged.

The forward price of such a contract is commonly contrasted with the spot price, which is the price at which the asset changes hands on the spot date. The difference between the spot and the forward price is the forward premium or forward discount, generally considered in the form of a profit, or loss, by the purchasing party.

Forwards, like other derivative securities, can be used to hedge risk (typically currency or exchange rate risk), as a means of speculation, or to allow a party

to take advantage of a quality of the underlying instrument which is time-sensitive.

A closely related contract is a futures contract; they differ in certain respects. Forward contracts are very similar to futures contracts, except they are not exchange-traded, or defined on standardized assets. Forwards also typically have no interim partial settlements or "true-ups" in margin requirements like futures – such that the parties do not exchange additional property securing the party at gain and the entire unrealized gain or loss builds up while the contract is open. However, being traded over the counter (OTC), forward contracts specification can be customized and may include mark-to-market and daily margining. Hence, a forward contract arrangement might call for the loss party to pledge collateral or additional collateral to better secure the party at gain.

2.1.3 Future

A futures contract is a standardized contract between two parties to buy or sell a specified asset of standardized quantity and quality for a price agreed upon today (the *futures price* or strike price) with delivery and payment occurring at a specified future date, the *delivery date*. The contracts are negotiated at a futures exchange, which acts as an intermediary between the two parties. The party agreeing to buy the underlying asset in the future, the "buyer" of the contract, is said to be "long", and the party agreeing to sell the asset in the future, the "seller" of the contract, is said to be "short". The terminology reflects the expectations of the parties—the buyer hopes or expects that the asset price is going to increase, while the seller hopes or expects that it will decrease in near future.

In many cases, the underlying asset to a futures contract may not be traditional commodities at all – that is, for financial futures the underlying item can be any financial instrument (also including currency, bonds, and stocks);

they can be also based on intangible assets or referenced items, such as stock indexes and interest rates.

While the futures contract specifies a trade taking place in the future, the purpose of the futures exchange institution is to act as intermediary and minimize the risk of default by either party. Thus the exchange requires both parties to put up an initial amount of cash, the margin. Additionally, since the futures price will generally change daily, the difference in the prior agreed-upon price and the daily futures price is settled daily also (variation margin). The exchange will draw money out of one party's margin account and put it into the others so that each party has the appropriate daily loss or profit. If the margin account goes below a certain value, then a margin call is made and the account owner must replenish the margin account. This process is known as *marking to market*. Thus on the delivery date, the amount exchanged is not the specified price on the contract but the spot value (since any gain or loss has already been previously settled by marking to market).

A closely related contract is a forward contract. A forward is like a future in that it specifies the exchange of goods for a specified price at a specified future date. However, a forward is not traded on an exchange and thus does not have the interim partial payments due to marking to market nor is the contract standardized, as on the exchange.

Unlike an option, both parties of a futures contract must fulfill the contract on the delivery date. The seller delivers the underlying asset to the buyer, or, if it is a cash-settled futures contract, then cash is transferred from the futures trader who sustained a loss to the one who made a profit. To exit the commitment prior to the settlement date, the holder of a futures position can close out its contract obligations by taking the opposite position on another futures contract on the same asset and settlement date. The difference in futures prices is then a profit or loss.

2.1.4 Option

An option is a contract which gives the owner the right, but not the obligation, to buy or sell an underlying asset or instrument at a specified strike price on or before a specified date. The seller incurs a corresponding obligation to fulfill the transaction, which is to sell or buy, if the long holder elects to "exercise" the option prior to expiration. The buyer pays a *premium* to the seller for this right. An option which conveys the right to buy something at a specific price is called a call; an option which conveys the right to sell something at a specific price is called a put. Both are commonly traded, though in basic finance for clarity the call option is more frequently discussed, as it moves in the same direction as the underlying asset, rather than opposite, as does the put.

Options valuation is a topic of ongoing research in academic and practical finance. For simplicity of discussion, the value of an option is commonly decomposed into two parts: The first of these is the "intrinsic value," which is defined as the difference between the market value of the underlying and the strike price of the given option. The second part depends on a set of other factors which, through a multi-variable, non-linear interrelationship, reflect the discounted expected value of that difference at expiration. Although options valuation has been studied at least since the nineteenth century, the contemporary approach to be based on the Black–Scholes model which was first published in 1973.

Options contracts have been known for many centuries, however both trading activity and academic interest increased when, starting in 1973, options were issued with standardized terms and traded through a guaranteed clearinghouse at the Chicago Board Options Exchange. Today many options are created in a standardized form and traded through clearinghouses on regulated options exchanges, while other over-the-counter options are written as bilateral, customized contracts between a single buyer and seller, one or both of which

may be a dealer or market-maker. Options are part of a larger class of financial instruments known as derivative products, or simply, derivatives.

2.1.5 Swap

A swap is a derivative in which counterparties exchange cash flows of one party's financial instrument for those of the other party's financial instrument. The benefits in question depend on the type of financial instruments involved. For example, in the case of a swap involving two bonds, the benefits in question can be the periodic interest (or coupon) payments associated with the bonds. Specifically, the two counterparties agree to exchange one stream of cash flows against another stream. These streams are called the *legs* of the swap. The swap agreement defines the dates when the cash flows are to be paid and the way they are calculated. Usually at the time when the contract is initiated at least one of these series of cash flows is determined by a random or uncertain variable such as an interest rate, foreign exchange rate, equity price or commodity price.

The cash flows are calculated over a notional principal amount. Contrary to a future, a forward or an option, the notional amount is usually not exchanged between counterparties. Consequently, swaps can be in cash or collateral.

Swaps can be used to hedge certain risks such as interest rate risk, or to speculate on changes in the expected direction of underlying prices.

2.1.6 Speculation

Speculation is the practice of engaging in risky financial transactions in an attempt to profit from short or medium term fluctuations in the market value of a tradable good such as a financial instrument, rather than attempting to profit from the underlying financial attributes embodied in the instrument such as capital gains, interest, or dividends. Many speculators pay little attention to the fundamental value of a security and instead focus purely on price movements. Speculation can in principle involve any tradable good or financial

instrument. Speculators are particularly common in the markets for stocks, bonds, commodity futures, currencies, fine art, collectibles, real estate, and derivatives.

Speculators play one of four primary roles in financial markets, along with hedgers who engage in transactions to offset some other pre-existing risk, arbitrageurs who seek to profit from situations where fungible instruments trade at different prices in different market segments, and investors who seek profit through long-term ownership of an instrument's underlying attributes. The role of speculators is to absorb excess risk that other participants do not want, and to provide liquidity in the marketplace by buying or selling when no participants from the other categories are available. Successful speculation entails collecting an adequate level of monetary compensation in return for providing immediate liquidity and assuming additional risk so that, over time, the inevitable losses are offset by larger profits.

The view of what distinguishes investment from speculation and speculation from excessive speculation varies widely among pundits, legislators and academics. Some sources note that speculation is simply a higher risk form of investment. Others define speculation more narrowly as positions not characterized as hedging. The U.S. Commodity Futures Trading Commission defines a **speculator** as ***"a trader who does not hedge, but who trades with the objective of achieving profits through the successful anticipation of price movements."*** The agency emphasizes that speculators serve important market functions, but defines excessive speculation as harmful to the proper functioning of futures markets.

According to Ben Graham in *Intelligent Investor*, the prototypical defensive investor is "one interested chiefly in safety plus freedom from bother." He admits, however, that "some speculation is necessary and unavoidable, for in many common-stock situations, there are substantial possibilities of both profit and loss, and the risks therein must be assumed by someone." Thus, many long-term investors, even those who buy and hold for decades, may be

classified as speculators, excepting only the rare few who are primarily motivated by income or safety of principal and not eventually selling at a profit.

2.1.7 Hedge

A hedge is an investment position intended to offset potential losses/gains that may be incurred by a companion investment. In simple language, a hedge is used to reduce any substantial losses/gains suffered by an individual or an organization.

A hedge can be constructed from many types of financial instruments, including stocks, exchange-traded funds, insurance, forward contracts, swaps, options, many types of over-the-counter and derivative products, and futures contracts.

