

The objective of this study is to investigate the volatility of Karachi Stock Exchange before and after incident of 9/11 by applying the  $RKSE = \log(KSE_t/KSE_{t-1})$  formula to calculate the change in daily return of Karachi Stock Exchange. Three sample periods have been chosen to estimate the comparative volatility of stock market; first, (31<sup>st</sup> August, 1996-1<sup>st</sup> September, 2001), second (31<sup>st</sup> August, 2001-1<sup>st</sup> September, 2006) and third (31<sup>st</sup> August, 2006-1<sup>st</sup> September, 2011).

Purpose to choose these three samples is to estimate the volatility. First sample period refers to pre 9/11 period and second sample period during 9/11 period and third sample period is after 9/11 incident. Further, purpose to include the third sample period in this study is to investigate the volatility of KSE-100 index in longer time period. GRACH (1,1) model is used to estimate the volatility, GARCH (2,0) to estimate the past information effect on current volatility, EGARCH and TRACH model are applied to investigate the leverage effect on KSE-100 index. Moreover, these models are applied separately on each sample periods.

From results it is concluded that after 9/11 period is more volatile than other because in GARCH model, both ARCH term and GARCH term are significant and greater as compare to other sample periods. Similarly, GRACH (2, 0) model shows that due to past information, volatility in after 9/11 period is greater. EGARCH and TARCH model both estimate the leverage effect on stock exchange. Comparison confirms that EGARCH model is best fit on data and estimated more significant results. Value of  $\gamma$  is negative and significant in post 9/11 period that indicates that leverage effect exists in post 9/11 period. Whereas, there is no leverage effect exists in pre 9 11 period that shows that bad news effects on volatility are more as compare to good news in market. From the results it is also concluded that period after 9/11 (31<sup>st</sup> August, 2006 - September, 2011), volatility exist in the Karachi Stock Exchange but of low magnitude.