Impact of exchange rates on stock market: evidence from pakistan



Today in the present world foreign currency is a key component or tool for different kinds of businesses, and many countries in the world did businesses in foreign currencies like in Dollars, Euros etc. on the other hand movement in the stock market index is a key indicator for the financial performance of a country. Stock market may have bullish or bearer trend which reflect its relative strength in specific period. It also shows the investor confidence and sentiments toward markets.

The establishment of the relationship among the stock market and foreign exchange rates is important for some reasons. Initially, it can affect decisions about monetary policy and tax. Gavin (1989) analyze that financial market has a large impact on the aggregate demand. The policy maker should be aware about the relationship regarding stock market and demand. Secondly, the relation between the aggregate demand and stock markets may be used to forecast the direction of the exchange rate. It will be useful for multinational firms to actively manage their exposure associated to foreign contracts and exchange rate. Thirdly, currency is treated as a commodity or an asset in portfolio of investment funds. So the awareness about the relationship among currency and other assets in the portfolio of investment funds is important.

This is not the first study to look at the exchange rate and equity markets in the world as well as in Pakistan. Like Aquino analyzed the foreign exchange exposure countenance by Philippine companies around the Asian financial crisis. It was concluded that stock returns were not statistically significantly affected by the instability in foreign exchange. But after the crises, there was

a significant impact of the fluctuations in exchange rate on the stock returns (Aquino 2005, 2006).

Yau and Nieh investigated the relationship between Taiwan dollar/Japanese yen and the stock prices for the period from 1991 to 2005. They found that among the exchange rate and the stock prices of both countries there was no long-term relationship. But this linkage exists only to shorten the period (Yau and Nieh 2006).

But the present study is exceptional in the sense that it uses the most recent data of the exchange rate and stock market which may provide latest linkage to the investors and other policy makers in Pakistan.

There are three stock exchanges known as Karachi Stock Exchange (KSE), Lahore Stock Exchange (LSE) and Islamabad Stock Exchange (ISE) currently operating in Pakistan. Among these Karachi Stock Exchange (KSE) is considered as major and the well known stock market of Pakistan. It is regarded as a representative of all three stock exchanges of Pakistan. Karachi Stock Exchange (KSE) formed on September 18, 1947. It began its operation with five companies that have paid a capital of Rs. 37 millions of dollars. The first index was the 50 index of trade and was done through open-out-cry system. But now KSE has 662 listed companies and considers a main economic and business hub of Pakistan. The daily KSE-100 Index published by the Karachi stock exchange is announced at 3: 10 pm. Therefore KSE-100 index can be used as performance indicators of the stock market in Pakistan. KSE played an important role in the economy of Pakistan

in different problems like political, social, financial and other issues (Karachi Stock Exchange, 2011).

To identify the linkage of foreign exchange rate with equity market is significant because of above reasons. So in this study the researcher tries to identify this relationship by using various statistical techniques.

# Rationale of the study

The currency market may be linked with equity market in many different ways. It can be seen that if there is an upward trend in the stock market, then there will be a large influx of foreign capital in the country due to international investors. This influx of foreign money would be a key indicator for the betterment of economic position of any country. The adversary also sustains that if there is a long downtrend visible on the stock market, foreign investors, the most likely rush to sell their shares that would have a substantial impact on the stock market of a country. This reasoning can be applied to all currencies and stock markets in the whole world (Kathy Lien, 2009).

The basic idea behind this study is to provide a clue to the stock brokers, managers, planners, policy makers and regulatory authorities that they actively share information about the change in macroeconomic variables.

AND also provide considerable information essential for them, which may be used for future decisions about stocks and stock markets of Pakistan especially about KSE noting the movement of the exchange rate in Pakistan. This investigation is also useful for executives, managers, responsible for the

decisions, researchers and students who are not familiar with the exchange rate and securities markets in Pakistan.

### Problem identification

Due to globalization and technological innovations any one can access the foreign markets. The business in foreign countries needed to intact with change in exchange rate dynamics. Since, the exchange rate can be defined as the price of currency of one country expressed in the currency of another country. So the change in the exchange rate might have some impact on the macroeconomic variables of any country. The stock market of Pakistan may be influenced due to change in exchange rate. So to identify this impact of exchange rate on the stock market is a matter which requires intentions.

### **Problem Statement**

The main focus of this study is to know that, how exchange rate affects the equity market of Pakistan? It further explores the direction (positive or negative) and strength of relationship among exchange rate and stock market in Pakistan. For this purpose researcher links the exchange rate with equity market of Pakistan to see a clear picture about them as they influence several other variables.

Research Question

What is the possible impact of exchange rate fluctuation on the equity market of Pakistan?

# **Objective**

This study aims to examine the effect of exchange rate on the Karachi stock exchange. The objectives of the study are:

- . To analyzes the impact of exchange rate fluctuation on equity market of Pakistan.
- . To determines whether the impact is statistically significant or not.

#### Resources

Resources include financial data of KSE, articles, books, newspaper and internet. The data will be collected from yahoo finance and the website of Karachi Stock Exchange.

Scope of the research

It is believe that the financial position of an economy is vulnerable to the foreign exchange rate. So it is very crucial to explore the linkage between the exchange rate and equity market. The present study is an effort to investigate this important aspect and it tries to analyze the impact of exchange rate on the equity market of Pakistan.