Public futures markets were established in the 19th century to allow transparent, standardized, and efficient hedging of agricultural commodity prices; they have since expanded to include futures contracts for hedging the values of energy, precious metals, foreign currency, and interest rate fluctuations.

Agricultural commodity price hedging

A typical hedger might be a commercial farmer. The market values of wheat and other crops fluctuate constantly as supply and demand for them varies, with occasional large moves in either direction. Based on current prices and forecast levels at harvest time, the farmer might decide that planting wheat is a good idea one season, but the forecast prices are only that — forecasts. Once the farmer plants wheat, he is committed to it for an entire growing season. If the actual price of wheat rises greatly between planting and harvest, the farmer stands to make a lot of unexpected money, but if the actual price drops by harvest time, he could be ruined.

If at planting time the farmer sells a number of wheat futures contracts equivalent to his anticipated crop size, he effectively locks in the price of wheat at that time: the contract is an agreement to deliver a certain number of bushels of wheat to a specified place on a certain date in the future for a certain fixed price. The farmer has hedged his exposure to wheat prices; he no longer cares whether the current price rises or falls, because he is guaranteed a price by the contract. He no longer needs to worry about being ruined by a low wheat price at harvest time, but he also gives up the chance at making extra money from a high wheat price at harvest times.

2.1.8 Arbitrage

In economics and finance, arbitrage is the practice of taking advantage of a price difference between two or more markets: striking a combination of matching deals that capitalize upon the imbalance, the profit being the difference between the market prices. When used by academics, an arbitrage is a transaction that involves no negative cash flow at any probabilistic or temporal state and a positive cash flow in at least one state; in simple terms, it is the possibility of a risk-free profit at zero cost.

In principle and in academic use, an arbitrage is risk-free; in common use, as in statistical arbitrage, it may refer to *expected* profit, though losses may occur, and in practice, there are always risks in arbitrage, some minor (such as fluctuation of prices decreasing profit margins), some major (such as devaluation of a currency or derivative). In academic use, an arbitrage involves taking advantage of differences in price of a *single* asset or *identical* cash-flows; in common use, it is also used to refer to differences between *similar* assets (relative value or convergence trades), as in merger arbitrage.

People who engage in arbitrage are called arbitrageurs such as a bank or brokerage firm. The term is mainly applied to trading in financial instruments, such as bonds, stocks, derivatives, commodities and currencies.

Arbitrage is possible when one of three conditions is met:

- The same asset does not trade at the same price on all markets ("the law of one price").
- Two assets with identical cash flows do not trade at the same price.
- An asset with a known price in the future does not today trade at its future price discounted at the risk-free interest rate (or, the asset does not have negligible costs of storage; as such, for example, this condition holds for grain but not for securities).

Arbitrage is not simply the act of buying a product in one market and selling it in another for a higher price at some later time. The transactions must occur *simultaneously* to avoid exposure to market risk, or the risk that prices may change on one market before both transactions are complete. In practical terms, this is generally possible only with securities and financial products that can be traded electronically, and even then, when each leg of the trade is executed the prices in the market may have moved. Missing one of the legs of the trade (and subsequently having to trade it soon after at a lower price) is called 'execution risk' or more specifically 'leg risk'.

In the simplest example, any good sold in one market should sell for the same price in another. Traders may, for example, find that the price of wheat is lower in agricultural regions than in cities, purchase the good, and transport it to another region to sell at a higher price. This type of price arbitrage is the most common, but this simple example ignores the cost of transport, storage, risk, and other factors. "True" arbitrage requires that there be no market risk involved. Where securities are traded on more than one exchange, arbitrage occurs by simultaneously buying in one and selling on the other.

2.2 LEGISLATION AND REGULATION RELATING TO DERIVATIVE MARKET IN NEPAL

In most of the countries the derivative market has been regulated by their respective securities board or by another separate entity. But, in the context of Nepal there is not any regulatory body for the regulation of the derivative market. All the exchanges and other supportive entities to the exchanges are registered in the Company Registrar Office and are self regulated. So, the exchanges are registered as per the Companies Act, 2063 only and there is not any governing body for those exchanges.

Securities Board of Nepal (SEBON), the regulating authority for the development of capital market is trying to formulate and implement the rule and regulations for the effectiveness of the derivative market in Nepal as soon as possible.

2.3 REVIEW OF PREVIOUS STUDY

In this chapter, the focus has been made in the review of previous study relevant to the current status of derivative market in Nepal. Every effort has been made to grasp knowledge and information that is available from libraries, document collection centers, other information managing bureaus and concerned derivative exchanges. This study helps to take adequate feed back to broaden the information base and inputs to my study. Study of previous predecessor's researchers is important for the study. Some of the previous study has been conducted to explore the current status of the derivative market in Nepal. Since derivative market is very new in the context of Nepal, no thesis work has been found on the topic derivative market in Nepal till date.

2.3.1 Review from previous Research conducted

In this section effort has been made to examine and review of some related research. While reviewing previous predecessor's researchers there was only one research found on the derivative market of Nepal. The research has been conducted by Amrit Kharel and team on August 2012 and presented to the Securities Board of Nepal. The topic of the research was **"Commodity Derivative Bazarko Abadharana, Bartaman Awastha, Niyemanko Antarastriya Abbshyas Tatha Nepal ko Sandarva"**. Basically, the main objective of the research was to know the present situation of the derivative market of Nepal and compare with the International market to formulate the regulation based on the international standard to make the market more transparent and reliable. The research report has been submitted to the SEBON so that it can formulate the policies and rules based on the observations and recommendations of the research report for the effective operation of the derivative market of Nepal.

As per their research on August 2012, there were 6 derivative exchanges, 15 clearing houses and 150 non clearing houses. The total paid up capital of these six exchanges was Rs. 14,99,51,500 only. While reviewing the research it was noted that there was detail analysis whether derivative market is contributing in economic development of the nation and some of the statistic data has been provided. As per the daily transaction entered by the exchanges there were daily transactions of Rs. 5 crores and annual transactions of Rs. 13 Arabs. Further, while analyzing the last 5 years transactions there were total transactions of Rs. 50 Arabs and return to the investors of Rs. 1 Arab 27 crores and 49 lakh. It shows the profit to the investors around 2.54% and stock market return to investors of total transactions of 20%. While analyzing the contribution to economy from derivative market of Nepal, there were 0.016% contribution to GDP from investment by six commodity exchanges and 0.85%

contribution in GDP from its total transactions. While analyzing the net profit of these six exchanges, net profit in 2009/10 was of Rs. 90.65 lakhs and 2010/11 was of Rs. 64.02 lakhs. The total income tax paid by those six exchanges from 2007/08 to 2011/12 was Rs. 23.98 crores only. Further, this market has been providing the employment opportunitites directly or indirectly around three thousand people through exchanges, clearing houses, non clearing houses, portfolio management companies and training institutions. Therefore it has concluded that the derivative market operated in Nepal has been contributing in the economic development of Nepal.

Further the research has also stated some of the weakness of derivative market of Nepal. The major weaknesses are stated as follows:

- Focused on speculation
- No transparency
- No analysis of demand and supply of market
- No uniformity in real time pricing
- Margin limitations
- No practice of creating central counter party fund and investor protection fund
- No guarantee of settlement
- No reliable and transparent software
- Lacking of system software audit
- No mechanism of warehouse development
- No limit of transactions per day as the market is open for 22 hours in a day in Nepal
- Weaknesses in corporate governance

The research has also stated the major challenges if the regulations are not formulated by the concerned authority in time. The challenges are as follows:

- There will not be productive investment in the country as it is basically operated for speculation.
- Derivative market may create bad long term financial impact as the transactions are not controlled or regulated in time as it may help in increasing the inflation rate and also cost of living.

