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IMPACT OF EXTERNAL FACTORS ON STOCK PRICE VOLATILITY IN BANKING SECTOR: AN EMPIRICAL ANALYSIS OF SELECTED INDIAN BANKS

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ABSTRACT

The stock (share) market plays a vital role in any free market economy. Study is examined with various tools and techniques. Six banks were taken to examine the impact of external factors on stock price of these banks. Descriptive statistics, correlation analysis and regression analysis were applied. 9 years monthly time series data was used to analyze the impact. Different banks log stock returns are being affected by different external factors.

INTRODUCTION

The stock (share) market plays a vital role in any free market economy. It helps companies to get funds in lieu of shares. A person holding a share (shareholder) has a claim to a part of the corporation's assets and earnings. In other words, a shareholder is an owner of a company. Ownership is determined by the number of shares a person owns relative to the number of outstanding shares.

Stock market is divided into primary market (fresh issue) and secondary market. Primary market deals with fresh issue of shares like IPOs (initial public offer), rights issue, preferential issue, etc. In primary market shares are sold for the first time in the market. Secondary market deals with the shares already existing in the market. In secondary market with the help of stock exchange shares are bought and sold. Shares once sold in primary market then they are dealt in secondary market only.

The stock market is one of the most important sources for companies to raise funds for setting up a new business venture or for further expansion of the existing company. If a company wishes to raise capital for the business, it can issue fresh shares of the company that is basically part of ownership of the company. To issue shares for the investor to invest in the stocks of a company needs to get listed to a stock exchange and through the primary market of the stock exchange they can issue fresh shares and get the funds for business requirements. This allows businesses to trade publicly, or raise additional capital for expansion by selling shares of ownership of the company in the market. The liquidity that an exchange provides affords investors ability to quickly and easily sell securities. There are certain rules and regulations for company to get listed on the stock exchange and that needed to be fulfilled before getting listed.

The price of a stock is quoted on an exchange. A basic quote for a specific stock provides information, such as its bid and asks price, last-traded price and volume traded.

The share price movement is analysed broadly with two approaches, namely, fundamental approach and the technical approach. Fundamental approach analysis the share prices on the basis of economic, industry and company statistics whereas technical approach uses past trends and charts for analysis.

If the price of the share is lower than its intrinsic value, investor buys it. But, if he finds the price of the share higher than the intrinsic value he sells and gets profit. The technical analyst mainly studies the stock price movement of the security market. If there is an uptrend in the price movement the investor purchases the script. With the onset of fall in price he sells it and move from the scrip.

The stock market index such as BSE SENSEX (Bombay stock exchange index which represents top 30 listed companies in terms valuation) and nifty (National stock exchange index which represents top 50 listed companies in terms of valuation) helps investor to know where market is going and accordingly one can buy and sell. Bombay Stock Exchange (BSE) is one of the oldest exchanges across the world, while the National Stock Exchange (NSE) is among the best in terms of sophistication and advancement of technology.

Stock prices and stock returns are correlated means that a rise in the stock price will result in a rise in return and vice-versa. But the price rise should be genuine. There are unhealthy practices in the market which were created by the brokers and the dealers to create a fake bubble in the market. The stock prices were deliberately raised through unfair trade practices like in Harshad Mehta's stock scam was such a practice adopted to artificially support the price and create artificial boom in the share price. Stock prices most often were deceptive that they told a different tale contrary to what generally believed to be.

Various External factors are:

- Exchange rate

The Exchange rate is the value of a nation's currency in terms of the value of another country's currency. An exchange rate, thus has two components, the domestic currency and a foreign currency, and can be quoted either directly or indirectly. In a direct quotation, the price of a unit of foreign currency is expressed in terms of the domestic currency. In indirect quotation, the price of a unit of domestic currency is expressed in terms of the foreign currency. An exchange rate that does not have the domestic currency as one of the two currency components is known as a cross currency, or cross state. Exchange rates can fluctuate for many reasons, including macroeconomic factors that affect the behaviour of market participants.

