Volatility Analysis of BSE BANKEX companies in Indian Banking Sector using GARCH Model

ASHUTOSH KOLTE*
HOSHIAR MAL**
AVINASH PAWAR***
TUSHAR BHOSALE****
JEWEL KUMAR ROY*****

Abstract

Our study focusses on the forecasting the volatility of the BSE BANKEX indices of Indian banking sector as one can't be always sure about his returns on the investment. We used the Statistical model for the analysis of the performance of BSE BANKEX indices. We have collected the data from the S&P BANKEX Index for the period of 2001 to 2019. The study considers the EGARCH from GARCH model family for the Calculations. GARCH(General autoregressive conditional heteroskedasticity) model is the statistical tool which can be used for the forecasting and analyzing financial data related information to assess the instability of profits for stocks and market indices. We have used NumXL for the calculations of GARCH model. The banking sector is performing good. So, the investment in Indian banking sector can be a profit maker for the investors. Investors can make the final decision regarding their investments through this research.

I. Introduction:

BANKING INDUSTRY IS the one of the industries which is mainly responsible for the economic growth of the nation. It is a major part of the finance industry as of about 70% of capital running through banks.

The total GDP of India comes from different-different sectors like Agricultural sector, Industrial Sector and Service Sector. Around 61% of total GDP comes from the Service Sector. It includes economic services and

*   Associate Professor, Savitribai Phule Pune University, The Department of Management Sciences, Pune 411045, INDIA
**   Faculty, Flame University, Gat No. 1270, Lavale, Office Pune, Bangalore Highway, Pune, Maharashtra 412115, INDIA
***   Post Doctoral Fellow, Savitribai Phule Pune University, The Department of Management Sciences, Pune 411045, INDIA
**** Doctoral Fellow, Savitribai Phule Pune University, The Department of Management Sciences, Pune 411045, INDIA
*****Assistant Professor, JatiyaKabiKazi Nazrul Islam University, The Department of Finance and Banking, Trishal, Mymensingh 2224, BANGLADESH

References

Bekaert, G. and C. Harvey, (2003), "Emerging Markets Finance", *Journal of Emperical Finance*, Vol. 3

Bulkle, G. and R. Harris, (1997), "*Irrational Analysts, Expectations as a cause of excess volatility in stock price*", Blackwell Publishers Cambridge, 1997

Cattlin, B., (2018), "*IG Markets Limited*", IG, Australia, 24th June, 2018

Costa, F., (2017), "*Forecasting volatility using GARCH Models*", School of Economics and Management University of Minho, 2017

Dulababu, D.T., (2015), "An Analytical Study on Volatility of Volatility", *Elk Asia Pacific Journal of Finance and Risk Management,* Vol. 2-3

Engle, R., (2001), "GARCH 101: The Use of ARCH/GARCH Models in apllied econometrics", *Journal of Economic Perspectives,* Vol. 15, pp. 157-168

Gauba, R., (2012), "The Indian Banking Industry: Evolution, Transformation, Raod ahead", *Pacific Business Review Inrenational*, Vol. 5, No. 1, pp. 85-97

Hammoudeh, S., and H. Li, (2008), "Sudden changes in volatility in emerging markets: The Case of Gulf Arab Stock Markets", *International Review of Financial Analysis (IFRA)*, pp. 47-63

IBEF., (2019), "*Banking Industry*", IBEF, September-2019

Indiabullsventures, (2019), "*What is a Stock Exchange and List of Stock Exchanges in India?*", Indiabulls Ventures 30th January, 2019

Joseph., (2019), "Seperating winners from losers among low book to market stocks using financial statement analysis", *Review of Accounting Studies*

Krishnan, R., (1998), "*Technology Acquisiion de regulation and competiveness:a study of indian automobile industry*", SSRN Network

Krishnan, R., and V. Mishra, (2013), "Intraday Liquidity Patterns in Indian Stock Market", *Journal of Asian Economics*, pp. 99-100

Narayan, Y., A. Bhardwaj and M. Dutta, (2015), "Science Direct. *Sentimenata Analysis for indian stock market using NIFTY and SENSEX*", Vol. 85

Narayan, P., and H. Ahmed, (2014), "How Profitable is Indian Stock Market?", *Pasific-Basin Finance Journal*, pp. 44-61

Roy, Jewel Kumar, A. Kolte, B. Sangavikar and A. Pawar, (2019), "Accessing the Equity Return Volatility Effect of East and South Asian Nations: The Econometrics Modelling Method", *International Journal of Recent Technology and Engineering (IJRTE),* Vol. 8, No. 3, pp. 594

Seo, M., and S. Lee, (2018), "Forecasting the Volatility of Stock Market Index Using the Hybride Models with Google Domestic Trends", *World Scientific*, November 9th, 2018

Shakthivel, P., K. Veera Kumar and K. Govindarajan, (2014), "Impact of Global Financial Crisis on Stock Market Volatility: Evidence from India", *Asian Social Science,* Vol. 10, pp. 86-94

Sharma, R., (2019), "*List of Stock Exchanges in India*", Groww, 17 April, 2019

Wennstrom, A., (2014), "*Volatility Forecasting Performance: Evaluation of GARCH type Volatility models on Nordic Equity Indices*", Department of Mathematics, Royal Institute of Technology (KTH), Stockholm, Sweden.

Yadav, S. (2017), "Stock Market Volatility - A Study of Indian Stock Market", *Global Journal For Research Analysis*, pp. 629