

A STUDY ON THE IMPACT OF DERIVATIVES IN MANUFACTURING SECTOR

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ABSTRACT:

Derivatives playing an important role in the emerging business environment. Each Derivative as its own significance in business. Derivatives is using as hedging tool to reduce risk which involved in the transaction. Derivative which is used to hedging a risk. An option gives the Holder of the option right to take decision on his favor at the time of exercise of option right. The Holder does not have right to exercise his favor decision.

Option is type of contract between 2 persons where one grants the right to buy a specific at specific price within a specific time period. Alternatively contract gives the other person the right to sell a specific asset to specific price within a specific time period, in order to have his right the option Derivative buyer has to pay the seller the premium amount. On commodity on which option can be derived as hedging tool. Option can be explained by two main words call option and put option. By using the derivatives instruments most of the company are making good profit and also they reduced the risk Involved in their business. Especially manufacturing sectors faces more problems on the raw materials cost, by using the derivative tool they can easily reduce the risk and run the business in most profitable manner.

Derivatives play an integral role in helping companies manage risk and are likely to occupy an increasingly prominent place at firms that are seeking shelter from the volatility of the financial markets. About 83% of companies that use derivatives do so to curb the risk of foreign currencies, 76% of firms use derivatives to hedge against changes in interest rates, 56% seek to protect themselves against commodity-price fluctuations, and 34% use derivatives that are based on equity, or stock, markets. Here is our study is based on secondary data and we are studied on manufacturing company how they are using option derivative, how they reduced the risk which involved in their transaction and how they are disclosed. There are 380 manufacturing companies are listed in Indian stock market in that most of them are not using the derivatives in their business but some of the top leading companies they are using the derivatives tool and getting the favorable benefit. So we suggest that every company can use derivative in their business and they can mitigate the risk.

Keywords: Derivatives, Option, Future, Hedging risk and Manufacturing sector.

1.1 INTRODUCTION:

The past decade has witnessed a growth in use of derivatives. It was first used for financial instruments to reduce risk. As financial instrument was having high risk that risk was effecting return even initial investment. Hence to reduce risk and to motive investors' derivatives was introduced. From past decades the risk on market prices in commodity as increased. So derivatives in purchasing commodity especially in business purchasing of raw materials prices variation is reduced by derivatives most of top companies use derivatives.

Derivatives as a vital role is been played in enhancing profitability and its cheapest source of fund. Active use of derivatives instruments allows the overall business risk profile to be modified, thereby providing the possible to improve earning quality by offsetting risks. The impression is usually given that these losses arose from extreme complex and difficult to understand financial strategies. As business main motto is to make profit formulating new strategies is most important and necessity. Now a day's business as to formulate its own strategies for servility in market for long run and to give counter competition. As to make profit as simple formula is reducing cost of production. Reducing per unit cost will helps to reach goal. In accordance with reaching goal the strategies as to be formulated. In part of analyzed almost invariably it is found that the true source of losses was a basic organizational weakness or a failure to observe some simple business controls. 'Control' word in simple comparing actual performances with standard budget. As standard budget is prepared in expected of profit.

The result to this observation is that derivatives can indeed be used safely and successfully provided that a sensible control and management strategy is established and executed. Certainly, a degree of quantitative pricing and risk analysis may be needed, depending upon derivatives strategies which they incorporate. Rather, successful execution of derivatives strategy and of business risk management in general relies much more heavily on having a sound appreciation of qualitative market and industry trends and on developing a solid organization, infrastructure and controls. The objective of study is to examine how option derivatives helping business profit and how prominent role is been played by derivatives in present scenario.

1.2 LITRATURE REVIEW: In present study 10 literatures were collected and reviewed related to hedge commodity risk. Hear there is a no study taken place only on manufacturing sector.

1. **Marlowe (2000):** argues that the emergence of the derivative market products most notably forwards, futures and options can be traced back to the willingness of risk-averse economic agents to guard themselves against uncertainties arising out of fluctuations in asset prices. It is generally stated that regulation has an important and critical role to ensure the efficient and smooth functioning of the markets.
2. **Bose Suchismita (2006):** in their study "The Indian Derivatives Market Revisited" examined derivative as a risk management tool. It was found that Derivatives products provide certain important economic benefits such as risk management or redistribution of risk away from risk-averse investors towards those more willing and able to bear risk. Derivatives also help price discovery, i.e. the process of determining the price level for any asset based on supply and demand. These functions of derivatives help in efficient capital allocation in the

economy; at the same time their misuse also poses a threat to the stability of the financial sector and the overall economy.