The exchange rate can be floating or fixed. Floating exchange rates are those in which currency rates are determined by market forces and are the norm for most major nations, some nations prefer to fix or peg their domestic currencies to a widely accepted currency like the US dollar.

The nominal exchange rate is defined as the number of units of the domestic currency that can purchase a unit of a given foreign currency. A decrease in this variable is termed nominal appreciation of the currency and an increase in this variable is termed nominal depreciation of the currency (Under the fixed exchange rate regime). The real exchange rate is defined as the ratio of the price level abroad and the domestic price level, where the foreign price level is converted into domestic currency units via the current nominal exchange rate. An increase in real exchange rate is termed as an appreciation of the real exchange rate, and a decrease is termed as depreciation. The real rate tells us how many times more goods and services can be purchased abroad (after conversion into a foreign currency) than in the domestic market for a given amount. Real effective exchange rate is the weighted average of a country's currency relative to an index or basket of other major currencies adjusted for the effects of inflation. The weights are determined by comparing the relative trade balances, in terms of one country's currency, with each other country within the index. Nominal effective exchange rate is the unadjusted weighted average value of a country's currency relative to all major currencies being traded within an index or pool of currencies. The weights are determined by the importance a home country places on all other currencies traded within the pool, as measured by the balance of trade. Equilibrium exchange rate is the exchange rate at which the supply for a currency meets the demand of the same currency. As foreign exchange rates are affected by a number of factors, the equilibrium exchange rate in turn, are also influenced by its supply and demand. Hence equilibrium is achieved when a currency's demand is equal to its supply.

Exchange rate fluctuations increase the business risk of domestic firms which are involved in imports and exports. If the value of the domestic currency appreciates it makes domestic products and services more expensive in foreign markets (the opposite is true for importers). Fluctuations in exchange rates affect firms due to changes in their costs, revenues and incomes. Investors can experience fluctuations in the value of their investments if these are held in foreign-denominated assets, so that appreciation of the domestic currency results in lower returns, and vice versa. Changes in the exchange rate can occur with changes in inflation and interest rates. Depreciation of the domestic currency can lead to a rise in inflation and therefore affect interest rates, thus impacting on stock prices.

- Gross domestic product (GDP)

Gross Domestic Product (GDP), a calculation method in national accounting is defined as the total value of final goods and services produced within a country's borders in a year, regardless of ownership. GDP measures only final goods and services, which are those goods and services that are consumed by their final user, and not used as an input into other goods. Economic growth is measured in terms of an increase in the size of a nation's economy. A broad measure of an economy's output. A most widely used measure of economic output is the Gross Domestic Product.

There are three approaches to calculating GDP with al rendering same results. Expenditure Approach: Calculates the final spending on goods and services. Income Approach: Sums the income received by all products in the country. Product Approach: Calculates the market value of goods and service produced.

GDP = government purchases + private consumption + investment + net exports

GDP measures the output of goods and services within the borders of the country. Gross National Product (GNP) measures the output of a nation's factors of production, regardless of whether the factors are located within the country's borders.

In an inflationary environment, the nominal GDP is greater than the real GDP. If the price deflator is not known, an implicit price deflator can be calculated by dividing the nominal GDP by the real GDP: Implicit Price Deflator = Nominal GDP / Real GDP

According to Fama (1990), Oskooe (2010), inter alia, economic growth influences the profitability of firms by affecting the expected earnings, dividends and stock prices fluctuations of the company. Further, Schwert (1989, 1990) relates stock return volatility to the level of economic activities through financial and operating leverages. When stock prices fall relative to bond prices or when firms increase financial leverage by issuing debt to buy back their stocks, the volatility of company stock return increases. With an unexpected decline in economic activity, the profits of companies with large fixed costs falls more than the profits of firms that avoid large capital investment or long-term supply contracts.

Antonios (2010) suggests that risk diversification through stock market integration can improve resource allocation and influence banking operations, hence affecting real GDP growth.

