

A STUDY OF GLOBAL MARKETS IMPACT ON NIFTY

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ABSTRACT: This analysis has focused for very short term period that is from 10th November to 20th November of 2014 the variables of Asian and European countries were extracted by Indian opening time 9:15 from Asian countries previous day closing prices, European countries were opening 12:30 to 12:40 registration weight estimation indicated that Japan and Singapore markets European markets were impacting nifty partial correlation indicated that the all the countries which were selected were having slightly to strong correlation this analysis is useful for the investors who takes position based on global FII, mutual funds PMS, services also well get benefit out off this research paper.

KEY WORDS: SGX, Nikkei-225, SSE, HANGSENG, CAC40, DAXI, FTSE, Volatility

INTRODUCTION: National stock markets have emerged as the major channel for financial integration of emerging market economies amid for globalization, deregulation. Among the factors contributing to growing financial integration have fast increase in the cross-border mobility of private capital inflows due to investors seeking portfolio diversification and better yields, a growing reliance of nations on the savings of other nations, and a shift in the leverage preference of companies from debt to equity finance. It is generally perceived that financial integration can be associated with several benefits, including development of markets and institutions and effective price discovery, leading to higher savings, investment and economic progress. At the same time, linkages among financial markets can pose various risks, such as the contagion and associated disruption of economic activities that were evident during the crisis in Asia in the late 1990s. More recently, in January 2008, national stock markets declined sharply in the wake of credit market developments in the United States. Economists have thus realized that it is useful for countries to monitor the progress of interdependence among financial markets for the sake of policy as well as market participants. Recognizing the critical importance of financial assets to economic agents and policy, numerous studies in the applied finance literature have concentrated on measuring the international integration of national stock markets across several developed and emerging market economies. In the copious literature, however, studies focused on India's stock market are rather scarce, the development of an economy is largely influenced by financial markets; they competitively allocate financial resources that are mobilized from savers (Households, firms) and investors among participants in the economy. Central Bank, the Reserve Bank of India (RBI), has proactively shaped the development of financial markets in India through its series of economic policy reforms market-determined interest and exchange rates, current account convertibility, monetary policy dealing with price-based instruments, auction-based allocation in the Government Securities Market, and phased capital account. Such a closely monitored development of the financial market is essential in an emerging and developing economy such as India to avoid financial instability, which is likely to occur otherwise.

OBJECTIVES:

1. To find the impact of select Asia and Europe in discuss on Indian nifty
2. To know the infusion of select Asia and Europe market's effect on India volatility
3. In the future moving to nifty based on the select Asia and Europe opening market's price

SCOPE: This study has focused for very short term period that is Nov 10th, 2014. Select Asian and European countries were considered which trades during the Indian market trading time that is 9:15 to 3:30. Opening bell impact has been analyzed by considering Nikkei, SSE, Hangseng, and Singapore Index previous day close to Indian market opening time 9:15. European market opening period has been consider 12:30 to 12:40pm. The focus of this analysis is limited to opening prices of external countries impact on nifty opening and its volatility during trading session.

NEED OF STUDY: In the Global Economy Indian market is playing a role. Indian is constantly attracting the FII investment into Indian markets after the rationalization of Indian capital market I modern economy. Equity markets were affected by both internal and external factors of developed nations. Always depends on the news through which they can take a position in the market there is a need to know how Indian Equity markets are considered by the investors to take position in the equity markets. Indian equity markets are dominated by the external force. After the global recession emerging markets like India is trading based on the global queue investors India always they can take a position in the market there is a need to know how Indian markets were reacting based on the global markets trading pattern.

LIMITATIONS:

1. Pre open session fluctuating are not consider for the analysis.
2. The countries which were selected from Asian and Euro based on high market Capitalization
3. NSE nifty has been considered per Indian equity bench mark.
4. For the European opening time period considered as 12:30 to 12:40.

