Impact of macroeconomic variables

Economics, Macroeconomics

In both economic theory and practice, it is a known fact that saving leads to investment. And investment can impact the economy to such an explicit extent that its role cannot be over emphasized. The investors in the Pakistani market have a wide array of instruments and financial assets they can invest in ranging from bank accounts to shares of a publically traded company. However it is not a simple matter to invest in Pakistan, or for that matter anywhere else in the world. A lot of time and effort is required to determine the fair value of a financial asset, not to mention, expertise and experience are pre requisites as well.

It is necessary though, to point out right now, that there are other assets besides financial assets that are at the disposal of domestic and foreign investors anywhere. In fact, it would be appropriate to categorize assets into two broad group's i. e. physical assets such as property and real estate. The other class of assets would be financial assets that include stocks, bonds, bank deposits and the like. We would concern ourselves with financial assets and more specifically stocks and how to have an idea in what direction the share prices of the stocks listed on the Karachi Stock Exchange are headed.

It is a known fact in the developed economies that changes in the macro economic variables can have very profound effects on the performance of a stock exchange. In the US only it has happened so many times. Just recently, starting from August 2007, the stock market crash in the US led to thefailureof so many financial institutions. The reasons behind these failures were primarily due to heavy exposure to securities of packaged subprime loans and credit default swaps issued to insure these loans and their issuers.

This rapidly evolved into a global financial crisis resulting in a number of bank failures in Europe and sharp reductions in the value of equities (stocks) and commodities worldwide. Therefore it is clear, developed or developing, macro economic variables can act as indicators as to how a stock market will perform in the future, however it is necessary the variables under consideration have a leading timing type attribute, in order to predict the future movements of the stock market index. History of the Karachi Stock Exchange

Karachi Stock Exchange (KSE) has had the honor of being best performing stock market of the world for the year 2002 by Business Week. It was founded in 1947 and since then has come a long way, with many Pakistani and foreign listed companies. To date, there are 651 companies listed on the KSE, which has even had 663 companies listed in 2006, making it the largest and the most liquid stock exchange in Pakistan. Before 1991, foreign investors did not have the opportunity to invest in the KSE.

However, with the establishment of a new policy for foreign investors and initiating privatization in Pakistan, KSE has grown rapidly. The KSE lists four indexes that investors can follow. These are the KSE All Share Index, KSE-100 Index, KSE-30 Index and the KMI-30 Index. The companies being listed have a choice to be listed on one of the two markets, the ready market and over the counter (OTC) market. Of course both have different minimum paid up capital requirements, the OTC market demanding the lesser. KSE began with a 50 shares index. As the market grew a representative index was needed.

On November 1st, 1991 the KSE-100 was introduced and remains to this day the most generally accepted measure of the Exchange. Karachi Stock Exchange 100 Index (KSE-100 Index) is a benchmark used to compare prices overtime therefore companies with the highest market capitalization are selected. To ensure full market representation, the company with the highest market capitalization from each sector is also included. In 1995 the need was felt for an all share index to reconfirm the KSE-100 and also to provide the basis of index trading in future.

On August the 29th, 1995 the KSE All Share Index was constructed and introduced on September 18, 1995. The Karachi Stock Exchange has started trading through the computerized trading system KATS (Karachi Automated Trading System) since 1997. As the demand for Trading Workstations installation has been significant during the consecutive years, today over 1000 KATS workstations are already installed. In 2005, trading in the Internet was also initiated. The KSE has had its ups and downs and has usually proven to be highly susceptible to the political conditions and law and order provisions of the country.

Foreign direct investment has regularly had a positive effect on the indexes and the stock market performance. In 2006 only, foreign buying interest had been very active in the KSE and continued in 2007 as well. KSE, then again faced fluctuations from the start of 2008. One reason could have been that it was the election year in Pakistan since KSE 100 Index rose more than 4% after the announcement of the resignation of President Pervez Musharraf. But Pakistan's Post-Musharraf rally in the Karachi Stock Exchange was short-lived because of a rising fiscal deficit and runaway inflation.