- Foreign institutional investors (FIIs)

Foreign institutional investors (FIIs) are an investor or investment fund registered in a country outside the one he/she is investing. Institutional investors most notably include hedge funds, insurance companies, mutual fund and pension funds. The term is used most commonly in India and refers to outside companies or individual investing in the financial markets of India.

Countries with the highest volume of foreign institutional investors are developing economies. These types of economies provide investors with higher growth potential or return than in mature economies. This is why these investors are most commonly found in India, all of which must required to be register with the Securities and Exchange Board of India (SEBI) to participate in the market.

All FIIs are allowed to invest in India's primary and secondary capital markets only through the country's portfolio investment scheme (PIS). This allows FIIs to purchase shares and debentures of Indian companies on the normal public exchanges in India.

In an environment of globalization where there are no bounds or barriers for the flow of funds. Funds flow from one country to another in just few seconds. So Stock market faces no dearth of fund. India with the path of globalization with much hesitation and with much hue and cry in the early 90's invited all countries to invest in Indian stock market to mobilize funds. The industries, assuming a new kind of freedom under deregulated and subsidy-less environment, showed better results, attracted the Foreign Investors to India. Since then, Indian stock market became an arena for the foreign players. Foreign Institutional Investors (FII) became the major players in Indian stock market.

- Inflation

Inflation is defined as a rise in the average level of price for all goods and services. It can be defined it as a permanent increase in the aggregate price level which implies a diminishing purchasing power and increases the cost of living. It is important to note that the movement in the price level needs to be permanent to believe it as inflation. Inflation considered one of the economic phenomena that still polarized attention of both development and developing countries. It is considered as a complex economic subject because it represents a tangible phenomenon and not only a macroeconomic variable such as gross domestic product and investment. In addition, there are many different reasons that may cause inflation. Therefore, the economic school of thoughts and many economists tried to study this observable variable in order to analyze, explain and understand its relation with the other macroeconomic variables.

The importance of inflation, as a macroeconomic variable, in the literature comes from its ability to reflect the economic stability of a nation, or the ability of the government to control the economy through its monetary and fiscal policies. Inflation may give an idea about the trade policy of a nation such as the degree of openness. The relationship between stock prices, rates of return and inflation is perhaps best illustrated in the context of the dividend-discount model (DDM). According to Fisher effect theory, interest rates do not always move exactly with inflation because they reflect expectations of future inflation rather than current inflation.There are various measures for inflation such as consumer price index (CPI), wholesale price index (WPI). In this study monthly WPI is considered.

- Interest rate

Interest Rate is the price at which interest is paid by a debtor for the utilization of money or any property that they borrow from a creditor. In organized financial sector of the economy the interest rates are guided through monetary policy. However, for the unorganized financial sector, the interest rates are not controlled and may fluctuate

widely depending upon the demand and supply of funds in the market.

An investor evaluates the impact of the level and growth of interest rates based on the performance and profitability of companies of different sectors of the economy. From the borrower's point of view interest rate is the cost of borrowing money whereas from lender's point of view, the interest rate is the fee charged for lending money.

In this study, 10year government bond is considered as a proxy of interest rate variable. Increasing or decreasing of interest, encourages substation between speculative, market instrument, and stock market.

REVIEW OF LITERATURE

Juneja sanjana (2013) examined the relationship of Foreign institutional investors (FIIs) with BSE sensex and NSE nifty. She took secondary data of 10 years from January 2003 to September 2013. Daily data of 10 years were used in her study. She analyzed data with the help of correlation and concluded that there is a direct positive relationship between net purchases and sales of FIIs with BSE Sensex and NSE Nifty.

Muthike and Sakwa (2012) examined weather macroeconomic indicators can be used as predictors of the stock exchange index trends. They used annual time series data from 1976 to 2008. Macroeconomic variables used were money supply, inflation rate, Treasury bill rate, gross domestic product (GDP) and exchange rate as independent variables and the Nairobi Stock Exchange (NSE) 20 share index as dependent variable. The findings of the study revealed that the 91-Day Treasury Bill and the Inflation rate were the only leading macroeconomic variables on the NSE 20-Share Index whereas money supply and real exchange rate were leading and lagging macroeconomic indicators on the NSE 20-Share index and GDP comes out to be the weakest relationship with the NSE 20 Share index.