Besides these weaknesses and challenges the research has concluded that the derivative markets are important for the economic development of the nation. It has noted the future prospective of development of derivative market in Nepal as follows:

- It can be proved as the best tool for price stability and price control
- It helps to maintain the quality of product
- It can assist to develop the agricultural sector of our country by developing the practice of planned farming.
- It helps in modernization, commercialization of our agricultural products
- It helps in introducing our domestic agricultural products in international market and can assist in providing the high and attractive prices of our agricultural products

2.3.2 Review from Articles

In this section effort has been made to examine and review of some related articles in different journals, magazines, newspaper and other related books.

As per the article on **"Derivative market Dwelling on the benefits"** by **Mr. Hom Nath Gaire** published in **"The Himalayan Times"** on 3rd October 2012, he has stated the fact that Nepalese commodity derivative exchanges are not certified by the International Organization of Securities Commissions (IOSCO) and have not followed the principles of IOSCO in contract derivation and margin determination. Likewise, the trading engine of Nepal's commodity exchanges is not audited at all and no disaster recovery mechanism is there.

One of the major reasons for these anomalies, according to the operators of the markets, is lack of authentic regulator and the governing law in the country. So, he concluded that the government should concentrate on developing the commodity eco- system having strong as well as efficient supply and value chain in the agriculture sector of the country. For that, well developed infrastructure of international standards should be created. And for the longer term, the government should focus on attracting the foreign investment in the country's derivative markets which would be helpful to gain foreign exchange earnings and to increase balance of payment.

As per the article on **" SEBON to introduce commodities regulation soon"** published on **"The Himalayan Times"** on 22nd September, 2012, the capital market is in a hurry to bring the commodities and derivatives market under the regulatory ambit at the soonest following the furor about shady activities of the exchanges, but the move raised concerns about its effectiveness. Securities board of Nepal (SEBON) had already submitted a preliminary draft of the regulation to the High Level Financial Coordination Committee. The committee has given its feedback and those suggestions will be incorporated in the final regulation. Further, the report also stated that it did not find any illegal undertakings by these exchanges and the brokers, it, however, substantiated doubts that the market operation is not in favour of investors. Moreover, suspicious trading software, lack of transparency and bad corporate governance, has left the investors vulnerable. Fearing similar activities, Sebon had already started proceedings to frame a regulation but the process got derailed as an amendment to the Securities Act 2007, to include the commodities and derivative market under Sebon's jurisdiction was halted due ti the dissolution of parliament. Further it also stated that the derivative transactions in Nepal are held for speculative motive only. So, the regulation needs to steer exchanges to facilitate commodities trading for hedging and arbitrage purpose too. Then only will its economic utility be realized.

As per the article on **“Billions Gone Away – The inside story of future exchanges”** by Amrit Kharel (Editor of the Economic System) published on the magazine “The Economic System” June 2011, the major four commodities and future exchanges, that is to say Mercantile Exchange Nepal Ltd. (MEX Nepal), Nepal Derivative Exchange Ltd. (NDEX), Commodities and Metal Exchange Ltd. (COMEN) and Wealth Exchange Nepal Ltd. (WEX) are the gaming zone where thousands of the general investors are losing their tens of millions, day by day while counting speculations and fluctuations in the commodities price level as of the global market. As per the article the derivative market of Nepal is considered as the illegitimate trading because of the reasons first-its' origin and functioning as financial facilitator of public, beyond the existing law, lack of prior licenses and certifications, second-the paper based virtual trading within price fluctuation of commodities which means the 'exclusive speculation', third -the absence of validity and quality control of software used, fourth - the use of illicit conduits of hundis or hawala banking system for the international settlements and finally the fifth - investment in the international domain; all these sort of ongoing malpractices are concretely setting up this market as 'super highway' of illegitimate trading.

In the absence of well-developed regulatory and supervisory framework, these markets are only threats in the economy rather than opportunities. Commodities market is proposed to be regulated by Securities Exchange Board of Nepal (SEBON) which is the regulator of capital market in Nepal. There must be a powerful regulator to monitor every facets of the future trading not to let any loopholes. The commanding regulator in real sense must have proper human resources with adequate technical support to oversee the high-tech software based online trading and automated platform. There are several issues to supervise and monitor, quite a lot of them to regulate and almost all to formulate the concerned acts, regulations and by laws. There is neither any validity of the software used by the different exchanges, nor any guidelines for their 'terms and conditions', 'fees' and 'commissions'. Similarly, the compliance

of Anti-money laundering act is not yet mandatory for the commodities market where tens of millions of contracts are purchased and sold every day. It seems relatively imperative; the Financial Information Unit (FUI) in NRB should draw its attention over the issue to keep the exchanges under surveillance, so that any possible money laundering activities will be discouraged.

The article concluded that as they say every black cloud has a silver lining, the commodities and future market too comprises the positive facade that is the hedging for future. 'Hedging' refers to the process of agreeing on the price of certain commodities for the future date and later the seller will have to deliver the physical goods as of the previous agreements. Usually the user of natural products hedge for the future and make the advance payment in order to mitigate the probable risk of price fluctuation. Hedging benefits both the producer of commodities and the users of it. Genuine customers like importers of raw material; manufacturer etc. can utilize the hedging as financial instrument to secure their future contracts. So, derivative market is considered as the essential for the economic development of the nation. Therefore the authorities must take some prompt measures to develop systematic, regulated and genuine commodities trading environment where Nepalese products will acquire the opportunities of trading worldwide. Or else, the future market as it is, fleeing the national capital seems no more necessary. Decide either to make them beneficial or to shut down these all commodities and future trading.

As per the article on **“Growing population in Asian countries will lead the price of commodities to a new height”** by Bishowjan Shrestha (Vice President of NDEX) published in “The Economic System” Magazine on February 2012, investment in the commodity markets has been a known phenomenon since more than last 1 hundred and 50 years in the United States of America (USA) and the commodity trading is believed as began earlier than

1 thousand years ago in Japan. Commodities are simple goods that exist as the basis of our food supply and manufacturing. However, the general public thus far hardly ever understands why commodities are traded on exchanges.

Commodity exchanges actually serve a vital role to the economy and it is not likely we would have had as much as economic growth in the last 1 hundred years without the commodity exchanges. The purpose of commodity exchanges is to provide a centralized marketplace where commodity producers can sell their commodities commercially to them who want to use them for manufacture or consumption purpose. The beauty of a commodity future exchange is that someone like a corn farmer is bounded at a price for his crops several months before harvesting time. This process increases business survival among farmers and the exchanges always make sure there is a buyer for every seller and provide their meet prices.

In recent years, commodities prices have outperformed stocks and bonds. One reason is that demand for commodities from developing countries is increasing. Participants in derivative market can entertain the margin trading with low transaction cost and hedge against the risk associated to the future price. And so, massively emerging economies like China and India have managed to build infrastructure and increase production of the steel, oil, precious metals and other commodities essential in huge quantities. Increased demand, coupled with decreased supply for some commodities such as oil will continue to make its price higher. Growing population in Asian countries will lead the price of commodities to a new height.

Volatility in the commodity markets with the active speculators can create standard pricing and hedging opportunities for the commercial activities which is enough to prove the necessity of a new investment platform. Speculators are the main players who are more active in this market earning more benefit than any other participants. Moreover, hedging can be a bigger part of the trading

plan if it is carefully handled. It is performed only by experienced traders who understand market swings and timing. Mainly hedging is appropriate for the institutional corporations, multinational companies, government, exporters and the end users who consumed commodities daily.

Derivative market is an integral part of capital market in developed as well as in emerging economies. Among the major contributing factor for the success or failure of the market is the regulatory framework too. The purpose of the regulation is to promote the efficiency of the whole derivative system. Unless there is a strong and effective regulatory frame work to govern the commodities trading, the market cannot be developed furthermore. Collective efforts from all levels and positive attitude of the government show that the mandatory act for the market will be implemented soon.

