

Industry Specific Volatility check on Derivatives Introduction : Indian Context

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Abstract

This paper examines the effect of derivatives on volatility of select securities of specific industries in Indian stock market to assess if any industry specific volatility pattern exists. This study is based on 21 stocks of six different industries of the Indian stock market which includes both derivative stocks and non-derivative stocks. These stocks are listed in the National Stock Exchange of India. GJR GARCH model was used to measure the volatility changes over the pre - introduction and post introduction period of derivatives. Among the seven stocks under consideration, all stocks except ACC had a decrease in volatility. Four derivative stocks had significant reduction in volatility. Compared to derivatives, non-derivatives, 4 industries namely, Auto-two and three wheeler, Cement, Cigarette, and Computer Software confirm the effect of derivatives while two industries namely, Banks - Private sector and Diversified, confirm the effect of industry specific factors.

I. Introduction

DERIVATIVES WERE INTRODUCED with the intention of stabilizing the market by shifting speculators from spot market to derivatives market, creating more investment avenues and by passing on information about likely changes in the price of the underlying security. Capitalizing price changes in short term is one of the main concerns of speculators which always destabilize the market. Derivatives market attracts speculators by profiting them with any changes in market price of the underlying security in a short span of time besides requiring only margin money. It also gives rise to many investment alternatives which in turn could reduce volatility. It passes information to spot market about the likely changes in the price of securities and helps predict price movement in the near future as well as reduce volatility.

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Table XI
Computer Software

Classification	Stocks	Volatility Change	Gamma (Asymmetry)	Alpha	Beta
Derivative Stocks	INFOSYSTCH	Decreased **	Decreased	Increased	Increased
Non Derivative	CYIENT	Decreased	No Significant effect	Decreased	Increased
Stocks	ROLTA	Decreased	No Significant effect	Decreased	Decreased

Notes : ** implies significance at 5%

Source: Self Computed

Table XII
Diversified

Classification	Stocks	Volatility Change	Gamma (Asymmetry)	Alpha	Beta
Derivative Stocks	GRASIM	Decreased	No Significant effect	Increased	Decreased
Non Derivative	DCMSHRIRAM	Decreased***	Increased	Decreased	Increased
Stocks	BOMDYEING	Increased	No Significant effect	Decreased	Increased
	VOLTAS	Decreased	No Significant change	Increased	Decreased

Notes : *** implies significance at 1%

Source: Self Computed

All the stocks have decreased volatility except one non derivative stock BOMDYEING. Other parameters like asymmetric effect, volatility pattern show some mixed trend. Hence apart from the industry specific factors, some other factors might have affected volatility of these stocks.

Among the 7 stocks under consideration, all stocks except ACC had decreased volatility. Four derivative stocks had significant reduction in volatility. When non – derivative stocks are compared with derivative stocks, 4 industries confirm the effect of derivatives and 2 industries confirm the effect of industry specific factors.

VI. Conclusion

This study confirms that industry specific pattern of volatility prevailed in two industries namely Banks – Private sector and Diversified. Other four industries, Auto- two and three wheeler, Cement, Cigarette, and Computer Software have shown distinctive changes in volatility of derivative stocks. These industries explain the influence of derivatives on volatility of derivative stocks. Hence the change in volatility of these stocks is not due to industry specific factors. There are stabilising effects of derivatives identified from this study. Since this study confines to only six selected industries, further studies in an elaborate way by including more industries is recommended.

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