Pal & Mittal (2011) examined the long run relationship between two Indian capital markets and some macro economic variables such as interest rates, inflation, and exchange rate and gross domestic savings. They used the quarterly data from January 1995 to December 2008 and with the help of unit root test, co integration and error correction mechanism they found out that the inflation rate have the significant impact on both capital markets whereas interest rate and foreign exchange rate have the impact on one capital market. Gross domestic savings played insignificant role in both the markets.

Dimitrios and Theodore (2011) investigated the relationship between expected stock returns and volatility in the twelve European Monetary Union (EMU) countries as well as five major out of EMU international stock markets. Based on parametric GARCH in mean models they found a weak relationship between expected returns and volatility for most of the markets. However, using a flexible semi-parametric specification for the conditional variance, significant evidence of a negative relationship in almost all markets. Furthermore, they investigated the asymmetric reaction of volatility to positive and negative shocks in stock returns confirming a negative asymmetry in almost all markets.

Olweny and Kimani (2011) investigated the relationship between stock market performance and economic growth in Kenya and they used cointegration and granger causality test. Time series data from 2001:Q1 to 2010:Q4 was considered for the study. Variables used for the study were NSE (Nairobi stock exchange) 20-share index, GDP and CPI. The results indicated that variables were cointegrated with at least one co-integrating vector and Granger causality test indicated that the causality between economic growth and stock market runs unidirectional from the NSE 20-share index to the GDP.

Mishra and Singh (2011) studied whether the stock market in India is driven by macroeconomic fundamentals. They employed a non-parametric approach to determine whether any variables were non-linearly related with stock returns and the variability of stock returns by taking monthly observations from 1998 to 2008. They considered exchange rate, interest rate, industrial production, inflation and foreign institutional investments as macroeconomic factors. Further, they employed a semiparametric approach to see whether any of the macrovariables have a significant nonlinear impact on the stock returns and on the variability of stock returns. The results suggested that of the Ordinary Least Square (OLS) and semi-parametric approaches, the semi-parametric approach better explains the stock returns and volatility

Hsing (2011) investigated the relationship between Hungary stock market index and various macroeconomic variables. Macroeconomic variables used for the study were real output, government debt, money supply, real interest rate, nominal effective exchange rate (NEER), expected inflation rate, foreign stock market index and foreign interest rate. He employed the generalized autoregressive conditional heteroscedasticity (GARCH) model. He used monthly time series data from 2000:Q1 to 2010:Q2 in his study. The study indicated that Hungary's stock market index has a positive relationship with real GDP and a negative relationship with the real interest rate, expected inflation rate and the government bond yield and a quadratic relationship with real money supply.

Ali, M. B. (2011) investigated the impact of changes in microeconomic and macroeconomic variables on stock returns at Dhaka Stock Exchange (DSE). He used monthly time series data from July 2002 to December 2009. He employed Multivariate Regression Model with Standard ordinary least squares (OLS). The variables used for the study were DSE all share price index as dependent variable and

CPI as proxy of inflation, industrial production index (IPI) and foreign remittance as macroeconomic independent variables and Market Price earnings ratio (P/E) and monthly average growth in market capitalization measured in percent as microeconomic independent variables. The study indicated that inflation and foreign remittance have a negative influence whereas IPI, market P/E and monthly percent average growth in market capit alization have a positive influence on stock returns.

OBJECTIVES OF THE STUDY

I. To assess the volatility of stock return of different banks of India.
II. To examine the impact of various external (macroeconomic) factors on stock return volatility of different banks.

HYPOTHESES OF THE STUDY

To accomplish the objectives of the study, the following null hypotheses have been developed:-

I. There is no significant impact of exchange rate on market stock returns.
II. There is no significant impact of GDP on market stock returns.
III. There is no significant impact of FIIs on market stock returns.
IV. There is no significant impact of inflation on market stock returns.
V. There is no significant impact of interest rate on market stock returns.