### LITERATURE REVIEW

In the following section, there are some studies associated to this area of study that has been investigated earlier by other researchers.

Hussain et al. examined the Impact of Macroeconomics Variables on Stock market by using the periodical data of some macroeconomic variables such

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as foreign exchange rate, broad money M2, whole sale price (WSP) index, industrial production index (IPI), gross fixed capital formation and foreign exchange reserve. The period of time to study was started from 1986 to 2008. The result showed that, after the reform in 1991, the pressure of the exchange rates and reserves effects significantly to the equity market, while the variables as IIP, and GFCF had no significant effect on the stock prices. In addition, concluded that internal factors of the companies such as increasing the production and capital formation had no significant effect while external factors such as the exchange rate and reserves significantly affected the stock prices. (Hussain et al. 2009).

Nishat and Shaheen analyzed long-term relationships among set of macroeconomic variables and the equity market of Paksitan. The macroeconomic variables that were used in their study includes: industrial production index (IPI), the consumer price index (CPI), M1 and the value of an investment earning the money market rate. Vector error correction model was used to investigate the relationship from 1973 to 2004. It can be revealed that there is a fundamental connection between the equity market and the economy and showed that industrialized creation was the major positive determinant of Pakistani stock prices. On the other hand, inflation was the major negative determinant of equity prices in Pakistan. It was established that the macroeconomic variable granger caused stock movements in prices, the reverse causality was observed in the variable in industrial production and the stock prices. In addition, argued that statistically significant durations between fluctuations in the bag and changes in the real economy were relatively short. Additionally, it was

further argued that statistically significant lag lengths between fluctuations in the stock market and changes in the real economy were relatively short (Nishat & Shaheen, 2004).

Bhattacharya et al. analyzed a case study to explore the linkage between stock market and macroeconomic variables such as Exchange Rate, Foreign Exchange Reserves and Value of Trade Balance. They used method of non-causation that was considered by Toda and Yamamoto (1995) for the period from 1990 to 2001. Proxy used in the investigation of stock market was Indian, the Bombay sensitive Index (BSI). The three major macroeconomic variables incorporated in the investigation was effective exchange rate, the foreign exchange reserves and the balance of trade. The study revealed the attractive resulted in the structure of the stock market Indian, mainly as regards the exchange rate, the foreign exchange reserves and the balance of trade. It is suggested that there is no relation between cost and equity the three macroeconomic variables studied (Bhattacharya & Mukherjee, 2001).

Dimitrova examined the association between stock prices and the exchange rates using multivariate model. He focused on the stock markets in America (USA) and the United Kingdom (UK) during the period 1990-2004. The result of the study shows that there was a relationship between the exchange rate and the stock market. The examiner stressed that there was a positive correlation when the price of actions were the main variable and be expected negative when exchange rates were the main variable. (Dimitrova, 2005).

Sohail et al. conducted a study on Lahore stock exchange (LSE), the objective of that study was to observed the long-term, as well as the short-term associations between Lahore Stock Exchange (LSE) and some important variables. Using the monthly data for the variables from 2002 to 2008, it was found that there was a negative impact of the consumer price index (CPI) on the stock market returns in Pakistan while industrial production index (IPI), real effective exchange rate, the money supply had an important positive long-term effect on stock returns to Pakistan(Sohail & Hussain, 2009).

Robert Gay investigated time series relationship between stock exchange index and some of the macroeconomic variables of the price of oil and the type of change in China, India, Russia and Brazil, using the Box-Jenkins autoregressive integrated moving average (ARIMA) model. It came to the conclusion of his study in which there was no significant association between exchange rate and the price of oil on the index of the stock market of these countries. Moreover, there was no significant relationship between past and present yields of the stock markets in these countries (Gay, 2008).

## **METHOD**

## Sample

Since there are 660 listed companies in Karachi stock exchange of Pakistan on November 7, 2010. This research uses KSE-100 Index as a benchmark to find out the impact of exchange rate fluctuation on equity market of Pakistan.

#### Instrument and Measures

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This research will be based on secondary sources, thus no questionnaire will be distributed. The study uses the financial data of last 6 years of Karachi stock exchange (one of the major stock exchange in Pakistan) and exchange rate. This study will investigates the impact of foreign exchange rate on equity market in Pakistan.

This study uses KSE-100 index as a proxy of equity market of Pakistan and uses exchange rate between dollar and rupees to analyze the impact of exchange rate fluctuation on equity markets of Pakistan. So, this research treats KSE-100 index as the dependant variable and exchange rate as independent variables.

### **Procedure**

The following statistical tools will be used to examine the impact of exchange rate fluctuation on equity market of Pakistan.

Descriptive statistics

Correlation matrix

Regression analysis

Descriptive statistics illustrate the main features of a collection of data quantitatively. It may include mean, median, mode, standard deviation, maximum and minimum. Correlation model will be tested to observe the linkage between the exchange rate and equity market of Pakistan. It will also enlighten about the direction and strength of relationship between the

variables. Further to find out the impact of exchange rate on stock market of Pakistan, the study will performed the regression analysis.

The data of Karachi stock exchange will be compared with the data of exchange rate of Pakistan. Statistical tools including timeline graphs and others will be constructed and made use of to determine the respective effects and a comparison between exchange rate and equity market.

Research papers of various authors related to the study will be studied and judge against with the results of this particular research.

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