Chapter 25
Dynamic Relationship Between Stock Market Sector Indices and Macroeconomic Variables in India

Neeru Gupta
Maharaja Agrasen Institute of Technology, Delhi, India

Ashish Kumar
IIM Kashipur, Kashipur, India

ABSTRACT

This study investigates the long-term and short-term relationships between selected macroeconomic variables and the selected Indian stock market sector indices over the period of 2010 to 2017. The Johansen Co-integration Test, the Vector error correction model (VECM), is applied to calculate the long-term and short-term relationship between sector indices and macroeconomic variables. It is found that stock prices are exposed to macroeconomic factors, but the level of sensitivity is different in different sectors. Out of five sectors taken in the study, it is found that only the realty sector has long run relationship with macroeconomic variables. Other sectors have no long run relationship with macroeconomic variables. Along with this, it is also found that the Auto index has a significant short-term positive relationship with gold prices and the FMCG sector index has a significant short-term positive relationship with industrial production. The consumer price index and exchange rate have significant short run relationship with realty sector index.

INTRODUCTION

A well-functioning financial system will provide a boost to the economic growth by proper and efficient allocation of resources. Stock market being an important part of the financial system of a country plays an important role in economic growth. It channelizes the funds from savers (investors) to the needy

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(Industry). It creates a pool of surplus fund of investors and makes it available to the companies for their expansion requirement. Therefore, a well performing stock market is very helpful in economic growth of a country. After economic reforms in the 1990s, Indian stock market has become more prone to changes in policies and trends in world market. It is not only affected by domestic factors but international factors too. Performance of stock market is influenced by a number of macroeconomic factors. Investors, before investing their surplus fund into stock market will try to seek information about the factors which impact stock prices. Efficient Market Hypothesis (EMH) falls the possibility of earning super normal profit by investors as it states the share prices incorporate all information in current prices. The semi-strong form of EMH claims that prices reflects all publicly available information and prices will instantly change with the arrival of new information. Efficiency level in Indian stock market will help to build the confidence of investor in stock market. Investor will try to grab the information about different macroeconomic factors which can have an impact on the share price.

All economic factors have different impact on each industry because of their heterogeneous nature. Different companies' share price will also response differently to any macroeconomic change. A need has been aroused to study the relationship between stock market sector index and macroeconomic variables. Although, the relationship between stock market and Macroeconomic variables has been well documented by many researchers throughout the world, but a very few studies are available on relationship between stock market sector indices and Macroeconomic variables. This paper extends the literature by considering the relationship between sector indices and macroeconomic variables. Five Indian stock market sector Indices i.e. Auto sector index (Auto), Banking sector index (Bankex), FMCG sector index (FMCG), Finance sector index (Fin), Reality Sector Index (Reality) have been used to study the relationship with four macroeconomic variables named consumer price index (CPI), Exchange rate (Exrate), Industrial production (IP), and Gold Price (GP). Bombay Stock Exchange being the oldest stock exchange in India has been chosen for sector Indices. The paper has been carried with the objective to investigate the long run and short run linkage between macroeconomic variables and select sector indices

REVIEW OF LITERATURE

Ahamed (2008) studies the causal relationships between stock prices and the key macroeconomic variables representing real and financial sector of the Indian economy for the period March 1995 to March 2007 using quarterly data. Study indicates that stock prices in India lead economic activity except movement in interest rate. Interest rate seems to lead the stock prices. Co-integration regressions indicate the presence of a long run relationship between stock prices and FDI, stock prices and Money Supply and stock prices and IIP. In NSE, movement in NSE Nifty does not have effect on exchange rate and IIP while movement in BSE Sensex seems to cause these variables. The study indicates that exchange rate does not influence the BSE Sensex and NSE Nifty while movement in BSE Sensex and NSE Nifty does cause change in exchange rate. It indicates towards large FII inflows in recent years.

Chen, Roll, and Ross (1986) tested that whether innovations in macroeconomic variables are risks that are rewarded in the stock market. It is found that these sources of risk are significantly priced. Stock returns are exposed to systematic economic news, that they are priced in accordance with their exposures.

Elly and Oriwo (2012) investigates the relationship between macroeconomic variables on all share index (NASI) in Kenya for the period 2008 to 2012 and goes further to determine whether changes in