SCOPE OF THE STUDY

Monthly data from April, 2009 to March, 2018 is taken for impact of external factors on stock returns. Stock split has been adjusted as per current scenario.

TOOLS AND TECHNIQUES

To find out the relationship between various variables and stock returns, different tests will be employed using excel, SPSS and EViews. Techniques used are descriptive analysis, correlation analysis and regression analysis.

RESULTS

	LBOND	LEXR	LFII	LIIP	LWPI
Mean	0.000494	0.002341	0.005066	0.013434	0.001224
Median	-0.002839	-0.000746	0.012846	0.015627	0.003743
Maximum	0.092389	0.076681	9.036694	1.490091	0.532620
Minimum	-0.116608	-0.068299	-9.532368	-1.327296	-0.698135
Std. Dev.	0.031269	0.024693	1.508416	0.391975	0.154930
Skewness	-0.182813	0.341959	-0.491061	-0.149785	-0.855099
Kurtosis	5.014921	4.327462	28.48421	5.647979	10.47545
Jarque-Bera	18.87115	10.03455	2926.844	31.95691	264.6321
Probability	0.000080	0.006623	0.000000	0.000000	0.000000
Sum	0.053302	0.252796	0.547105	1.450833	0.132234
Sum Sq. Dev.	0.104619	0.065244	243.4593	16.43994	2.568353
Observations	108	108	108	108	108

	LAXIS	LHDFC	LICICI	LINDUSIND	LKOTAK	LSBI
Mean	0.016831	0.021080	0.013253	0.037210	0.024958	0.007884
Median	0.018471	0.013519	0.001111	0.029207	0.023427	-0.001177
Maximum	0.343505	2.380589	0.438508	0.560848	0.567642	0.380395
Minimum	-0.246070	-2.293883	-0.264629	-0.183330	-0.162733	-0.220751
Std. Dev.	0.103007	0.325626	0.105128	0.100663	0.086716	0.101375
Skewness	0.244276	0.202629	0.919511	1.260401	2.378319	0.641425
Kurtosis	3.851192	50.10823	5.724794	8.600547	16.32058	4.060092
Jarque-Bera	4.334456	9987.074	48.62926	169.7425	900.2851	12.46275
Probability	0.114495	0.000000	0.000000	0.000000	0.000000	0.001967
Sum	1.817756	2.276627	1.431377	4.018668	2.695472	0.851462
Sum Sq. Dev.	1.135314	11.34546	1.182549	1.084226	0.804608	1.099637
Observations	108	108	108	108	108	108

Where,
LAXIS= Log Return of stock market price of Axis Bank
LHDFC= Log Return of stock market price of HDFC Bank
LICICI = Log Return of stock market price of ICICI Bank
LINDUSIND= Log Return of stock market price of IndusInd Bank

LKOTAK= Log Return of stock market price of Kotak Mahindra Bank
LSBI= Log Return of stock market price of SBI Bank
Correlation analysis of stock returns of Axis Bank and external factors

Table 1
Correlations

		LAXIS	LBOND	LEXR	LFII	LIIP	LWPI
LAXIS	Pearson Correlation	1	-.150	-.690**	.164*	-.094	.029
	Sig. (1-tailed)		.061	.000	.045	.166	.384
	N	108	108	108	108	108	108

**. Correlation is significant at the 0.01 level (1-tailed).
*. Correlation is significant at the 0.05 level (1-tailed).

Log return of axis bank is positive correlated with log return foreign institutional investors and it is significant at 5% significance level.
Log return of axis bank is strong negative correlated with log return of exchange rate and it is significant at 1% significance level.
There is no significant correlation of stock return of axis bank with other variables.

Correlation analysis of stock prices of HDFC Bank and various external factors

Table 2
Correlations

		LHDFC	LBOND	LEXR	LFII	LIIP	LWPI
LHDFC	Pearson Correlation	1	.015	-.137	.053	.051	.149
	Sig. (1-tailed)		.441	.079	.294	.301	.062
	N	108	108	108	108	108	108

*. Correlation is significant at the 0.05 level (1-tailed).
**. Correlation is significant at the 0.01 level (1-tailed).