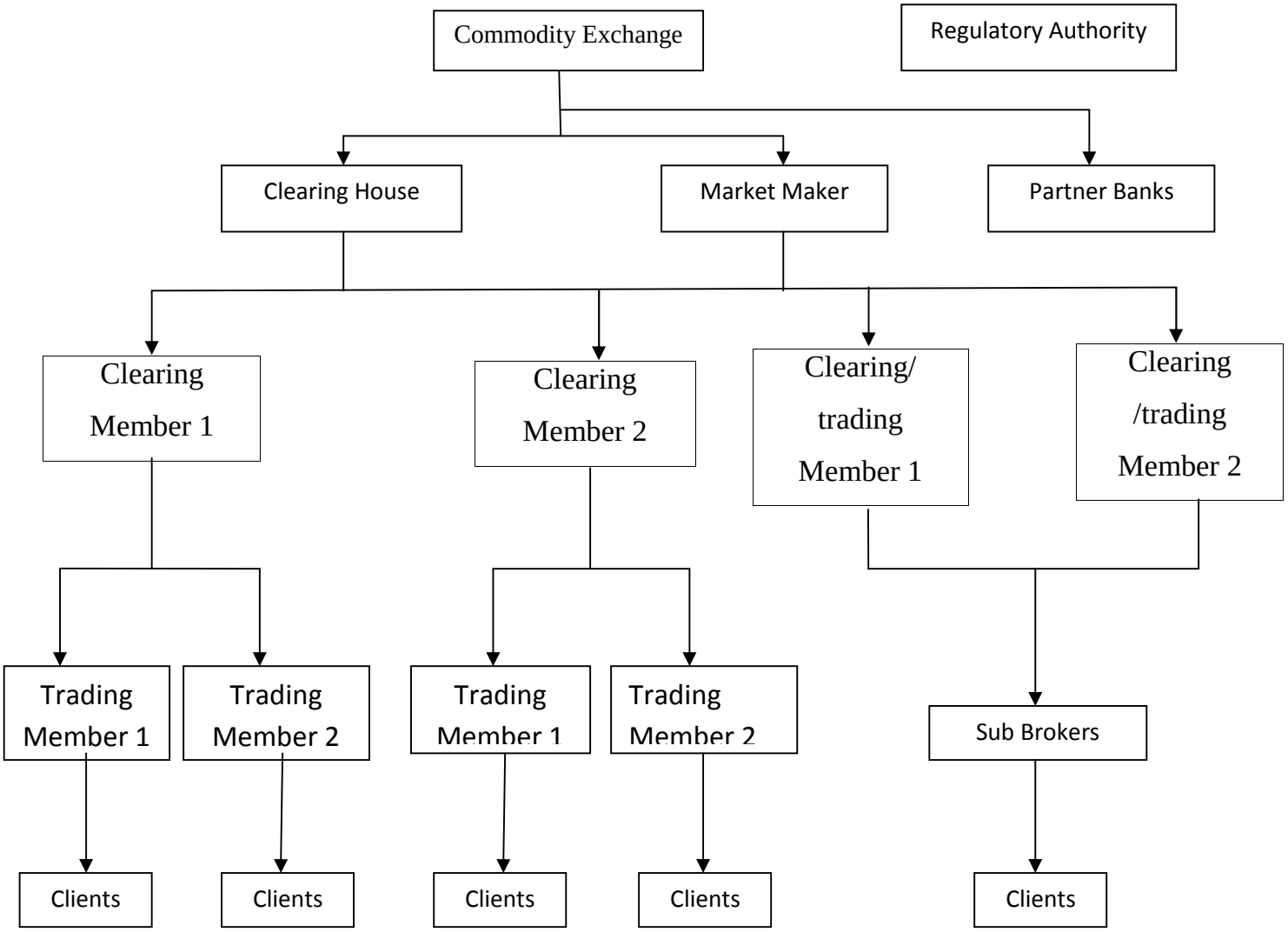
Today, future exchange market is emerging as an important economic tool to determine prices based on present and future predetermined amount of global supply and demand. In the same way this market is also a place for people to reduce their risk when making purchases. Risks are reduced because the price is pre-set and consequently letting participants know how much of the commodity they will need to buy or sell. In view of the aforementioned generally accepted principles and international practices of futures market, the performance of commodities futures trading initiatives in Nepal should be well organized in the coming days.

Securities Research Center and Services (SRCS) has published a book titled '**Commodities and Derivatives Jigyasa**'. The book is authored by capital market analyst **Rabindra Bhattarai** and contains information about derivative market of the country. The 112-page book has adopted a question-answer method for better elaboration of the issue. It concluded that commodity and derivative market is not a new thing for Nepal but its organizational trade in the market is a new concept for Nepalese.

2.3.3 Review from Thesis

Derivative market is very new market in the Nepalese scenario. Before this, no other thesis has been conducted so far on the derivative market of Nepal by the students. But various students regarding the various aspects of capital market/ stock exchange has been conducted. And the reviews of those researches are not supposed to be relevant for this research.

Fig: 2.1 Organized Structure of Commodity Derivative Market



CHAPTER III

RESEARCH METHODOLOGY

Research is defined as a scientific and systematic search for pertinent information on a specific topic. In fact, research is an art of scientific investigation. The Advanced Learner's Dictionary of Current English lays down the meaning of research as "a careful investigation or inquiry especially through search for new facts in any branch of knowledge." Redman and Mory define research as a "systematized effort to gain new knowledge." Some people consider research as a movement, a movement from the known to the unknown. It is actually a voyage of discovery.

Research methodology refers to the various sequential steps to be adopted by a researcher in studying problem with certain object in view. It would be appropriate to maintain those research projects are not susceptible to any one complete and inflexible sequence of steps and the type of problems to be studied will determine the particular steps to be taken and their order too.

Research methodology is a technique of analyzing the obtained data to solve the research problem. It consists of descriptive approach and statistical tools. Descriptive approach is used to analyze the research problem, setting hypothesis and other theoretical problem. Statistical tools are used to analyze the research problem, setting hypothesis and other theoretical problem. Statistical tools are used to analyze the numerical data. Researcher has used the following methodology to complete the research.

3.1 RESEARCH DESIGN

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with

economy in procedure. To achieve results of targeted objective of the proposed study, the descriptive cum empirical research design has been adopted. Descriptive research design along with survey has been adopted to describe the situation and events, accumulates factual information, and identifies current conditions and also identifies the challenges and opportunities for the growth of derivative market in Nepal.

Empirical research design has been adopted to collect opinions of various respondents associated with derivative market i.e. investors, business men and researchers / consultants. The findings are generally indicative of knowledge, attitudes and perceptions of respondents in general.

3.2 POPULATION AND SAMPLE

This study comprises of 15 respondents who are investors, business men, market researchers/ consultants, person involved in banking sectors, derivative exchanges and students as sample population. In order to facilitate this study, all 15 sample size from Kathmandu valley will be selected using convenience sampling method and also the limited sample size has been taken due to the unavailability of many people involved in this sector. Random sampling technique will be use to select the target and sample population. The selection of sample has based primarily on such non-scientific factors, as financial constraints, personal availability and convenience, and it cannot be claimed that the site selected and people surveyed are the actual representative of the entire population. The site selected, however, does have one major characteristic of diversity because of the residency of people from several parts of country. Therefore it is believed that the findings are generally indicative of the knowledge, attitudes and perceptions of target population.

3.3 SOURCE OF DATA

The necessary data has been collected in order to achieve the real world factual result. Since this study is focused on current situation of derivative market in Nepal and to identify the challenges and opportunities for the growth of derivative market in Nepal, primary data has been collected. Further, secondary data have been collected through previous research conducted. The major sources of data are as follows:

3.3.1 Primary Sources of Data

Primary source of data has been collected within Kathmandu valley from fifteen respondents. The respondents are investors, business men, the researchers/ consultants, person involved in banking sectors, derivative exchanges and students. The set of questionnaire was developed to collect data. Twelve questions were set to respondent to achieve the objective of the research.

3.3.2 Secondary Sources of Data

Secondary data have been collected through previous research conducted on the commodity derivative market of Nepal by Amrit Kharel and his team. Necessary information and data have been taken from that research for analysis of secondary data.

3.4 PROCEDURE OF DATA COLLECTION

Primary data has been collected through questionnaire method. For this the set of questionnaires were developed and distributed among the respondents accordingly. Distribution was done through personal visit and through email to get accurate and actual information in time. Collection of response from the respondents was also done through the same procedure.

