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A study on derivatives as risk management tools for business corporates

T Mary Jones
maryjonestalluri@gmail.com
Pace Institute of Technology and Sciences, Ongole, Andhra Pradesh

B. Sudhir
bsudhir@svuniversity.edu.in
Sri Venkateswara University, Tirupati, Andhra Pradesh

ABSTRACT

Derivatives are the most important tools in the financial markets in the present days. They are working for reducing the risk for business corporate. The basic purpose of these instruments is to provide commitments to prices for future dates for giving protection against adverse movements in future prices, in order to reduce the extent of financial risks. Derivative markets were novel until the 1970s. However, with the breakdown of Bretton Woods system in 1973, there was a sudden increase in the volatility of exchange rates and interest rates thereby making it necessary for firms and investors to find ways to reduce these risks. There is a need for proper training and orientation programmes are required to increase the growth of derivatives in India.

Keywords—*Derivatives, Hedging, Risk*

1. INTRODUCTION

The past decade has witnessed the multiple growths in the volume of international trade and business due to the wave of globalization and liberalization all over the world. As a result, the demand for international money and financial instruments increased significantly at the global level. In this respect, changes in the interest rates, exchange rates, and stock market prices at the different financial markets have increased the financial risks to the corporate world. Adverse changes have even threatened the very survival of the business world. It is, therefore, to manage such risks; the new financial instruments have been developed in the financial markets, which are also popularly known as Financial Derivatives.

The basic purpose of these instruments is to provide commitments to prices for future dates for giving protection against adverse movements in future prices, in order to reduce the extent of financial risks. Not only this, but they also provide opportunities to earn a profit for those persons who are ready to go for higher risks. These instruments facilitate to transfer the risk from those who wish to avoid it to those who are willing to accept the same.

Today, the financial derivatives have become increasingly popular and most commonly used in the world of finance. This has grown with so phenomenal speed all over the world that now it is called the derivatives revolution. With the introduction of financial derivatives, the trading strategies adopted by the investors is changing it reduces the risk and achieve more profits from the investment.

The risk is present in all human affairs and affects every economic agent in the economy. The word 'risk' is the possibility of loss, damage, or any undesirable event. Risk can be measured and managed. Some risks such as damages due to fire or theft can be handled by paying a premium to the insurance companies. Risk can be also reduced to a larger extent by diversification. However, the risk arising from macroeconomic fluctuation that affects all the participants in the economy can neither be insured nor diversified away. In this context, derivatives have become increasingly important to manage risk by various financial institutions like banks, corporate firms, asset management companies, governments and investor round the world.

Derivative markets were novel until the 1970s. However, with the breakdown of Bretton Woods system in 1973, there was a sudden increase in the volatility of exchange rates and interest rates thereby making it necessary for firms and investors to find ways to reduce these risks. Other developments in the economic environment such as ongoing globalization process, the deregulation of several industries and the spectacular growth in international trade and finance, advancement in telecommunication and information technology in recent years have also increased the demand for derivative products.

On the domestic front, there has been a paradigm shift in the policy stance of the government with regard to resource allocation in the economy since the 1980s. The direct influences on resource allocation by the State were diminished and a greater role has been given to the market. One of the main aspects of these reforms has been the development of the financial markets as an alternative vehicle to determine the allocation of capital in the economy. The financial sector of India and in particular securities markets attracted sharp attention from policy makers in the aftermath of the Harshad Mehta Scam of 1992. This led to some initiatives with respect to the equity and debt markets in the following years.

2. REVIEW OF LITERATURE

(GAKHAR* & MEETU**, 2013) Opined that the derivatives market has become a multi-trillion dollar market in the past two decades. This paper is focused on studying the evolution of Indian derivates market and its future prospects. Even though the prospects are good there are some bottlenecks which should be dealt with immediately like economies of scale, tax, and legal issues, and the need for an independent regulator.

(Mina, 2017) Serbian currency is highly volatile and depreciates by an average of 10% annually. This is because of the dependence of Serbian currency on the international market and the economic underdevelopment and low volume of economic activity. Thus the business corporate is dependent on hedging contracts with regard to Dinar denominated positions. Thus it is observed that the most important device to manage risk in Serbia is the financial derivates. It is supporting them from all the effects of national and international markets.

(Ovidiu ŞONTEA, 2011) Sontea developed a process for financial risk management by resolving problems of risk using derivative products, options, and futures. This was formulated using a hedging situation of the portfolio. In the first part of the optimization problem, we will get the coverage ratio of the optimal price for exercising the option which is actually the relative cost of the option's value. In the second part of the optimization problem, we obtained an optimal exercise price for a put option which is to hedge a bond.

(Gakhar, 2016) Divya Varma Gakhar conducted a study to examine the effect of financial derivatives on the underlying market volatility. The paper also focused on awareness level of derivatives among Indian investors and their perception about the future prospects of the derivatives market in India. The study was done through a survey method. As per the study, the AR (1)-GARCH (1,1) model show that the volatility is reduced in the spot market after the derivatives are introduced into the financial markets. The perception of investors about the future of the derivative market in India the investors are expecting a grievance redressal system, awareness and training programmes for investors which results in the growth of derivatives market in India in a gradual manner.