There is no significant correlation of stock return of HDFC bank with external variables.

Correlation analysis of stock prices of ICICI Bank and various external factors

Table 3
Correlations

		LICICI	LBOND	LEXR	LFII	LIIP	LWPI
LICICI	Pearson Correlation	1	-.146	-.639**	.176*	-.157	.064
	Sig. (1-tailed)		.065	.000	.034	.052	.255
	N	108	108	108	108	108	108

**. Correlation is significant at the 0.01 level (1-tailed).
*. Correlation is significant at the 0.05 level (1-tailed).

Log return of ICICI bank is positive correlated with foreign institutional investors and it is significant at 5% significance level.
Log return of ICICI bank is strongly negative correlated with log return of exchange rate and it is significant at 1% significance level. There is no significant correlation of stock return of ICICI bank with other variables.

Correlation analysis of stock prices of Indusind Bank and various external factors

Table 4
Correlations

		LINDUSIND	LBOND	LEXR	LFII	LIIP	LWPI
LINDUSIND	Pearson Correlation	1	-.041	-.548**	.243**	-.198*	.072
	Sig. (1-tailed)		.335	.000	.006	.020	.230
	N	108	108	108	108	108	108

**. Correlation is significant at the 0.01 level (1-tailed).
*. Correlation is significant at the 0.05 level (1-tailed).

Log return of INDUSIND bank is positive correlated with log return of FIIs and it is significant at 1% significance level.
Log return of INDUSIND bank is strongly negative correlated with log return of exchange rate and it is significant at 1% significance level.
Log return of INDUSIND bank is negative correlated with log return of Index of Industrial production and it is significant at 5% significance level. There is no significant correlation of stock return of INDUSIND bank with other variables.

Correlation analysis of stock prices of Kotak Mahindra Bank and various external factors

Table 5
Correlations

		LKOTAK	LBOND	LEXR	LFII	LIIP	LWPI
LKOTAK	Pearson Correlation	1	-.080	-.429**	.154	-.094	.099
	Sig. (1-tailed)		.206	.000	.055	.167	.153
	N	108	108	108	108	108	108

**. Correlation is significant at the 0.01 level (1-tailed).
*. Correlation is significant at the 0.05 level (1-tailed).

Log return of Kotak Mahindra bank is strong negative correlated with log return of exchange rate and it is significant at 1% significance level.
There is no significant correlation of stock return of Kotak Mahindra bank with other variables.

Correlation analysis of stock prices of SBI Bank and various external factors

Table 6
Correlations

		LSBI	LBOND	LEXR	LFII	LIIP	LWPI
LSBI	Pearson Correlation	1	-.142	-.587**	.158	-.021	.089
	Sig. (1-tailed)		.071	.000	.052	.416	.179
	N	108	108	108	108	108	108

**. Correlation is significant at the 0.01 level (1-tailed).
*. Correlation is significant at the 0.05 level (1-tailed).

Log return of SBI is strong negative correlated with log return of exchange rate and it is significant at 1% significance level. There is no significant correlation of stock return of SBI with other variables.

INTERPRETATION AND CONCLUSION

It has been observed from impact of macroeconomic variables on stock returns that Axis bank and ICICI bank both have significant positive correlation with foreign institutional investors whereas strong significant negative relationship with exchange rate. IndusInd bank has significant positive correlation with foreign institutional investors and significant negative correlation with Index of Industrial production and exchange rate. Kotak Mahindra bank and SBI have strong negative correlation with exchange rate. Regression model found to be fit. Impact of constant, government bond and exchange rate on axis bank stock return is significant. Around 60% of Axis return is explained by external variables. Around 74% of HDFC bank returns were explained by external variables and government bond and exchange rate have significant impact on HDFC return. 43.7%of ICICI bank returns were explained by external variables and IIP and exchange rate have significant impact on ICICI returns. 43.1 of IndusInd bank returns were explained by external variables and and IIP and exchange rate have significant impact on IndusInd returns. 69.4% of Kotak Mahindra Bank returns were explained by external variables. Government bond and exchange rate have significant impact on Kotak Mahindra Bank returns. 65.6% of SBI returns were explained by external variables. SBI also significantly impacted by Government bond and exchange rate.