LITERATURE REVIEW:

1. M.Thenmozhi ,Manish Kumar : In this study he has examined the dynamic interaction between mutual fund flows and security returns and between mutual fund flows and volatility. but The results based on the contemporaneous relationship by using daily data suggest that a positive relationship exist in between stock market returns and mutual fund flows measured as stock purchases and sales. This positive concurrent relationship continues to exist even after controlling for volume. The analysis of causal relationship between mutual fund flows and market returns show that mutual fund out flows (sales) are significantly affected by return in the equity market, however, the latter is not significantly influenced by variation in these flows which suggests negative feedback trading behavior in the Indian market. This results show that a strong positive relationship exists between stock market volatility and mutual fund flows measured as the stock purchases and sales of the market .This positive concurrent relationship continues to exist even after the controlling for volume. The analysis is the direction of relationship between volatility and mutual fund flows using the VAR approach suggests that market volatility is positively related to lag flow, and the shock in flow has the positive impact on market volatility. The results provided evidence that the relationship is stable even after including these exogenous variables such as volume and market fundamental variables such exchange rates, dividend and short term interest rates in the model. Increase in the aggregate inflows and outflows are associated with more volatile market

2. **P. Sakthivel** : In this analysis author concentrated on effect of the introduction of futures trading on the spot market volatility has been widely documented in the financial literature. The main objective of this study is to investigate the impact of introduction of index futures trading on the volatility of Nifty. In this study employed GARCH (1, 1) model to capture the time varying nature of the volatility and volatility clustering phenomena using daily closing price of the Nifty. The results showed that after introduction of the futures trading reduced stock market volatility, effected due to increase market efficiency. The study is also examined futures trading changes structure of spot market volatility by applying GARCH model. The study observed that there is a changes structure in spot market volatility after introduction futures trading. Specifically, there is evidence that the increased impact on recent news and reduced effect of the uncertainty originating from the old news. In this study finally he observed that the introduction of the derivatives contract part improved the market performance efficiency and reduced the asymmetric information.

3. **Dr. Gaurav Agrawal , Ankita Srivastava , Aniruddh Kumar Srivastav** : In This analysis the relationship between Nifty returns and the Indian rupee-US Dollar Exchange Rates. The Several statistical tests have been applied in order to study the behavior and dynamics of both the series. And the paper also investigates the impact of both the time series on each other. The period of the study has been taken over from October, 2007 to March, 2009 by using daily closing indices. In this study , it was found that Nifty returns as well as Exchange Rates were the non-normally distributed. Through unit root test And it was also established that both the time series, Exchange rate and the Nifty returns, were stationary at the level form itself. The Correlation between Nifty returns and Exchange Rates was found to be negative. and Further investigation into the causal relationship between the two variables using Granger Causality test highlighted unidirectional relationship between Nifty returns and the Exchange Rates between running from the former towards the latter

4. **Ruchika gahlot, saroj k. Datta, sheeba kapil** : The analysis of the study is to examine the impact of derivative trading on stockmarket volatility. The sample data consist of closing prices of S&P CNX Nifty as well as closing prices of five derivative stocks and five non derivative stocks from April 1, 2002 to March 31, 2005. The study uses GARCH model to capture nature of volatility over time and volatility clustering phenomenon of the data. The evidences suggest that there is no significant change in the volatility of the S&P in CNX Nifty, but the structure of volatility has changed into some extent. However, results show mixed effect in case of 10 individual stocks. These are results can assist investors in making investment decision. It also helps to identify need for regulation.

5. **Dr. M. Jayasree** : In the major concern for any investor in stock market is volatility. during this recent past, and the stock returns on an average are the negative performance. The frequent changes in the stock prices, makes it difficult to there investor to invest in stock market. Is One of the major factors causing volatility in the stock market is lack of proper disclosure of information by the corporate. In India SEBI has been given certain guidelines regarding disclosures. Corporate do follow these guidelines. Disclosures are both compulsory and voluntary Some corporate provide information above the statutory requirements must be The present article examines the correlation of disclosures and volatility of stock prices. That The study uses regression model for understanding the significance of disclosures on stock price volatility.