3.5 DATA PROCESSING PROCEDURE AND ANALYTICAL TOOLS

Information would be categorized, tabulated, processed and analyzed as required. Simple statistical measures have been used to analyze the data. Bar diagram and pie-chart has been drawn to interpret the data visually. The presentation of the findings is shown in the tabular form. Bar diagram and pie-chart is drawn as per the requirement.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

This chapter includes the presentation and analysis of data. Analysis is based on survey of investors, researchers, business men, consultants, employee in the exchanges and students. Altogether 15 respondents were taken as a sample for data collection.

4.1 ANALYSIS OF SURVEY

This empirical study is based on the opinion questionnaire survey which was distributed to the total 15 respondents. The questionnaire has been developed in order to collect the opinions and views of the various categories of respondents. Twelve questions were set to obtain the opinion of the respondent in due consideration of achieving the main objective of the research.

The questionnaire were set in such a way that the reply were in either Yes/No, ranking of choices according to number of alternatives where first choices is most important and the last choice as least important. For analytical purpose the first preferred choice is given ten points and nine to the second preferred choice and so on. The total points available to each choice had been converted into percentage in reference to the total points available for all choice. The choice with the highest score of percentage has been ranked as the most important choice and one with the lowest percentage has been ranked as last choice and few were opinion providing type of questions.

4.2 ANALYSIS OF SURVEY CONDUCTED

Twelve questions were asked to respondents relating to the current status of derivative market of Nepal. They were given a questionnaire and requested to fill

up and they were collected through email and self visit. The finding of the questions asked to them is presented below:

4.2.1 Importance of development of derivative market for the economic development of the nation

The first question asked was whether it is important to develop derivative market for the economic development of the nation. The objective of this question was to find whether derivative market is contributing in the economic development of the nation. The response given has been tabulated as follows:

Table 4.1

Importance of Derivative market for economic development

Reply	**Result**	
	in No.	**%**
Yes	15	100
No	-	-
Total	**15**	**100**

Source: Survey, 2013

Among 15 respondents, all of them replied that development of the derivative market is important for the economic development of the nation. This shows that development of the derivative market is important for the economic development of the nation.

4.2.2 Limitation of the derivative market in speculation purpose only

The second question asked was the reason behind the limitation of derivative trading in speculative purpose only in Nepal (we can used for hedging and arbitrage also). The objective of this question was to know why trading is limited in speculative purpose only. The main objective of the derivative market is to hedge for future but it is not used in Nepalese market. So to know the reason behind its limitation the question was asked. The response received has been tabulated below:

Table 4.2

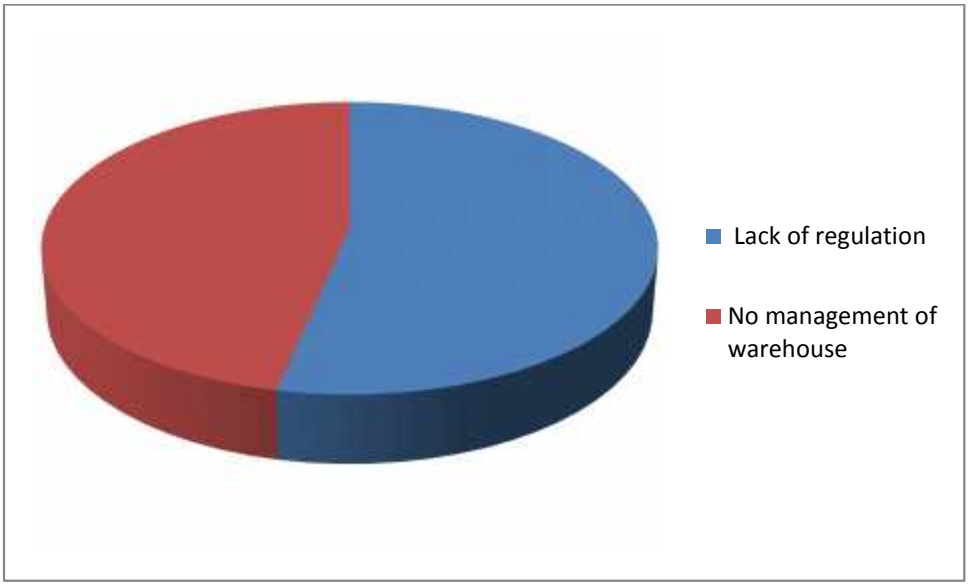
Reason behind limitation of derivative market in speculation purpose only

Reply	Result	
	in No.	**%**
Lack of regulation	8	53
No management of warehouse	7	47
Total	15	100

Source: Survey, 2013

The above table has been presented in the following pie-chart:

Fig: 4.1 Reason behind the limitation of derivative market in speculation purpose only



As shown in the above table, among 15 respondents 53% of them replied that there is lack of regulations. Similarly, 47% replied "no management of warehouse". So, we can conclude that there is lack of regulations for the effective functioning of the derivative market in Nepal. Therefore the authorities must take some prompt measures to develop systematic, regulated and genuine trading environment for its proper functioning in order to achieve main objectives of the derivative trading i,e hedging and arbitrage.

4.2.3 Reasons behind lack of transparency in operation of transactions in the derivative trading in Nepal

To know the attitude of respondents towards factors responsible for not having transparency in operation of transactions in the derivative trading in Nepal, they had been requested to select the choices given. The finding is shown in the table below:

Table 4.3

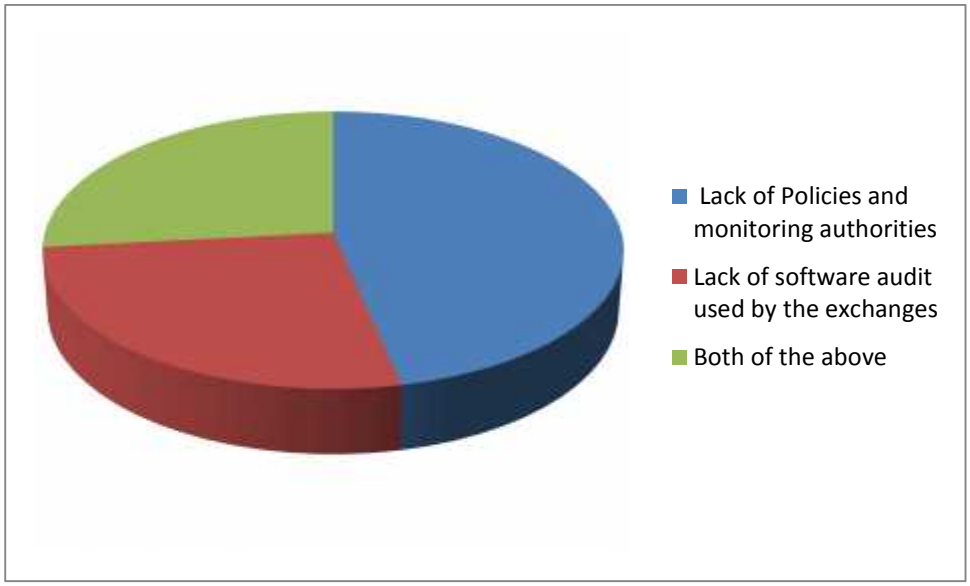
Reasons behind lack of transparency in operation

Options	in No.	%
Lack of Policies and monitoring authorities	7	46
Lack of software audit used by the exchanges	4	27
Both of the above	4	27
Total	**15**	**100**

Source: Survey, 2013

The above table has been presented in the following pie-chart:

Fig: 4.2 Reasons behind lack of transparency in operation



The above table shows that maximum respondents about 46% replied that there is lack of Policies and monitoring authorities which results lack of transparency in operations of transactions in derivative trading. Similarly, about 27% replied that due to lack of software audit used by the exchanges, there is no transparency in operations of transactions by the derivative exchanges. About

27% replied that all the options given are the factors are responsible for lack of transparency in operations of transactions by the derivative exchanges.

