Testing Pattern of Indian Indices with Other Country Indices

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INTRODUCTION

During late Eighties, the increasing regionalisation of economic activities and liberalisation of financial markets have resulted in regional economic integration around the world. The Indian capital market has witnessed liberalisation from past one decade, as a result of ongoing economic and financial sector reforms initiated by the government of India since 1991. Along with various measures, the opening of home market for foreign investors leads the Indian stock market to integrate strongly with the stock market of rest of the world. Various theories in finance suggest that, it is degree and direction of correlation among the returns of securities as well as those of the stock markets which decide whether an investor is going to have any gains of diversification across the securities and the markets. For instance, if the stock markets of different countries move together, then investing in different stock markets would not generate required portfolio diversification gains. Hence, it is important for the investor to know whether diversification across the global stock markets will provide desired marked diversification gains. For this, it is essential for them to have an accurate estimate of degree and nature of correlation among the returns across the global markets. It is also observed that Indian stock market has not only attracted relatively less attention from international finance academia, but the market is considered somewhat isolated from international market. The existing research generally supports the existence of interdependence in return and volatility of stock and foreign exchange markets. However, it is very much centered on the developed markets. No such attempts have been made so far to examine the volatility spillover between the stock and foreign exchange markets in Indian context. Day of the week effect is also documented for other stock markets around the world. Among them Jaffe and Westerfield (1985) investigate the weekend effect in four developed markets, namely Australia, Canada, Japan and U.K. The result indicates the existence of weekend effect in all countries studied. Contrary to previous studies of the U.S. market, the lowest mean returns for both Japanese and Australian stock markets were found to

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be on Tuesday. Chan, Gup, Pan and Ming (1997) examine the relationships among stock prices in eighteen national stock markets by using unit root and co integration tests for the period 1961-92. All the markets were analyzed individually and collectively in regions to test for market efficiency. The result from unit root tests suggests that the world equity markets are weak form efficient. The co integration test results show that there are only a small number of significant co integration vectors over the last three decades. However, the number of significant co integrating vectors increases after the October 1987 stock market crash, a result that is consistent with the contagion effect. Apte (2001) investigates the relationship between the volatility of the stock market and the nominal exchange rate of India. The study suggests that there appears to be a spillover from the foreign exchange market to the stock market, but the reverse is not true. The main limitation of Apte's study is the fact that during the early part of the data series, there are sometimes long gaps due to the stock markets having been closed for several days at a stretch. Also, despite the fact that National Stock Exchange (NSE) started its security trading only in 1994, Apte's data period begins from January 1991 by simulating the previous data points based on post data points. Wong, Aman and Jun (2004) investigate the long run equilibrium relationship and short-run dynamic linkage between the Indian stock market and the stock markets in major developed countries after 1990 by examining the Granger causality relationship and the pair wise , multiple and fractional co-integration between the Indian stock market and the stock market these three developed markets. Indian stock market is integrated with mature market and sensitive to the dynamics in these markets in long run. In a short run, both US and Japan granger causes the Indian stock market but not vice versa. Further it is found, Indian stock index and the mature stock indices form fractionally co integrated relationship in the long run with a common fractional no stationary component and find that the Johansen method is the best reveal their co integration relationship.

HYPOTHESES

The following hypotheses have been tested on the different countries stock markets:

- **Related to weak form efficiency**

H_o: Successive stock price movement are independent of past stock prices

H_A: Stock price movement are identical to that of random numbers

- **Related to day of the week effect**

- there are no differences in the volatility of stock indices across the day of week; and

H_o: $\sigma_{MON}^2 = \sigma_{TUE}^2 = \sigma_{WED}^2 = \sigma_{THU}^2 = \sigma_{FRI}^2$

H_A: $\sigma_{MON}^2 \neq \sigma_{TUE}^2 \neq \sigma_{WED}^2 \neq \sigma_{THU}^2 \neq \sigma_{FRI}^2$

σ_i^2=variance of day of the week returns

- there are no differences of average return of specific day return with the other days of the week.

