Preface

Stock market volatility has been a cause of concern for policy makers as well as for investors not only in India, but also throughout the world. An investor would like to know how much volatility or risk he or she is exposed to. Derivatives are the instruments that allow market participants to manage risk in securities trading. Since the introduction of derivatives in India in year 2000, there has been a tremendous growth in their trading volume. The appreciable spread of derivatives trading activity makes a great interest of academic research on the impact of derivatives trading on the underlying market. One of the motives behind introduction of derivatives has been to control the level of stock market volatility by providing an additional channel to invest with lower trading cost and to facilitate the investors by providing greater depth to the market. The introduction of derivative instruments makes a significant influence on spot market since the underlying in the derivatives are the instruments of the spot market. The movements of the prices of the spot market have been hugely influenced by the speculation, hedging and arbitrage activity of the futures market. Therefore, research on the relationship between futures trading and spot market volatility has been an important issue to generate for academicians, regulators and investors alike.

The impact of futures trading activity on the volatility of the underlying market is still widely debated. One view is that derivatives securities increase volatility in the spot market due to more highly leveraged and speculative participants in the futures market. Conversely, the derivatives markets reduce spot market volatility by providing low cost contingent strategies and enabling investors to minimize portfolio risk by transferring speculation from spot markets to futures markets. The low margin, low transaction costs, stabilized contracts and trading conditions attract risk taking speculators to futures. Hence, futures are expected to have stabilizing influence as it attracts more informed traders to the spot market.

Empirical studies made on the subject have been unable to arrive at a definite conclusion about the impact of derivatives. Some studies concluded that there has been an increase in the underlying spot market volatility due to introduction of derivatives contracts, while other studies concluded that there has been a decrease. However, such studies were
based on data pertaining to a shorter period of time. Also, most of the studies made on the subject relate to index futures only.

In this study an attempt has been made to investigate the relationship between derivatives trading & stock market volatility using the GARCH framework using data pertaining to a longer period of time to make generalizations regarding the impact of derivatives on volatility. Also, SSFs trading impact on the volatility of the spot market has also been studied.

The results of the study keep much relevance to policy makers and regulators of India in devising prudential norms and implementing warranted policy reforms.

The present study has been divided into seven chapters. The first chapter is related to the concept of derivatives & volatility, stylized facts about time series data, volatility determinants, volatility implications and volatility measuring tools and techniques. Chapter 2 overviews the available literature on the impact of derivatives on stock market volatility for India & for different countries. Chapter 3 describes the objectives, hypotheses that have been framed to be proved, sample data and econometric methodology used for achieving the objectives. Chapter 4 estimates the level of volatility & changes in volatility that have occurred after derivatives introduction. Chapter 5 examines the impact of derivatives on price discovery. Chapter 6 examines the impact of index futures & SSFs on the stock market volatility & also examines if the change in volatility could be attributed to derivatives alone or to some other market wide factors. Finally, Chapter 7 presents the summary, findings, conclusion and limitations of the study.

The study has reported a decline in volatility & increase in informational efficiency as a result of index futures trading but the impact of SSFs on volatility has been inconclusive.
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