6. **H.R. Badrinath , Prakash G. Apte**: In this analysis has increasing integration of financial markets over the years has led to greater movement of funds between these markets and also to return and volatility spillovers. In this study, we have examined the stock market, the foreign exchange market and the call money market in India for evidence of volatility spillovers using multivariate EGARCH models which facilitate the study of asymmetric responses. The results indicate the existence of

asymmetric volatility spillovers across these markets. The results also indicate that either the information assimilation across markets was slow or that the spillovers were on account of contagion. In addition, the results indicate the need to take the dynamic structure of correlation into account.

7. **Jianxin Wang** : In This analysis examines volatility forecasting for the broad market indices of twelve Asian of an stock markets. After considering the long memory in volatility and the volatility jumps, we incorporate local, regional, and global factors into a heterogeneous autoregressive (HAR) model and the volatility forecasting. Compared to several existing studies of our model produces smaller then the forecasting errors. Is Our empirical findings shed new light on the spillover effect from regional and global factors is the local market volatility. Despite the common perception are increased an globalization, we have that volatility in Asia is primarily driven by local factors. During the period of January 2005 to April 2010 are the regional and global factors explain 2-3% of the volatility in the next ten days for Asian emerging markets, and 3-6% for Asian developed markets. Is the no significant increase in the contribution of global factors to local market volatility?

8. **Vishal Sood , Poorva Ranjan** : In the analysis of Financial markets are a part of the changing business paradigms and across the globe. In fact, the financial markets are the first to unleash the creativity and imagination and lead the revolution. Today, globalization of competencies, thinking is the perspectives have been the part of Strategic Action Plan of all the major players in the financial markets, globally. The cut throat competition across the market operators and the pressure to perform by the stakeholders has resulted in competition being fiercer than ever before. Both the business landscape and chemistry of the competition has changed significantly over the period of time. All around, there the fresh thinking on the financial products and the structure of market players and the possibilities for the value creation. We can say that financial markets were being redefined, reinvented and reconfigured on a persistent on basis.

9. **Dubey, Ritesh Kumar ,Sarma** :In this analysis significant work in the area of efficient market theory, information spill over, long and short term memory of the time series data, rationality of markets is lightly linkages of economic variables to the stock market returns. This study of connects to all these dimensions market and thereby empirically testing the impact of information flow and information processing ability of the market using an Event Study approach. The findings suggest of they inflation, oil prices, money supply, gold prices have a significant impact on the volatility of stock market. The amount of variation shown by all of them taken together is low as observed in the combined regression equation. Thus, it leads to an opportunity for future research on what other factor accounts for the stock volatility apart from these macro-economic factors

10. **Amir Angabini ,Shaista Wasiuzzaman** : In the Stock market of volatility is important in determining the cost of capital and to assess investment and leverage decisions since volatility is synonymous with risk. The Risk averse investors could can be affected negatively due to substantial changes in volatility of the financial markets. We can focus on the global crisis of 2007/2008 and its impact on the Malaysian financial market. We can use GARCH models to model the volatility in order to determine the effect of the crisis on the KLCI. In the order to be able to model the volatility, we have first test the efficiency of the market by using ARIMA models. We founded that as because of the financial crisis there was an increase in the impact of news about volatility from the previous periods but only a slight drop in the persistency of the conditional variance.

RESEARCH METHODOLOGY:

1. **Co-integration:** Co-integration is a statistical property of time series variables. Two or more time series are co-integrated if they share a common stochastic drift. If two time series x and y are co-integrated, a liner combination of them must be stationary.

$$Y - \beta x = u; \text{ Where } u \text{ is stationary.}$$

2. **Granger causality test:** Granger causality test is a statistical hypothesis test for determining whether one time series is useful in forecasting another. A time series X is said to Granger-cause Y if it can be shown, usually through a series of t-tests and F-tests on lagged values of X (and with lagged values of Y also included), that those X values provide statistically significant information about future values of Y .