(Shawkat Hammoudeh, 2012) the optimal portfolio is possible only with proper risk management. New econometric, financial econometric and empirical finance methods contributed mostly to the analysis of risk management, with special focus on financial derivatives, especially conditional correlations and volatility spillovers between crude oil and stock index returns, pricing exotic options using the Wang transform, the rise and fall of S&P500 variance futures, predicting volatility using Markov switching multi fractal model.

(Yadav, 2016) Financial market of a country signifies the economic capacity of the country. A sound financial health of a country helps in increasing the cash flow and creates capital that contributes to developing a country. After privatization and globalization, financial markets entered into a new segment of global integration and liberalization with new and innovative financial instruments. The stock market is highly volatile as the prices change frequently. During 2001, India launched a risk-minimizing tool, Derivatives. The idea behind announcing derivatives trading in India was to control the fluctuations in the stock and commodity prices. It facilitates increasing the trading volume in the stock market and cash flows in India. This paper is to find out the impact of financial derivatives on spot stock market volatility. Numerous readings contributed different outcomes regarding the impact of the financial derivatives on the spot market volatility. This creates a confusion regarding increasing or decreasing volatility in the stock market due to the introduction of derivatives trading in the stock market. So, there is a requirement to stretch an overview of the literature review. The conclusion of various studies is to be analyzed in this paper so that the role of derivatives trading can be understood in context to the volatility of the stock market.

(Yadav, Financial Derivatives in India: A Case of National Stock Exchange India , 2014) This study helps in analyzing the facts behind launching financial derivatives by NSE India and how derivatives support in the growth of the financial market in India. The financial market provides a place for investment and helps in enhancing the income in terms of return. Every investor would like to get a high rate of return with low risk. To attain the objective of high return with minimum risk, various instruments, practices, and strategies have been devised and developed in the recent past. After privatization and globalization financial market entered into a new phase of global integration. On the one hand integration of the Indian capital market with the global market open the boundaries for investment to everyone, which also helps in increasing the cash flow, on the other hand, there has increased in financial risk as the frequent changes in the interest rates, currency exchange rate and stock prices. To overcome from the increased financial risk a risk-minimizing tool was launched by NSE during the year 2001, and that tool was Derivatives.

4. OBJECTIVES OF THE STUDY

- To study the importance of financial derivatives in managing the risk for the business.
- To study the impact of financial derivatives on the growth of Indian financial markets.

5. RESEARCH METHODOLOGY

The study is conducted basing on secondary data that is books, journals, magazines and the reports published by SEBI, NSE, BSE, etc.

6. REASONS FOR GROWTH OF DERIVATIVES IN INDIA

1. Risk Management tools: The derivatives are mainly used as tools for risk management. Every business entity follows the accounting convention of "Conservatism". That is the organization should work to get profits only. In the worst condition if the organization cannot run in profits it should try to work out to avoid losses. The organization is to satisfy all its stakeholders. Thus risk management is the most important objective for every organization. This is the main reason for the growth of derivatives in India.

Date	Contracts Traded	Turnover (₹ Cr.)	OI (No. Of Contracts)
28 Jan 2014	23294	467.86	1130
01 Jan 2015	8104	168.10	54949
01 Jan 2016	16724	333.55	21379
02 Jan 2017	25136	537.28	7642

Source: NSE

Table 1: Instrument wise volume and turnover

As on Nov 09, 2018 15:30:30 IST			
Product	**No. of contracts**	**Turnover (cr.)***	**Premium Turnover (cr.)**
Index Futures	2,33,993	15,559.97	-
Stock Futures	7,47,777	41,418.97	-
Index Options	56,60,696	3,28,284.84	1,699.91
Stock Options	5,33,680	30,214.51	674.42
F&O Total	**71,76,146**	**4,15,478.29**	**2,374.33**

