MEAN AND VOLATILITY SPILLOVER IN FOREIGN EXCHANGE AND EQUITY MARKETS - A CASE STUDY FROM PAKISTAN

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2019

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ABSTRACT

The main idea of this study is to analyse the nature of mean and volatility transmission between foreign exchange market and equity market of Pakistan. The sample data used in this study of the Pakistan Stock Exchange (PSX) index and foreign exchange market runs from 15th November 2010 to 15th November 2018. Firstly, we generate volatility data for both data series to analyse the long-term association by using EGARCH methodology. Due to presence of leverage effect in returns from both markets, the EGARCH methodology given by Nelson (1991) has been used. Secondly, we introduce the volatility generating from one market and equate it against the other market to examine the spillover effect. The technique has been used to understand how historical values of mean and variation can spill over from past to present and from one market to the other. The significant responses of the analysis show that historical return of PSX index and USD – PKR data respectively influence the current return of PSX index and USD – PKR market in Pakistan. Also the historical values of both the PSX index and USD – PKR markets create volatility in the current value of their respective markets.

Tests performed to observe transmission of mean and volatility across both markets reveal that volatility in the PSX index creates a significant variation in the USD – PKR exchange market, while the USD – PKR

exchange market creates even higher volatility in the PSX index. The data analysis also reveals that a negative shock creates more volatility in the PSX index and USD – PKR exchange rates markets, than positive news. As such a devaluation of the local currency will send bigger shock waves to the PSX index in Pakistan.

The results of the study are important for local and well as international investors while deciding about their diversification and hedging approaches for their portfolios.