- **Null hypothesis:** The null hypothesis refers to a general statement or default position that there is

No relationship between two measured phenomena. Rejecting or disproving the null hypothesis- and thus concluding that there is a relationship between two phenomena.

- **Alternative hypothesis:** In statistical hypothesis testing, the alternative hypothesis is applicable when probability is > 0.5 . Alternative hypothesis is that the quality is poorer in the second half of the record.

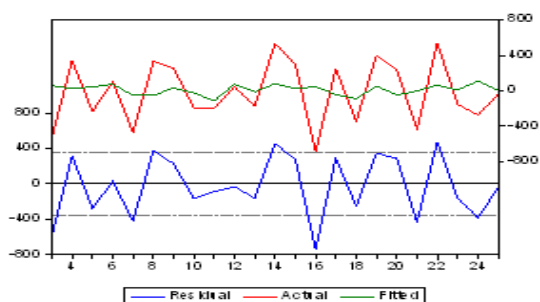
3. **Volatility:** Volatility is a measure for variation of price of a financial instrument over time.

Historic volatility is derived from time series of past market prices. The symbol σ is used for volatility, and corresponds to standard deviation.

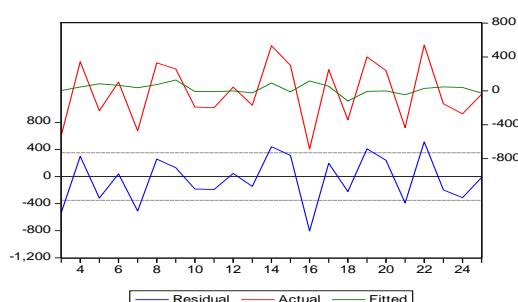
DATA ANALYSIS:

1.

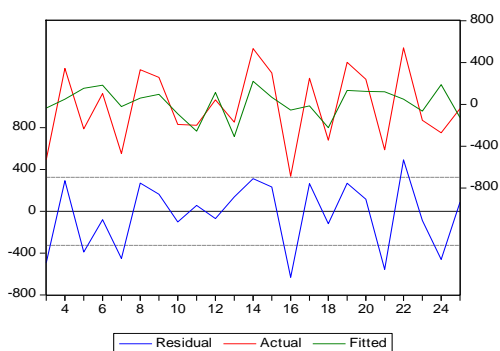
Hangseng vs. Nifty



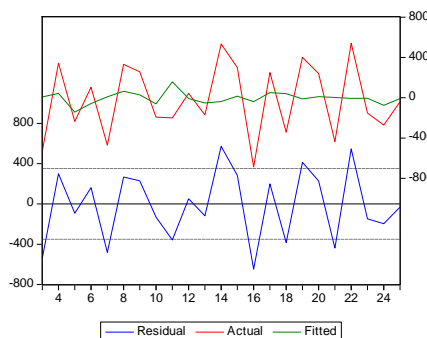
NIKKEI vs. Nifty



SGX vs. Nifty

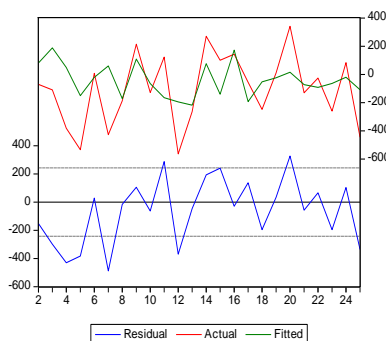
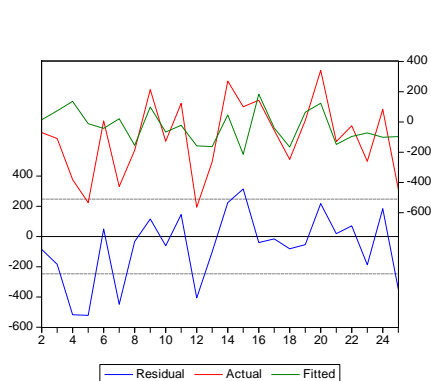