KSE did however cross the psychological barrier of 15, 000 points within the same year before settling around the 14, 000 points mark. Today the KSE is owned by 200 members/brokers. There are 1850 trading terminals at broker's end. Market capitalization is worth US $ 26. 48 billion with a listed capital of US $ 9. 65 billion. KSE boasts high returns as much as 40. 19% which it achieved in 2007. It intends to demutualize exchange publicly listed companies with strategic investors and to include new products such as Index Trading, Options, Swaps, and New Indices (e. g. Sector Indexes) in the future.

Literature Review The hypothesis of this study is that any change in the macroeconomic variables, specifically, change in GDP growth rate or a change in inflation rate, will have a very strong effect on the stock market and equity prices. Previous studies by Suliaman D. Mohammad, Adnan Hussain and Adnan Ali (2009) also explore the relationship between prices of shares listed on the Karachi Stock Exchange and changes in macroeconomic variables. The effect of variables such as the foreign exchange rate, foreign exchange reserve, industrial production index, whole sale price index, gross fixed capital formation and broadmoneyM2 on stock prices is explored.

The multiple regression analysis model is used and the results show that the foreign exchange rate and foreign reserves affect the stock prices strongly whereas the relationship between the stock prices and other macroeconomic variables such as the industrial production index is weak. A research by Kyereboah-Coleman, Anthony; Agyire-Tettey and Kwame (2008) on a developing economy such as Pakistan itself, Ghana, shows strong adverse relationship between lending rates from deposit money banks on stock market performance.

The inflation rate has also been found to have a negative relationship with the stock market performance, but investors benefit from domestic currency depreciation in the short run due to a lag period involved. Co integration and the error correction model techniques were employed to ascertain both short-and long-run relationships. Robert D. Gay (2008) has examined the effect of macroeconomic variables on stock prices in four emerging countries: Brazil, Russia, India and China (BRIC). The independent variables are oil price and exchange rates of the four countries.

The model applied for this purpose is the Box-Jenkins ARIMA model. No significant relationship was found between the respective exchange rates and oil prices on the stock market index prices of the BRIC countries. It was concluded that further research needs to be conducted withrespectto other domestic and international macroeconomic factors on stock market returns. It was also deduced that the BRIC countries exhibit the weak-form of market efficiency since there was no significant relationship found etween past and present stock market returns. A paper by Ahmet Buyuksalvarc? (2010) analyzes the effects of macroeconomic variables on the Turkish Stock Exchange Market in the Arbitrage Pricing Theory framework. The effect of consumer price index, money market interest rate, gold price, industrial production index, oil price, foreign exchange rate and money supply variables on the main Turkish Stock Market Index (Istanbul Stock Exchange Index-100) was investigated and a multiple regression model was employed to accomplish this.

The results of the paper indicated that interest rate, industrial production index, oil price and foreign exchange rate have a negative effect on ISE-100 Index returns while money supply positively influences the ISE-100 Index returns. On the other hand, inflation rate and gold price did not appear to have any significant effect on ISE-100 Index returns. Donatas Pilinkus (2010) argues that stock prices are determined by some fundamental macroeconomic variables. The consequence of ten macroeconomic indicators on the main Baltic stock market indices in the short and long run is investigated.

The Baltic States indices that were chosen for study were from Lithuania, Latvia and Estonia. Aiming to analyze the causality of macroeconomic indicators and stock market indices Granger causality tests were employed. Vector auto regression was applied to determine the short-term relationship between macroeconomic indicators and stock market index. Johansen co integration was used to determine the long-term relationship between macroeconomic indicators and stock market indices.

It was concluded that Granger causality existed between some macroeconomic indicators and stock market indices in the Baltic States. And speaking broadly, the investor should pay attention to the different impact of macroeconomic indicators on stock market indexes in the Baltic States which clearly proved the existence of speculative attacks in the aforementioned economies. The relation of macroeconomic indicators and stock market indices is much more reliable in the long run.