H_o: $\overline{X}_{\text{SPECIFIC DAY}} = \overline{X}_{\text{OTHER DAYS OF THE WEEK}}$

H_A: $\overline{X}_{\text{SPECIFIC DAY}} \neq \overline{X}_{\text{OTHER DAYS OF THE WEEK}}$

$\overline{X}_i$ = Average return of day of the week

➢ **Related to seasonal effect**

- there are no difference in the volatility of stock markets across the months of the year; and

H_o: $\sigma_{JAN}^2 = \sigma_{FEB}^2 = \sigma_{MAR}^2 = \sigma_{APR}^2 = \sigma_{MAY}^2 = \sigma_{JUN}^2 = \sigma_{JULY}^2 = \sigma_{AUG}^2 = \sigma_{SEP}^2 = \sigma_{OCT}^2 = \sigma_{NOV}^2 = \sigma_{DEC}^2$

H_A: $\sigma_{JAN}^2 \neq \sigma_{FEB}^2 \neq \sigma_{MAR}^2 \neq \sigma_{APR}^2 \neq \sigma_{MAY}^2 \neq \sigma_{JUN}^2 \neq \sigma_{JULY}^2 \neq \sigma_{AUG}^2 \neq \sigma_{SEP}^2 \neq \sigma_{OCT}^2 \neq \sigma_{NOV}^2 \neq \sigma_{DEC}^2$

σ_i=variance of months

- there are no differences of average return on stock markets across the month of the year.

H_o: $\overline{X}_{JAN} = \overline{X}_{FEB} = \overline{X}_{MAR} = \overline{X}_{APR} = \overline{X}_{MAY} = \overline{X}_{JUN} = \overline{X}_{JULY} = \overline{X}_{AUG} = \overline{X}_{SEP} = \overline{X}_{OCT} = \overline{X}_{NOV} = \overline{X}_{DEC}$

H_A: $\overline{X}_{JAN} \neq \overline{X}_{FEB} \neq \overline{X}_{MAR} \neq \overline{X}_{APR} \neq \overline{X}_{MAY} \neq \overline{X}_{JUN} \neq \overline{X}_{JULY} \neq \overline{X}_{AUG} \neq \overline{X}_{SEP} \neq \overline{X}_{OCT} \neq \overline{X}_{NOV} \neq \overline{X}_{DEC}$

$\overline{X}_i$ = Average return of months

➢ For testing the normality of returns of different days:

H_o: **Returns of different days follow a normal distribution**

H_A: **Returns of different days do not follow the normal distribution**

DATA

The list of stock markets consists of India and 34 other developed and emerging countries from rest of the world. The name of all the sample countries and their respective stock indices are mentioned in the appendix-I. S&P CNX Nifty index has been considered to represent the Indian market. Daily average equity price (Highest and Lowest price) indices of all the sample countries are obtained over a period of six years starting from April 2003 to March 2009. All the relevant data have been collected from national and international websites. Though the daily returns of most of the sample countries are matched by the calendar date, the trading sessions of the stock exchanges of those countries may not completely overlap across the market.

METHODOLOGY

- Average share price of each stock market is obtained as:

$$Share\ price = \frac{P_H + P_L}{2}$$

$$P_H = Highest\ market\ price\ during\ the\ day;$$

$P_L = Lowest\ market\ price\ during\ the\ day.$

- The daily return of the stock markets are calculated as:

$$R_t = \frac{(P_i - P_{i-1}) * 100}{P_{i-1}}$$

$$R_t \; is \; the \; rate \; of \; return \; for \; the \; period \; t;$$

$$P_i \; and \; P_{i-1} are \; the \; price \; of \; two \; successive \; periods \; t \; and \; t-1.$$

- For the turn of month effect, monthly return of stock markets are calculated as:

$$Monthly \; return = Average \; return \; of \; days \; in \; the \; month$$

- Weekly returns are calculated as:

$$Specific \; day \; return = Average \; return \; of \; specific \; days \; in \; a \; year$$