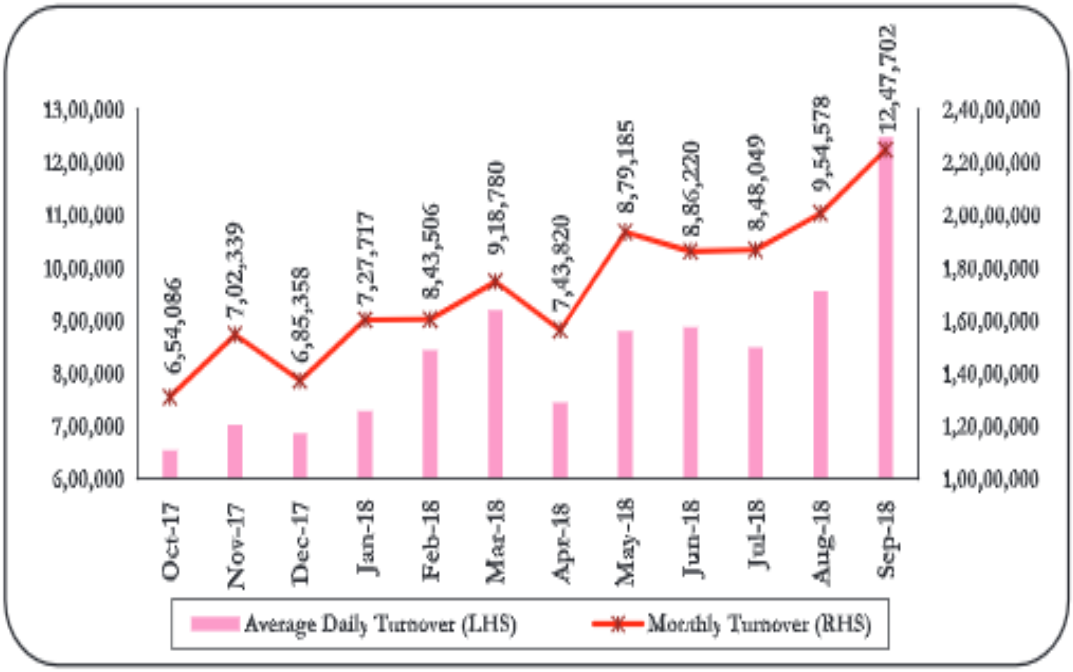

Fig. 1: Trends of Equity Derivatives Segment at NSE (₹ Crore)

Description	NSE			BSE		
	Aug-18	Sep-18	Percentage Change Over Month	Aug-18	Sep-18	Percentage Change Over Month
A. Turnover (₹ crore)						
(i) Index Futures	3,94,229	5,40,040	37.0	0.0	0.0	NA
(ii) Options on Index						
Put	81,84,551	86,75,528	6.0	0.0	0.0	NA
Call	86,26,841	1,06,62,247	23.6	0.0	0.0	NA
(iii) Stock Futures	15,44,987	14,64,394	-5.2	1.0	0.9	-7.1
(iv) Options on Stock						
Put	3,93,971	3,62,772	-7.9	0.0	0.0	NA
Call	9,01,553	7,53,661	-16.4	0.0	0.0	NA
Total	2,00,46,132	2,24,58,641	12.0	1.0	0.9	-7.1
B. No. of Contracts						
(i) Index Futures	40,86,103	58,32,447	42.7	0	0	NA
(ii) Options on Index						
Put	7,81,61,817	8,71,33,996	11.5	0	0	NA
Call	8,02,37,798	10,41,42,054	29.8	0	0	NA
(iii) Stock Futures	2,15,81,854	2,16,40,734	0.3	16	14	-12.5
(iv) Options on Stock						
Put	52,49,072	50,36,142	-4.1	0	0	NA
Call	1,13,69,088	98,97,504	-12.9	0	0	NA
Total	20,06,85,732	23,36,82,877	16.4	16	14	-12.5
C. Open Interest in Terms of Value (₹ crore)						
(i) Index Futures	35,080	23,666	-32.5	0.0	0.0	NA
(ii) Options on Index						
Put	87,500	75,624	-13.6	0.0	0.0	NA
Call	64,252	63,796	-0.7	0.0	0.0	NA
(iii) Stock Futures	1,30,521	1,04,528	-19.9	0.2	0.2	-9.0
(iv) Options on Stock						
Put	8,396	6,328	-24.6	0.0	0.0	NA
Call	16,166	10,800	-33.2	0.0	0.0	NA
Total	3,41,915	2,84,743	-16.7	0.2	0.2	-9.0
D. Open Interest in Terms of No of Contracts						
(i) Index Futures	3,90,766	2,82,242	-27.8	0	0	NA
(ii) Options on Index						
Put	9,45,783	8,81,743	-6.8	0	0	NA
Call	6,79,574	7,31,773	7.7	0	0	NA
(iii) Stock Futures	18,00,625	16,73,343	-7.1	3	3	0.0
(iv) Options on Stock						
Put	1,13,254	1,02,705	-9.3	0	0	NA
Call	2,22,478	1,87,225	-15.8	0	0	NA
Total	41,52,480	38,59,031	-7.1	3	3	0.0

Source: NSE and BSE

Fig. 2: Trends in equity Derivatives Market

2. Profitable Investment: Derivatives are traded in marking to the market system. That is every day profit or loss will be immediately affected into the account of the investors. Thus by the maturity period, the investor will already have a positive or negative opinion of accounts,

3. Options give Flexibility to Exercise.

4. Hedging: Hedging will help the investors to protect themselves from risk through hedging. That is the investor will trade only in a restricted environment. So the maximum loss is also reduced and confirmed for the investor.

5. Market Efficiency is improved for the underlying asset: The market conditions the trading and market efficiency can be improved for all the assets that are traded.

7. CONCLUSION

Thus derivatives are one of the most traded instruments of financial markets that are supporting as risk management tools for all the business corporate and individuals. It is still novel in India. Thus proper training and orientation programmes are required to increase the growth of derivatives in India.

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