SHANGHAI vs. Nifty

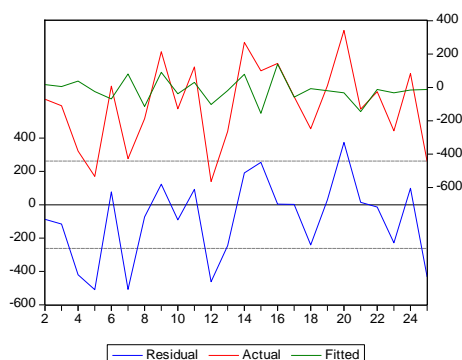


CAC-40 vs. Nifty

DAX vs. Nifty



FTSE vs. Nifty



	hangseng on nifty	dnikkei on nifty	sgx on nifty	shanghai on nifty	europa on nifty	germany on nifty	uk on nifty
Heteroskedasticity	0.0054	0.0065	0.0058	0.0021	0.0244	0.0033	0.0035
akaikie info criterion	26.34093	26.69454	26.2166	26.3021	25.66947	25.21399	25.73776
schwarz criterion	26.44012	26.79372	26.31579	26.40128	25.76821	25.31273	25.8365
Arch	0.0742	0.0009	0.1985	0.3099	0.0005	0.0085	0.009
akaikie info criterion	14.69152	14.56414	14.56704	14.82005	13.75157	13.65802	14.14555
schwarz criterion	14.889	14.76162	14.76452	15.01753	13.94791	13.85436	14.34189
Garch	0.0494	0.1647	0.3274	0.0577	0.0158	0.0129	0.1808
akaikie info criterion	14.75162	14.81213	14.7422	14.81782	14.00699	13.90004	14.04447
schwarz criterion	14.99847	15.05898	14.98905	15.06467	14.25242	14.14546	14.28989
Tarch	0.29	0.0446	0	0.369	0	0.0235	0.2324
akaikie info criterion	14.68283	14.66691	14.4755	14.84979	13.61103	14.09701	14.24627
schwarz criterion	14.8803	14.86439	14.67298	15.04726	13.80737	14.29336	14.44261
Egarch	0.0944	0.0826	0.2154	0.0252	0.2923	0.0013	0.1199
akaikie info criterion	14.78172	14.81056	14.66617	14.85613	14.2422	13.91638	14.23204
schwarz criterion	15.02857	15.05741	14.91302	15.10298	14.48763	14.16181	14.47746

Interpratation: The above volatility fluctuation impact by Asian and Europe on Indian market has Been analysis with regression model the residual test indicates that the volatility is Excision with all the market fluctuation Heteroskedasticity test Indicates that the volatility Is having signification value where all the probability figure were observe less than 0.05 Out of all models of regression arch model is found to be best model with NIKKEI, Shanghai and Germany to nifty. Garch model is found to be best model with UK to nifty

2.

Correlations						
Control Variables			NIKKEI	SSE	HANGSE NG	SINGAPO RE
MNIFTY	NIKKEI	Correlation	1	0.874	-0.185	0.128
		Significance (2-tailed)	.	0.002	0.634	0.742
		Df	0	7	7	7
	SSE	Correlation	0.874	1	-0.078	0.216
		Significance (2-tailed)	0.002	.	0.842	0.577
		Df	7	0	7	7
	HANGSEN G	Correlation	-0.185	-0.078	1	-0.14
		Significance (2-tailed)	0.634	0.842	.	0.72
		Df	7	7	0	7
	SINGAPO RE	Correlation	0.128	0.216	-0.14	1
		Significance (2-tailed)	0.742	0.577	0.72	.
		Df	7	7	7	0

Control Variables			DAX	FTSE	CAC40
NNIFTY	DAX	Correlation	1	0.018	0.884
		Significance (2-tailed)	.	0.964	0.002
		Df	0	7	7
	FTSE	Correlation	0.018	1	0.131
		Significance (2-tailed)	0.964	.	0.737
		Df	7	0	7
	CAC40	Correlation	0.884	0.131	1
		Significance (2-tailed)	0.002	0.737	.
		Df	7	7	0