3. **Mark fenton, Emma Soane, Nigel Nicolson and Paul Williame (2011):** document a quantitative investigation to find difference between high and low performing traders and studied the role of intuition in the decision making process. The emotional regulation strategies adopted by experts reveals that high performing traders are qualitatively different from low performing traders as former are inclined to cope up with negative feelings and formulate effective strategies to regulate their emotions.
4. **Shanmnga Sundaram V (2011):** examined the impact of behavioral dimensions of investors in Capital market and found that investor decisions are influenced by psychological factors as well as behavioral dimensions and this psychological effect is created by the fear of losing money, sudden decline in stock indices, greed and lack of confidence about their decision making capability.
5. **Sahoo (2012):** opines “Derivatives products initially emerged, as hedging devices against fluctuation in commodity prices and the commodity-linked derivatives remained the sole form of such products for many years”. According to him the legal framework for derivatives trading is a critical part of overall regulatory framework of derivative markets. The purpose of regulation is to encourage the efficiency and competition rather than impeding it.
6. **Supriya (2014):** reviewed derivative as a tool for managing risk which comes out of uncertainty and makes it difficult for businesses to estimate their future production cost and revenues. The NSE figures reveal that in equity derivative almost 90% of activity is due to stock futures and index futures, whereas trading in options is still limited to few stocks, partly because they are settled in cash and not the underlying stock. Further she found NSE has programmed to inform and educate brokers, dealers, traders and market personnel.

1.3 Need for the study:

Compare to other financial instruments, derivatives have high leverage and dynamic change in their value. Because of this unique nature it has become a challenging for the companies to take a decision on derivatives. In derivatives commodity derivatives have additional characteristics compare to other types of derivatives, thus have extra benefit for the company. But till now they face problem on using derivative instruments in manufacturing sector. There is no study which in concentrated on usage of derivative instrument in manufacturing sector. Therefore these issues as resulted in reducing the Companies confidence on these instruments. So there is a need for studying this issues which are impacting the users confidence. Because today manufacturing industry play an important role in the country development. Approximately the manufacturing industry contributing 16% for the Indian GDP. If the company uses the derivative instrument it can hedge the commodity risk and make more profit in future days. usage of derivatives in other nation is rapidly increasing, derivatives become an essential risk management tool to manage price volatility in commodities.

Hence, inadequate research has been conducted on derivatives on manufacturing sector which can be evidences from different studies which are made in the literature review.

1.4 Objective of study:

- To understand the concept of derivatives.
- To know the role of derivatives in Hedging risk.
- To know the impact of derivatives in manufacturing sector.

1.5 Research methodology:

The present study is an attempt to examine the impact of derivatives benefit in manufacturing sector. The study is based on secondary data. Annual reports of the companies are used for achieving the stated objectives including that we used various published articles, newspaper and text book publication. For this study we used random sampling method, and taken 40 sample size for study.

1.6 Limitations of the study:

The present study is limited only to manufacturing sector and the sample size is also restricted to 40 stock market listed companies. And used random sampling method for selecting the samples for the study.

DERIVATIVES:

Each and every companies work on maximizing profit. Operation of manufacturing companies mainly plans to reduce its cost of production. In course of reducing huge amount of expense will be on purchasing raw materials. Course of action in reducing production cost function of control is used. Control mean comparing standard with causal performances. To fix standard the company's management face problem in detrainning the price of raw materials. Determine market price of raw materials if complicated and difficult task. In proses of determining the raw materials price few economic factors should be considered like supply, demand and trends. As high risk is been found in determining price of raw materials hence companies can use derivatives to reduce the risk of fluctuation of price in market.