4.2.4 Reason behind more amounts of losses suffered by the investors

To know response of respondents reasons for the more amounts of losses being suffered by the investors. The finding is shown in the table below:

Table 4.4

Reasons behind more amounts of losses suffered by the investors

Options	in No.	%
Lack of understanding of operation/trading of derivative market by the investors	6	40
Lack of transparency of exchanges	9	60
Total	**15**	**100**

Source: Survey, 2013

The above table shows that maximum respondents about 60% replied that lack of transparency of exchanges has caused losses to the investors. Similarly, about 40% replied for lack of understanding of operation/trading of derivative market by the investors caused losses to the investors. This revels that there should be transparency in operations of the exchanges and all the operations should be closely monitored by the authority for the fair transaction of the exchanges. And also, the investors should have enough understanding of the operations/ trading of derivative market in order to save them from possible losses.

4.2.5 Effects of the improper regulations of the derivative market

To know the response of respondents towards effects if operations of derivative market of Nepal are not properly regulated. They were asked whether the improper regulations may increase the inflation rates and also increase the cost of living of the people. The finding is shown in the table below:

Table 4.5

Effects of improper regulations in increasing the inflation rates and cost of living

Reply	Result	
	in No.	**%**
Yes	15	100
No	-	-
Total	**15**	**100**

Source: Survey, 2013

Among 15 respondents, all of them replied that if the current derivative market of Nepal is not properly regulated then it can assist in increasing the inflation rates and also help in assisting the cost of living of people. This shows that in order to avoid the bad long term financial impacts i,e increment in inflation rates and cost of living the concerned authority should take the active measures to develop systematic, regulated and genuine trading environment.

4.2.6 Derivative market as the effective tool for commercializing our local agricultural products in international market

The question asked was whether the derivative market can be considered as th effective tool for commercializing our local agricultural products in international market. The objective of this question was to find the importance of development of derivative market for the development of agricultural sector of Nepal. The response given has been tabulated as follows:

Table 4.6

Derivative market as the effective tool for commercializing our local agricultural products in international market

Reply	Result	
	in No.	**%**
Yes	15	100
No	-	-
Total	**15**	**100**

Source: Survey, 2013

Among 15 respondents, all of them replied that development of the derivative market is important for commercializing our local agricultural products in international market. This shows that development of the derivative market is important for the development of agricultural sector of Nepal.

4.2.7 Sufficiency of rules and regulations

Another question was asked to know the response of respondents that whether there is sufficient rules and regulation for the overall development and also to

enhance the reliability and transparency of the derivative market of Nepal. The finding is shown in the following table:

Table 4.7

Sufficiency of rules and regulations

Reply	Result	
	in No.	**%**
Yes	-	-
No	15	100
Total	**15**	**100**

Source: Survey, 2013

Among 15 respondents, all of them replied that there is no sufficient rules and regulations which can enhance the reliability and transparency in the overall development of derivative market of Nepal. This shows that development of the derivative market can be possible only after the introduction of effective rules and regulations and its proper implementation.

4.2.8 Lack of specific policies, rules and regulation created the main hindrance in the overall development of derivative market

The question asked was whether lack of specific policies, rules and regulations created the main hindrance in the overall development of derivative market in Nepal. The objective of this question was to find whether formulation and its proper implementation of specific policies, rules and regulations are important for the overall development of derivative market of Nepal. The response given has been tabulated as follows:

Table 4.8

Importance of formulation of Policies for overall development of derivative market of Nepal

Reply	Result	
	in No.	**%**
Yes	15	100
No	-	-
Total	**15**	**100**

Source: Survey, 2013

Among 15 respondents, all of them replied that lack of specific policies, rules and regulations have created the main hindrance in the overall development of the derivative market of Nepal. This shows that formulation of the specific policies, rules and regulations and its effective implementations are must for developing the systematic, regulated and genuine trading environment.

4.2.9 Reasons behind the slow development of derivative market in Nepal

The respondents were asked the reason for slow development of derivative market in Nepal. They were requested to rank the given four options as per their priority. The finding is shown in the following table:

Table 4.9

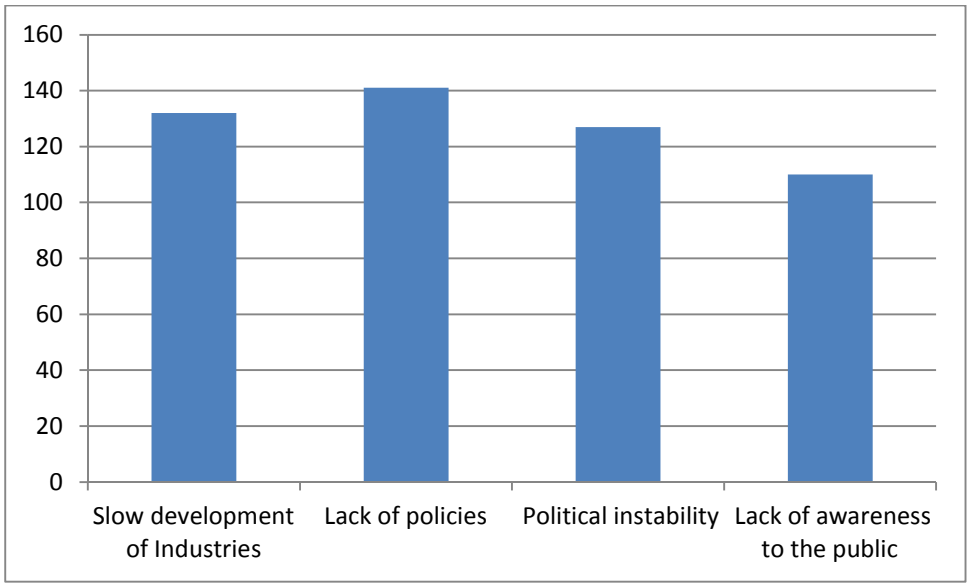
Reason for slow development of derivative market in Nepal

S. No	Reasons	Total Points	Rank
1	Slow development of Industries	132	2
2	Lack of policies	141	1
3	Political instability	127	3
4	Lack of awareness to the public	110	4
	Total Points	**510**	

Source: Survey, 2013

The above table has been presented in the following bar diagram:

Fig: 4.3 Reason for slow development of derivative market in Nepal



As per the finding, Option No. 2 is ranked First scoring 141 points. Similarly, Option No. 1 is ranked as Second scoring 132 points. Likewise, Option No. 3 is ranked Third scoring 127 points. Last rank was Option No. 4 scoring 110 points.

So, we can conclude from the above finding that the main reason behind the slow development of derivative market in Nepal is lack of proper policies formulation and its effective implementation.

4.2.10 Operation of derivative market of Nepal as per the standard of International Organization of Securities Commissions (IOSCO)

The next question asked was whether the operation of derivative market of Nepal is as per the standard of International Organization of Securities Commission (ISOCO). The response given has been tabulated as follows:

Table 4.10

Operation of derivative market of Nepal as per the standard of IOSCO

Reply	Result	
	in No.	%
Yes	-	-
No	15	100
Total	**15**	**100**

Source: Survey, 2013

Among 15 respondents, all of them replied that the derivative market operated in Nepal is not as per the standard laid by ISOCO. This shows that the exchanges established in Nepal has not operated its functions as per the international norms and practices. So we need lots of homework to develop our derivative market as per the international norms and practices.