BIBLIOGRAPHY

1. *Adams, S. (2009), "Can foreign direct investment (FDI) help to promote growth in Africa?", African Journal of Business Management, Vol. 3, No. 5, pp. 178-183. Adaramola, A. O. (2011), "The impact of macroeconomic indicators on stock prices in Nigeria", Developing Country Studies, Vol. 1, No. 2, pp. 1-14.*
2. *Al-Mamun, M. (2013), "The Effect of Macroeconomic & Market Specific Dynamics on Stock Market Development in Global Growth Generator Countries", Asian Economic and Financial Review, Vol. 3, No. 9, pp. 1152-1169.*
3. *Al-Sharkas, A. (2004), "The dynamic relationship between macroeconomic factors and the Jordanian stock*

market", International Journal of Applied Econometrics and Quantitative Studies, Vol. 1, No. 1, pp. 97-114.

4. *Amihud, Y., & Mendelson, H. (1986), "Asset pricing and the bid-ask spread", Journal of financial Economics, Vol. 17, No. 2, pp. 223-249.*
5. *Asaolu, T. O., and Ogunmuyiwa, M.S. (2010), "An econometric analysis of the impact of macroeconomic variables of stock market movement in Nigeria", Asian Journal of Business Management, Vol. 3, pp. 72-78.*
6. *Asprem, M. (1989), "Stock prices, asset portfolios and macroeconomic variables in ten European countries", Journal of Banking & Finance, Vol. 13, No. 4, pp. 589-612.*
7. *Basher, S. A., Haug, A. A., & Sadorsky, P. (2012), "Oil prices, exchange rates and emerging stock markets", Energy Economics, Vol. 34, No. 1, pp. 227-240.*
8. *Bekaert, G., & Harvey, C. R. (1997), "Emerging equity market volatility", Journal of Financial economics, Vol. 43, No. 1, pp. 29-77.*
9. *Dornbusch, R., Branson, W. H., Marina v. N. Whitman, Kenen, P., Houthakker, H., Hall, R. E., & von Furstenburg, G. (1980), "Exchange rate economics: Where do we stand?". Brookings Papers on Economic Activity, Vol. 1980, No. 1, pp. 143-205.*
10. *Hsing, Y. (2014), "The Stock Market and Macroeconomic Factors in Romania and Policy Implications", Trends in Economics, Vol. 1, No. 1, pp. 1-7.*
11. *Hsing, Y., Budden, M. C., & Phillips, A. S. (2011), "Macroeconomic Determinants of the Stock Market Index for a Major Latin American Country and Policy Implications", Business and Economic Research, Vol. 2, No. 1, pp. 1-10.*
12. *Lee, W. (1997), "Market timing and short-term interest rates", Journal of Portfolio*
13. *Ozbay, E. (2009), "The Relationship Between Stock Returns and Macroeconomic Factors: Evidence for Turkey", Devon: University of Exeter, MSc. Financial Analysis and Fund Management, Yayınlanmamış Yüksek Lisans Tezi.*
14. *Pathan, R., & Masih, M. (2013), "Relationship between macroeconomic variables and stock market index: evidence from India". Available at: http://mpra.ub.unimuenchen.de/63302/*
15. *Pesaran, M. H., Shin, Y., & Smith, R. J. (2001), "Bounds testing approaches to the analysis of level relationships", Journal of applied econometrics, Vol. 16, No. 3, pp. 289326.*
16. *Pilinkus, D. (2015), "Stock market and macroeconomic variables: Evidences from*
17. *Poon, S. H., & Taylor, S. J. (1992), "Stock returns and volatility: an empirical study of the UK stock market", Journal of banking &finance, Vol. 16, N*