In forward agreements for agricultural commodities have been around accent time we can find. In time of ordering goods for sells part of amount is given as advance and according to mutual condition contract was done. The growth of financial derivatives began in United States in 1970's in Chicago Board Options Exchange. Future contract on US treasury bonds and notes began trading after 1970's. Option on stock and equity usage for trading in 1980's. This expanded to other countries. At present the derivatives, the volume of trading in these instrument now exceeds the volume of trading in these instrument now exceeds the volume of trading in physical assets. The growth of traditional exchange-traded derivatives, the design of securities with embedded options as become common. Furthermore, many fixed-income transaction that generate an income stream have been dissected and separated into layers of priority in receiving the cash flows. This are sometimes structured are tranchd securities. In general, the higher priority tranches have higher credit quality then the lower –priority tranches. The result to this observation is that derivatives can indeed be used safely and successfully provided that a sensible control and management strategy is established and

executed. Certainly, a degree of quantitative pricing and risk analysis may be needed, depending upon derivatives strategies which they incorporate.

FUTURES DERIVATIVES:

Futures markets were designed to solve the problem that exist in forward markets. A futures contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. But unlike forward contract, the futures contracts are standardized and exchange traded. To facilitated liquidity in the futures contract, the exchange specifies certain standard underlying instrument, a standard quantity and quality of the underlying instrument that can be delivered, and a standard timing of such settlement. A futures contracts should be offset prior to maturity by entering into an equal and opposite transaction. More than 90% of futures transactions are offset this way. A future contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. Futures contracts are special types of forward contracts in the sense that former are standardized exchange-traded contracts.

The standardized items in a futures contract are:

- Quantity of the underlying assets or commodity.
- Quality of the underlying assets or commodity.
- The date and the month of delivery.
- The units of price quotation and minimum price change (any conditions if).
- Location of settlement.

Usually futures contract consist of two parties, one person expect increases in price in future days. Other person expects reduce in price in future days. Hence form contract to reduce risk.

OPTION DERIVATIVES:

An option is a contract whereby one has right, but not obligation to exercise the option derivatives on or before a date mentioned. Exercise right can be purchased by paying premium if that right is with one party that is called as call option (the holder or buyer). The other party (writer or seller) has the obligation to honor the specified feature of the contract. The decision of holder will be exercise at time of maturity date mentioned in option contract. Since the option gives the buyer a right and seller an obligation, the buyer has received something of value. The amount the buyer pays the seller for option is called the option premium. Because this is a security whose value is determined by an underlying asset, it is classified as derivatives.

Participants in option derivatives are:

- Call Option
- Put Option

Call Option is contract between the buyer and the seller, where the buyer of the option has the right, but not the obligation to buy an agreed quantity of a particular commodity or financial instrument from the seller of the option at a certain time for a certain price. The seller has the obligation to sell the commodity should the buyer so decide. The buyer pays a fee called premium for this right.

Put Option is a contract between the buyer and the seller of the option which put option buyer has obligation to buy or sell according contract on maturity date. On agreed price on agreed date put option holder as to excises contract this party cannot take decision on his favor.

There are four types of participants in option market depends upon position they take
Forward Contracts:

A forward contract is a commitment to purchase at a future date a given amount of a commodity or an asset at a price agreed on today.

Forward Contract as a contract deliverable at a future date, duration of the contract being computed from spot value date at the time of transaction. Forward Contract is an agreement to exchange one currency for another currency on a specific date in future, at a pre-determined exchange rate, set at the time the contract is made. The contract locks in an exchange rate and regardless of what the exchange rate may be on the future date, the transaction will be put through at the contracted rate. Under Forward Contract, the customer has not only the right to acquire or sell foreign currency on a future date at a pre-determined rate, but also has an obligation to meet the commitment. The Forward Contract is priced either at a ‘premium or discount’ over the spot rate. Forward Contracts can broadly be classified as ‘Fixed Date Forward Contracts’ and ‘Option Forward Contracts’.

Swap:

In financial markets the two parties to a swap transaction contract to exchange cash flows. A swap is a custom tailored bilateral agreement in which cash flows are determined by applying a prearranged formula on a notional principal. A swap is a derivative contract between two parties that involves the exchange of pre-agreed cash flows of two financial instruments. The cash flows are usually determined using the notional principal amount (a predetermined nominal value). Each stream of the cash flows is called a “leg.” Introduced in the late 1980s, swaps are a relatively new type of derivative. Even though relatively new, their simplicity, coupled with their extensive applications, makes them one of the most frequently traded financial contracts. Interest rate swaps currency swaps commodity swaps are the types of swaps.

Manufacturing sector:

India is fast becoming one of the most lucrative options for manufacturing industry to prosper.

