Behaviour of Stock Price and Macroeconomic Indicators: An Application of EGARCH

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ABSTRACT

The manoeuvre of the study was to anatomise the macroeconomic determinants that are responsible for variations in stock price in emerging stock markets of India. The relationship has been elicited exerting monthly data from April 2004 to March 2014. Sensex (i.e. BSE's index) has considered as dependent variable and key macroeconomic variables of Indian economy, such as exchange rate, index of industrial production, inflation, foreign exchange reserve, gold price and money supply as explanatory variables. Furthermore, the Exponential Generalised Auto Regressive Conditional Heteroscedasticity model (EGARCH) has been exercised to measure the volatility registered by Sensex due to the variations in macroeconomic indicators. Consequently, the model was formulated by taking care of tests for unit root, clustering volatility, presence of ARCH effect. The empirical findings of the study bestow the evidences of the significant role of macroeconomic indicators in advocating the behaviour of stock prices in India. Money supply, exchange rate and the index of industrial production are determined as the key variables, which evoke the Indian stock market volatility.

KEYWORDS: Stock Price, Macroeconomic Indicators, EGARCH model, Volatility.

REFERENCES
1. Bajaj, S. (2014), "Sensitivity of Indian Stock Market vis-à-vis Price Volume Relationship in the Backdrop of FII", *Asia-Pacific Journal of Management Research and Innovation*, Vol. 10, Issue 03, pp. 173-189.
2. Bhole, L. M. (2007), *Financial Institutions and Markets*, Tata McGraw Hill, New Delhi.
3. Black, F. (1976), "Studies of Stock Price Volatility Changes", *Proceedings of the 1976 Meetings of the American Statistical Association, Business and Economics Statistics Section*, Washington, DC, American Statistical Association, pp. 177-181.
4. Chaker, Aloui (2007), "Price and volatility spillovers between exchange rates and stock indexes for the pre- and post-euro period", *Quantitative Finance, Taylor & Francis. Quantitative Finance*, Vol. 7, Issue 06, pp. 669-685.
5. Dixit, R. K. (1986), *Behaviour of Equity Share Prices and Investment in India*, Deep and Deep Publications Pvt. Ltd., New Delhi.
6. Gan, C.; Lee, M.; Yong, H. and Zhang, J. (2006), "Macroeconomic Variables and Stock Market Interactions: New Zealand Evidence", *Investment Management and Financial Innovations*, Vol. 3, Issue 4, pp. 89-101.
7. Gupta, R. (2011), "Understanding the relationship of Domestic and international factors With stock prices in India: An application of ARCH", *Academy of Accounting and Financial Studies Journal,* Vol. 15, Issue 2, pp. 87-104.
8. Handbook of Statistics on Indian Economy, Various Issues, *Reserve Bank of India*.

9. Horobet, A. and Ilie, L. (2007), "On the dynamic link between stock prices and exchange rates: evidence from Romania", Working Papers, Munich Personal RePEc Archive.

10. Kumar, D. and Maheswaran, S. (2013). "Return, Volatility and Risk Spillover from Oil Prices and the US Dollar Exchange Rate to the Indian Industrial Sectors", *Margin - The Journal of Applied Economic Research*, Vol. 7, Issue 1, pp. 61–91.

11. Kumar, M. (2013), "Returns and volatility spillover between stock prices and exchange rates: Empirical evidence from IBSA countries", *International Journal of Emerging Markets,* Vol. 8, Issue 2, pp. 108-128.

12. Mookerjee, R. and Yu, Q. (1997), "Macroeconomic Variables and Stock Prices in small Open Economy: The case of Singapore", *Pacific-Basin Finance Journal*, Vol. 5, Issue 3, pp. 377-788.

13. Naik, P. K. and Padhi, P. (2012), "The Impact of Macroeconomic Fundamentals on Stock Prices Revisited: Evidence from Indian Data", *Eurasian Journal of Business and Economics*, Vol. 5, Issue 10, pp. 25-44.

14. Pal, K. and Mittal, R. (2011), "Impact of Macroeconomic Indicators on Indian Capital Markets", *Journal of Risk Finance*, Vol. 12, Issue 2, pp. 84-97.

15. Phylaktis, K., and Ravazzolo, F. (2005), "Stock prices and exchange rate dynamics", *Journal of International Money and Finance*, Vol. 24, Issue 10, pp. 31-53.

16. Ratanapakorn, O. and Sharma, S. C. (2007), "Dynamics analysis between the US Stock Return and the Macroeconomics Variables", *Applied Financial Economics*, Vol. 17, Issue 4, pp. 369-377.

17. Yusof, R. M. and Majid, M. S. A. (2007), "Stock market volatility transmission in Malaysia: Islamic versus conventional stock market", *Journal of King Abdulaziz University: Islamic Economics*, Vol. 20, Issue 2, pp. 17-35.