Model Summary	
Multiple R	0.887
R Square	0.787
Adjusted R Square	0.617
Std. Error of the Estimate	0.003
Log-likelihood Function Value	-43.553

Coefficients						
	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta	Std. Error		
(Constant)	16273.69	3786.072			4.298	0.008
NIKKEI	-0.059	0.042	-0.303	0.215	-1.41	0.218
SSE	-0.007	0.027	-0.056	0.226	-0.248	0.814
HANGSEN						
G	-0.015	0.057	-0.098	0.361	-0.273	0.796
SINGAPO						
RE	-1.961	0.775	-0.866	0.342	-2.53	0.053

Model Summary	
Multiple R	0.777
R Square	0.604
Adjusted R Square	0.406
Std. Error of the Estimate	2.55E+05
Log-likelihood Function Value	-46.336

Coefficients						
	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta	Std. Error		
(Constant)	5760.84	2684.775			2.146	0.076
FTSE	-26.582	10.06	-0.995	0.376	-2.642	0.038
CAC40	2.746	2.242	2.159	1.763	1.225	0.267
DAX	-0.818	0.722	-2.043	1.804	-1.133	0.301

Interpretation: (Note: MNifty-Morning Nifty, NNifty-Noon Nifty)

Mnifty: The about table depicts the partial correlation with select Asian countries Opening prices of Indian with nifty opening NIKKEI and Singapore are having The highest correlation with nifty along with the china’s index shanghai, Hangseng is having negative relationship with Indian marled opening

Nnifty: The about table had given the partial correlation with European market Opening prices to Indian non prices francs CAC 40 is having strong Correlated with Indian market in the afternoon hour UK market FTSC Is observe slight co-relation during the afternoon fluctuation of nifty

3.

	a	B	x	Prediction	Directions
Germany	8477.35	-0.57147	14119.32	408.6495	Down
France	8477.35	-0.04446	1382.216	8415.897	Down
Uk	8477.35	0.721822	7483.679	13879.23	Up
Japan	8408.82	3.600897	-28812.1	-95340.6	Down
Singapore	8408.82	0.108922	2021.887	8629.047	Up
Hangsang	8408.82	-2.5146	6475.464	-16283.2	Down
Shanghai	8408.82	0.156022	-964.731	-150.519	Down

Interpretation: Regression equation has been apply to predict the future direction of Nifty with the select Asian and European market the analysis result Show that except UK and Singapore market all other market are indicating nifty Moment expected to go down side

Asian: Regression weight estimation has been applied on Asian courtiers with nifty the analysis Show that theR2 is found to be above the based valve that is 0.787 the significant Of impact is observe by NIKKEI and Singapore were has shanghai and hang seng were Found non significant

Europe: The about table of regression weight estimation with Europe courtiers show value Mean this study is having signification the result shows all European that opening market Is having significant impact on nifty noon fluctuation

FINDINGS:

1. Heteroskedasticity test is having the significant probability value with all the select Asian and European Countries with this analysis it has been found that Indian market volatility is influenced by the selected other countries data.
2. Indian Market is having strong correlation with Singapore and Japan indices.
3. France CAC 40 of European Market having higher correlation with nifty.
4. In Asian stock market NIKKEI and Singapore affecting the opening of Indian Market nifty.
5. European market was found to be significant with Indian market which indicate opening of European market influence the direction of nifty during the 12:30 to 12:40 pm.

CONCLUSION:

We conclude the analysis of global market time zone impact on nifty this analysis had proven the Singapore and nifty is having a significant impact on nifty opening European markets were having impact on nifty movement during the afternoon hours period the volatility of the Indian market is also influence by openings of selected Asian European markets on nifty hence there is a further scope to the research in this area to measure the external country influence on nifty so that investor can take inform decision during this countries opening time.

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Conflict of Interest Reported: Nil; Source of Funding: None Reported.