In recent years the manufacturing sector has been the major focus for the government of India. Realizing the importance of manufacturing sector and the amount of employment it can generate, many initiatives are being taken up by the current government to foster the growth of this sector. Having the benefit of a high amount of educated population & skilled labor, there is enough scope for the manufacturing sector to further develop in the country. Good infrastructure, compliance to tax & labour laws and meeting the desired environmental standards were some of the factors responsible for better performance of states like Gujarat and Andhra Pradesh.” International Monetary Fund (IMF) raised a concern about the pace of the reforms which are being passed. They pointed out that Indian economy is facing

“decelerating pace of reforms”. Recently the long waited GST bill had been passed by the government of India which would enable an easy and a cost cutting flow of goods across different states of the country. It presents a wonderful opportunity for the manufacturing sector to re-establish the logistic sector of the country. A strong infrastructure is an essential ingredient for any manufacturing sector to grow. Keeping that in mind the government of India is investing a lot of funds in building a strong network of roads, rails and transport to foster the growth of the manufacturing sector. India to emerge as the new manufacturing sector hub

ROLE OF SEBI: A series of reform of stock market between 1993 and 1996 made way for development of exchange traded equity derivatives market in India. NSE improved the efficiency and transparency of the stock markets by offering a fully automated screen based trading options and real time price dissemination. In 1995 a prohibition on trading options was lifted. In 1996 the NSE sent a proposal to SEBI for listing exchange traded derivatives. According to report L.C.Gupta Committee, setup by SEBI – self regulation by exchange with SEBI providing a supervisory and advisory role. J.R.Varma Committee in 1998 specified over operational details such as margining system.

Securities Contract Act of 1956 was amended so that derivatives. The allowed the regulatory framework for trading securities to be extended to derivatives. The act considers derivatives to be legal and valid, but only if they are traded on exchanges. A system of market determined exchange rate was adopted by India in March 1993. In Aug 1994, the rupee was made fully convertible on current account. These reform allowed increased integration between domestic and international markets, created a need to manage currency risk. The easing of various restrictions on the free movement of interest rates resulted in the need to manage the interest rate risk.

Disclosure of commodity exposures as required under clause 9(n) of part C of schedule 5 of the SEBI listing obligations and disclosure requirements regulation, 2015.

Data Analysis & Interpretation:

Following are the data related to the status of using derivatives by the manufacturing companies in India.

Sl.no	Name of the company	Category of the company	Used derivatives	Type of derivative used	Benefited or not			
					2018	2019	2020	2021
1	Bombay Dyeing and manufacturing company	Textiles	yes	Forward	yes	yes	yes	yes
2	Vardhman	Textiles	yes	Forward and option	yes	No	yes	yes
3	Sutlej Textiles & Industries Ltd	Textiles	Yes	Forward and swaps	yes	yes	yes	yes
4	Arvind Limited	Textiles	yes	Swaps and option	yes	yes	yes	yes
5	Reliance Textiles	Textiles	No	-	-	-	-	-
6	Fabindia	Textiles	Yes	Forward and	yes	yes	yes	yes

				swaps				
7	JCT Limited	Textiles	No	-	-	-	-	-
8	Lakshmi Mills	Textiles	yes	Forward and option	yes	yes	yes	yes
9	Alok industries	Textiles	yes	Forward and option	yes	yes	yes	yes
10	Siyaram Silk Mills Ltd.	Textiles	yes	forward and option contracts	Yes	Yes	yes	yes
11	Nestle India Ltd	Food	yes	Forward contract	yes	yes	yes	yes
12	Parle Agro Pvt Ltd	Food	yes	Forward contract	yes	yes	yes	yes
13	Britannia Industries Ltd	Food	yes	Forward contract	yes	yes	yes	yes
14	LT Foods Ltd (Daawat)	Food	Yes	Forward and option	yes	yes	yes	yes
15	Gujarat Ambuja Exports Ltd	Food	Yes	Forward and option	yes	yes	yes	yes
16	KRBL Ltd	Food	yes	Forward contract	yes	yes	yes	yes
17	Venkys India Ltd (VH)	Food	yes	Swaps and option	yes	yes	yes	yes
18	KSE Ltd	Food	yes	Forward contract	yes	yes	yes	yes
19	MTR Foods Pvt Ltd (Orkla)	Food	Yes	Forward contract	yes	yes	yes	yes
20	REI Agro Limited	Food	No	-	-	-	-	-
21	ITC	tobacco & Related Products	Yes	Forward contract	yes	yes	yes	yes
22	Godfrey Phillip	tobacco & Related Products	Yes	Forward contract	yes	yes	yes	yes
23	Kothari Products Ltd	tobacco & Related Products	yes	Forward contract	yes	yes	yes	yes
24	Godfrey Phillips India Ltd	tobacco & Related Products	yes	Forward contract	yes	yes	yes	yes
25	Godrej Interio	Wood, furniture & fixtures	yes	Forward & option contract	yes	yes	yes	yes
26	Greenply Industries Ltd	Wood, furniture & fixtures	yes	Forward & option contract	yes	yes	yes	yes
27	Nilkamal Ltd	Wood,	yes	Forward &	yes	yes	yes	yes