4.2.11 Role of Government in development of derivative market of Nepal

To know the attitude of respondents towards the Government's immediate role on the improvement of derivative market of Nepal, they had been requested to select the options given. The finding is shown in the table below:

Table 4.11

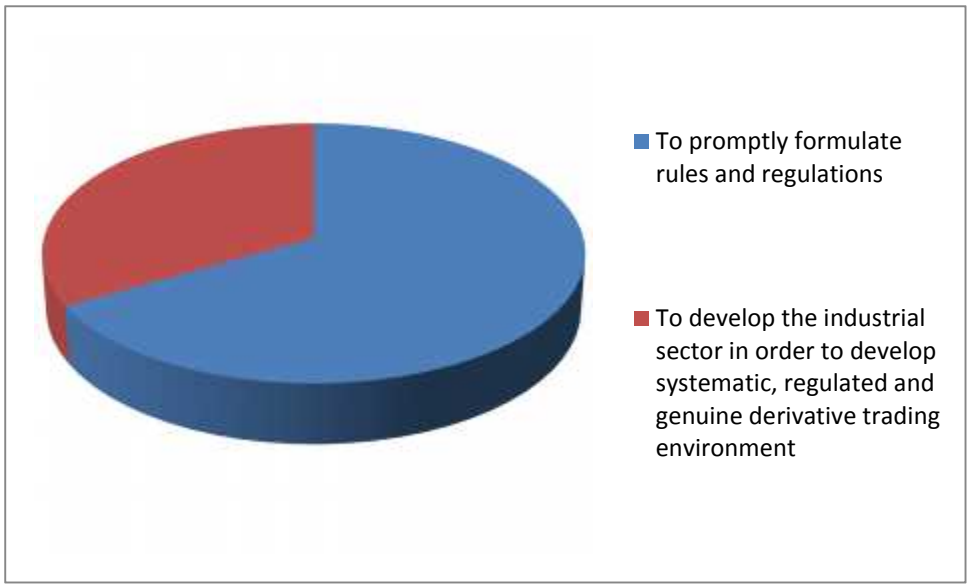
Role of Government

Options	in No.	%
To promptly formulate rules and regulations	10	67
To shut down the current market as it is not important in the developing countries like Nepal	-	-
To develop the industrial sector in order to develop systematic, regulated and genuine derivative trading environment	5	33
Total	**15**	**100**

Source: Survey, 2013

The above table has been presented in the following pie-chart:

Fig: 4.4 Role of Government



The above table shows that maximum respondents about 67% replied that the government should promptly formulate the rules and regulations. Similarly, about 33% replied for the development of industrial sector in order to develop systematic, regulated and genuine derivative trading environment. None of the respondent replied for the shut down the current market as it is not important in the developing countries like Nepal. Hence it is concluded that at the present situation the Government should focus on the formulation of the effective policies and regulations for the development of the derivative market in more efficient and effective way.

4.3 ANALYSIS OF PREVIOUS RESEARCH CONDUCTED

The research has been conducted by Amrit Kharel and team on August 2012 and presented to the Securities Board of Nepal. The topic of the research was "Commodity Derivative Bazarko Abadharana, Bartaman Awastha, Niyemanko Antarastriya Abbshyas Tatha Nepal ko Sandarva". Basically, the main objective of the research was to know the present situation of the derivative

market of Nepal and compare with the International market to formulate the regulation based on the international standard to make the market more transparent and reliable.

As per their research on August 2012, there were 6 derivative exchanges, 15 clearing houses and 150 non clearing houses. The total paid up capital of these six exchanges was Rs. 14,99,51,500 only. While reviewing the research it was noted that there was detail analysis whether derivative market is contributing in economic development of the nation and some of the statistic data has been provided. As per the daily transaction entered by the exchanges there were daily transactions of Rs. 5 crores and annual transactions of Rs. 13 Arabs. Further, while analyzing the last 5 years transactions there were total transactions of Rs. 50 Arabs and return to the investors of Rs. 1 Arab 27 crores and 49 lakh. It shows the profit to the investors around 2.54% and stock market return to investors of total transactions of 20%. The total income tax paid by those six exchanges from 2007/08 to 2011/12 was Rs. 23.98 crores only. Further, this market has been providing the employment opportunities directly or indirectly around three thousand people through exchanges, clearing houses, non clearing houses, portfolio management companies and training institutions. Therefore it has concluded that the derivative market operated in Nepal has been contributing in the economic development of Nepal.

Further the research has also stated some of the weakness of derivative market of Nepal. The major weaknesses are stated are focused on speculative purpose only, no transparency, no analysis of demand and supply of market, no uniformity in real time pricing, margin limitation, no practice of creating central counter party fund and investor protection fund, no guarantee of settlement, no reliable and transparent software, lacking of system software audit, no mechanism of warehouse development and others.

The research has also stated the major challenges if the regulations are not formulated by the concerned authority in time. The challenges are there will

not be productive investment in the country as it is basically operated for speculation and derivative market may create bad long term financial impact as the transactions are not controlled or regulated in time as it may help in increasing the inflation rate and also cost of living.

Besides these weaknesses and challenges the research has concluded that the derivative markets are important for the economic development of the nation because of the following reasons:

- It can be proved as the best tool for price stability and price control
- It helps to maintain the quality of product
- It can assist to develop the agricultural sector of our country by developing the practice of planned farming.
- It helps in modernization, commercialization of our agricultural products
- It helps in introducing our domestic agricultural products in international market and can assist in providing the high and attractive prices of our agricultural products

4.4 MAJOR FINDINGS

The major findings of this research are as follows:

- Derivative market is important for the economic development of the nation as it is contributing in revenue collection to the Government and source of employment opportunities to many people.

- Lack of policy formulation is the main problem in the overall development of the derivative market in Nepal

- No regulating body for the operation of derivative market in Nepal

- Derivative market of Nepal is in introductory phase and there is no support from Government in this market.

- The derivative trading in Nepal is conducted for speculative purpose only and the main reason of behind limitation in speculative purpose is lack of policies formulation and no mechanism of warehouse management.

- If the current situation of derivative market of Nepal is not improved or controlled then it may create bad financial impact resulting assisting in inflation rate enhancement and increasing in cost of living

- The main reasons behind the slow development of derivative market in Nepal are lack of policies, slow development of industries, lack of public awareness and political instability.

- The authority should take prompt action to develop the regulated derivative market in order to introduce our agricultural products in international level.

- The main reasons for the maximum losses suffered by the investors are the lack of transparency of operations by the exchanges and lack of sufficient knowledge about the trading of derivative instruments.

- While formulating the policies it should incorporate the standards to be complied as per International Organization of Securities Commissions (IOSCO) in order to compete with the international market.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents the Summary, Conclusion and Recommendation. This chapter shows the overall summary, findings and conclusion of the thesis. Recommendation is given on the basis of the conclusion drawn from the thesis.

5.1 SUMMARY

Nepal is an agricultural based country as more than 80% of its population is depended on the agriculture. Therefore without the commercialization of the agricultural product the economic development of the nation is not possible. The government should try for all the possibilities which help to boost up its economy. The growth of the industries related with the agricultural products is most for the economic development of the nation. For the commercialization of the agricultural products and to introduce and also to give high and attractive prices in the international market the derivative market can be considered as an effective and essential tool. Therefore well organized and systematic trading environment of derivative market should be developed by the authority for the development of economy. The authorities must take some prompt measures to develop systematic, regulated and genuine derivative trading environment where Nepalese products will acquire the opportunities of trading worldwide.

The main objective of this research is to study whether the derivative market is important for the economic development of the nation. Furthermore, this research aimed to explore the current situation of the derivative market in Nepal. Also, the research was focused on identifying the challenges and opportunities for the growth of derivative market in Nepal.

To find out the contribution of derivative market in economic development of Nepal, this research had reviewed various relevant literatures. Both the primary and secondary data were used in this study.

Regarding the primary data collection the opinions from researchers or consultants of derivative market, investors, students, employees from exchanges, business men and other interested person in derivative market were collected through questionnaire. On the other hand, the detail research conducted on the commodity derivative market of Nepal conducted on August 2012 by Amrit Kharel and his team were observed and studied as the secondary data. The collected information was tabulated as per the requirement of the study.

From the analysis, it was found that the derivative exchanges, clearing and non clearing houses are contributing in the economic development of the nation. As, they are the source of revenue collection for the Government and also they are providing directly or indirectly employment opportunities for more than three thousand people. However, as per the interviews with the respondents and some formal and informal taking on derivative market with them reveled that the current operation of derivative market in Nepal is not satisfactory. Lack of policies formulation is the main hindrance in the overall development of the derivative market in Nepal.