		furniture & fixtures		option contract				
28	Merino Industries Ltd	Wood, furniture & fixtures	yes	Forward & option contract	yes	yes	yes	yes
29	Ballarpur Industries Ltd	Paper & printing	yes	Forward & option contract	yes	yes	yes	yes
30	JK Paper Ltd	Paper & printing	yes	Forward & option contract	yes	yes	yes	yes
31	International Paper APPM Ltd.	Paper & printing	No	-	-	-	-	-
32	Seshasayee Paper & Boards Ltd	Paper & printing	yes	Forward & option contract	yes	yes	yes	yes
33	Bata	leather	No	-	-	-	-	-
34	Metro Shoes Ltd	leather	yes	Forward & option contract	yes	yes	yes	yes
35	Relaxo Footwears Ltd	leather	yes	Forward & option contract	yes	yes	yes	yes
36	Superhouse Ltd	leather	yes	Forward & option contract	yes	yes	yes	yes
37	L&T Construction Equipment:	Machinery	yes	Forward & option contract	yes	yes	yes	yes
38	Volvo Construction Equipment India:	Machinery	yes	Forward & option contract	yes	yes	yes	yes
39	Tata steel	Iron and steel	yes	Forward & option contract	yes	yes	yes	yes
40	JSW	Iron and steel	yes	Forward & option contract	yes	yes	yes	Yes

There are 400 manufacturing companies are listed in the stock exchange, for the study we took 10% of 400 companies the sample size is 40..In this 40 companies only 5 companies are not used derivative as a hedging tool for the commodity risk. The company which is using derivatives are making more profit that to foreign commodity derivatives plays a major role in this. The top most companies of all the sectors of manufacturing like paper mill, cement ,steel ,textiles and machinery companies are getting more benefit from the derivative

transaction.. The major goods which are used by the manufacturing companies for hedging companies are silver, copper, steel, aluminum, iron ore, Coking Coal, Zinc, Cement and lead.

Findings:

- 1) As per the study we find derivative is a important instrument to reducing the Risk
- 2) Top companies of all the category of manufacturing sectors are using derivatives and its impacting positively to the profit of the company
- 3) SEBI is also suggesting the companies to use derivative transaction.
- 4) As per our study we are find that derivative plays a vital role in hedging the risk in manufacturing sectors.

Suggestion:

As the base on our study we are suggesting the following things:

- 1) All the companies should understand the benefit from the derivative transaction.
- 2) All the manufacturing company can enter to the derivative contract for hedging the risk.
- 3) SEBI also should give the information on derivatives.

Conclusion:

As base on the above studies we are going to conclude that derivative plays an vital role in all types of companies and its contributing positive to the Companies as well as countries. If the companies uses derivative instrument in its transaction it can easily reduce the risk which is associated with the commodity risk for the manufacturing companies. We know that manufacturing industry plays a vital role in the contributing to the GDP of the country. In recent years the manufacturing sector has been the major focus for the government of India. Realizing the importance of manufacturing sector and the amount of employment it can generate, many initiatives are being taken up by the current government to foster the growth of this sector. The Indian derivative market has become multi-trillion dollar markets over the years. Marked with the ability to partially and fully transfer the risk by locking in assets prices, derivatives are gaining popularity among the investors. Since the economic reforms of 1991, maximum efforts have been made to boost the investors' confidence by making the trading process more users' friendly and rigorous efforts have been made to reinforce the investor assurance. If the manufacturing company encash the opportunity of derivative it will be more benefited to the development of the companies and to the economy.

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