The derivative market of Nepal is in introductory phase now. So, we are not able to use this tool properly in the economic development of the nation even it has lots of possibilities in contributing the economic development of nation. In order to use this tool properly the development of systematic and regulated environment is must. Well defined policies for the operation of derivative market and including the protection of the interest of investors is must for the overall growth of derivative market in Nepal and also to enhance the transparency in its operation.

The policies formulated by the authority should follow the standards prescribed in International Organization of Securities Commissions (IOSCO) and the principles of IOSCO in contract derivation, margin determination, capital requirement, and qualification of the promoters, software used and minimum requirement of infrastructure used in its operations should be as per the standard of IOSCO. It helps to match up our derivative trading environment with the international level. Thus, currently the exchanges are not operated as per the standard of IOSCO so it is facing difficulties in its operations and also not contributing as it has to be contributed in the economic development of nation. At present use of derivative tools are limited in the speculative purpose only so efforts should be made to use it in hedging purpose also so that it can contribute a lot in the economic development of the nation.

5.2 CONCLUSION

Economic development is the prime concern of every nation of the world. So, every nation should involve in the modern and innovative development tool for boosting up its economy. Commodity derivatives have achieved one of the fastest growth rates, probably the highest among any other developmental initiatives undertaken either in agricultural sector or in financial sector of a developing economy like India, Nepal and others. But in the present context of Nepal the derivative market is not functioning properly. It suffers from many weaknesses like focused on the speculation purpose only, margin limitations, no uniformity in real time pricing, interest of investors are not protected, lack of transparency, no practice of system audit of the software used by the exchanges, no mechanism of warehouse development and others. Besides these all weaknesses, there is lots of future prospective of this market as it can be taken as the effective tool for the modernization and commercialization of our agricultural product in the international market and also it can provide the best and attractive prices of our agricultural products. So, it can contribute a lot in

the economic development of the nation. Therefore the authorities must take some prompt measures to develop systematic, regulated and genuine trading environment so that the Nepalese agricultural products can acquire the opportunities of trading worldwide.

Further, today, derivative has become part and parcel of the day to day life for ordinary people for sharing and transferring risk. Therefore, derivatives play a useful and important role in hedging and risk management, but they also pose several dangers to the stability of financial markets and thereby the overall economy. Moreover, with the globalization of emerging markets exchange risk has become an important part of the market and of institutions which operates in the economy. The well regulated forward and future markets are essential for efficient management of risk. Without such market, the firms and institutions are handicapped with regard to their competitors across the world. Unhedged foreign exchange exposure if widespread can also snowball into system through a vicious cycle of technical bankruptcy. Therefore, well defined policies should be formulated for the stability of financial markets for the economic development of the nation.

Further, the policies formulated by the authority should follow the standards prescribed in International Organization of Securities Commissions (IOSCO). It helps to match up our derivative trading environment with the international level. So that the smooth growth of the derivative market can be possible and also the interest of investors is protected.

5.3 RECOMMENDATIONS

The derivative tools are taken as the modern and innovative development tool for boosting up its economy and every nation should use them to boost up its economy. Besides the many weaknesses of the current derivative market of Nepal, it is concluded that the proper development of this market is must for economic growth of the nation. The main hindrance in the development of the

derivative market is lack of policies formulation by the authority. Therefore for the development of the systematic, regulated and genuine environment of the derivative market in Nepal the concerned authority should exercised in more precise and detail on legal and technical matters of the derivative market.

After presenting the major findings of the study, following recommendations have been presented:

1. At present the derivative exchanges are established as per Companies Act 2063 and not regulated by any authority for its proper functioning. So, Government should establish the separate regulating authority or Securities board of Nepal should be made responsible for the proper functioning of the derivative market of Nepal.

2. Securities board of Nepal or the separate regulating authority should take prompt action for the development of systematic, regulated and genuine trading environment of derivative market in Nepal.

3. The authority should follow the standards prescribed in International Organization of Securities Commissions (IOSCO) while formulating the Policies for the proper functioning of derivative market.

4. Development of derivative market and protection of the interest of the investors should be the main theme of the policies developed by the authority.

5. More research and homework should be done by the authority to use the derivative tools for hedging purpose as well.

6. Transparency in functioning of the exchanges is must for the protection of interest of the investors.

7. Development of the effective policies and close monitoring by the authority at the operational level is must for the overall development of the derivative market of Nepal.

8. Awareness on the trading of the derivative to the investors is very important in order to deal in the trading more effective and efficient way.

9. Use of financial derivative by the business organization should be increased to minimize their foreign exchange risk. For this awareness should be raised at the operational level about the importance of financial derivative in every organization that deals in foreign exchange.

10. Development of the industries in the country and political stability is very important for the growth of derivative market in Nepal.

11. If the current situation of the derivative market is left without its proper management then it can effect on the bad impact on the financials resulting in increasing the inflation rates and also effect in cost of living of the people. So, proper management of current situation is very important for the development of economy by developing the sufficient policies for its proper functioning.

12. Besides the many weaknesses in the current operation of derivative market of Nepal, the growth of derivative market is very important for the commercialization of the agricultural products and to introduce and also to give high and attractive prices in the international market the derivative market can be considered as an effective and essential tool. So, Government should allocate some of its financial and human resources to govern regulate and build the effective derivative market in the country for the economic development of the nation.

At last, this research helped me a lot in acquiring overview of derivative market in Nepal. It helps me in identifying the current status of derivative market of Nepal and shows the ways to improve the current situations. It also helps in knowing the important role of derivative market in the economic development of the nation. Finally I would like to make attention of all the concerned person that for the development of the systematic, regulated and genuine environment of the derivative market in Nepal the concerned authority should exercised in more precise and detail on legal and technical matters of the derivative market. So, that the derivative market helps in the economic development of the nation. I hope this study will help other researchers and interested person to gain some knowledge on the derivative market of Nepal.

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APPENDIX

Dear Respondent,

I am collecting data regarding my thesis entitled "**An Overview of Derivative Market in Nepal"** for partial fulfillment of the requirement for the degree of Master of Business Studies (MBS) and it would be of great help in this research work, if you provide me your valuable time by filling up the following questionnaire.

Sincerely,

Mandika Maharjan

Researcher

Shanker Dev Campus

Kathmandu, Nepal

Questionnaire

Please tick the desired answer or fill in the blanks as per requirement

Name of the Respondent: .....

1. Is derivative market is important for the economic development of our nation?

   a. Yes b. No

2. What is the reason behind the limitation of derivative trading in speculative purpose only in Nepal (we can used for hedging and arbitrage also)?

   a. Lack of regulation
   b. No management of warehouse

3. What is the reason behind lack of transparency in operation of transactions in the derivative market in Nepal?

   a. Lack of Policies and monitoring authorities
   b. Lack of software audit used by the exchanges

4. What is the reason behind the high amount of loss being suffered by the investors?

   a. Lack of understanding of operation/trading of derivative market by the investors
   b. Lack of transparency of exchanges

5. Can this market help in increasing the inflation rates and increase the cost of living if it is not properly regulated?

   a. Yes b. No

6. Can derivative market be considered as the effective tool for commercializing our local agricultural products in international market?

   a. Yes b. No

7. Is there sufficient rules and regulation for the overall development, and also to enhance the reliability and transparency of the derivative market in Nepal?

   a. Yes b. No

8. Is lack of specific policies, rules and regulation created the main hindrance in the overall development of derivative market?

   a. Yes b. No

9. What are the main reasons behind the slow development of derivative market in Nepal?

   a. Slow development of Industries
   b. Lack of policies
   c. Political instability
   d. Lack of awareness to the public

10. Is derivative market of Nepal conducting as per the standard of International Organization of Securities Commissions (IOSCO)?

    a. Yes b. No

11. What should be the Government's immediate role on the current status of derivative market in Nepal?

a. To promptly formulate rules and regulations
b. To shut down the current market as it is not important in the developing countries like Nepal
c. To develop the industrial sector in order to develop systematic, regulated and genuine derivative trading environment

12. Please give your valuable suggestions and recommendations for the overall development of the derivative market in Nepal.
    a. …….
    b. …….
    c. …….
    d. …….