- Security standard deviation is calculated as:

$$\sigma_i = \sqrt{\beta_i^2 \sigma_1^2 \sigma_{\varepsilon i}^2}$$

- Correlation analysis attempts to determine the degree of relationship between different countries stock market. The formula for computing Pearson coefficient of correlation is:

$$r = \frac{\sum xy}{N \sigma_x \sigma_y}$$

$$where:$$

$x = (X - \bar{X});$

$$y = (Y - \bar{Y});$$

$$r = Correlation \; coefficient;$$

$$\sigma_x = Standard \; deviation \; of \; series \; X;$$

$$\sigma_y = Standard \; deviation \; of \; series \; Y; and$$

$$N = Number \; of \; pairs \; of \; observations.$$

- Skewness is the measures of symmetry of a distribution. It is measured as:

$$SK_P = \frac{Mean - Mode}{Standard \; Deviation}$$

- Kurtosis is the measure of peakness or flatness of a distribution when compared with a normal distribution. A positive value indicates a relatively peaked distribution, and a negative value indicates a relatively flat distribution. The most important measure of kurtosis is the value of the coefficient β^2. It is defined as:

$$\beta^2 = \frac{\mu_4}{\mu_2^2}$$

$$where:$$

$$\mu_4 = 4^{th} \; moment; and$$

$$\mu_2 = 2^{nd} \; moment.$$

- To examine the randomness, this study employs the Ljung Box statistics to detect the autocorrelation in the returns of the stock markets. If random, such autocorrelation should be near zero for any and all time-lag separations. If non-random, then one or more of the autocorrelations will be significantly non-zero. The serial correlation coefficient is estimated by:

$$r_k = \frac{C_k}{C_o}$$

$$where:$$

$$C_k = \frac{1}{n}\sum_{t=1}^{n-k}(X_t - \bar{X})(X_{t+k} - \bar{X});$$

$$K = 0,1,2, \dots \dots, n;$$

$$\bar{X} = \frac{1}{n}\sum_{t=1}^{m} X_t \ is\ mean\ of\ the\ whole\ series;$$

$$C_o\ is\ variance\ of X_t\ ;\ and$$

$$n\ is\ number\ of\ observation.$$

Statistical testing of the serial correlation coefficient requires the standard error of estimated coefficient, which is explained below:

$$Z = r_k\sqrt{n-k}$$

- Independent t test is tested whether mean differences of specific day returns and other days returns are significant or not. To carry out the test, it calculates the statistic as follows:

$$t = \frac{\bar{X}_1\bar{X}_2}{S} * \sqrt{\frac{n_1 n_2}{n_1 + n_2}}$$

$$S = \sqrt{\frac{\sum(X_1 - \bar{X}_1)^2 + \sum(X_2 - \bar{X}_2)^2}{n_1 + n_2 - 2}}$$

$$where:$$

$$\bar{X}_1\ is\ the\ mean\ of\ specific\ day\ retuns;$$

$$\bar{X}_2\ is\ the\ mean\ of\ other\ days\ returns\ in\ week;$$

$$n_1\ is\ the\ number\ of\ observations\ for\ specific\ day;$$

$$n_2\ is\ the\ number\ of\ observations\ for\ other\ days\ in\ week;\ and$$

$$S\ is\ the\ combined\ standard\ deviation.$$

- Leven's test is employed for testing the equality of the variance of daily returns across days of the week and monthly return across months of the year The test statistic, W , is defined as follows:

$$W = \frac{\left\{\sum_{j=1}^{j} n_j\left(D_{\cdot j} - D_{\cdot\cdot}\right)^2\right\}}{\{\sum_{j=1}^{j}\sum_{i=1}^{nj}\left(D_{ij} - D_{\cdot j}\right)^2\}}\left[\frac{(N-J)}{(J-1)}\right]$$

$$D_{ij} = \left|\mathrm{R_{ij}M_j}\right|$$

$$where:$$

$$W\ is\ the\ result\ of\ the\ test;$$

$\mathrm{R_{ij}}$ is the value of the $\mathrm{i^{th}}$ sample in the $\mathrm{j^{th}}$ group;

$\mathrm{M_i}$ is the number of sample in the $\mathrm{j^{th}}$ group;

$$D_{\cdot j} = \sum_{i=1}^{nj} \frac{D_{ij}}{n_j}, which\ is\ the\ mean\ of\ the\ D_{ij}; and$$

$$D.. = \sum_{j=1}^{j}\sum_{i=1}^{nj} \frac{D_{ij}}{N}\ , is\ the\ grand\ mean\ of\ D_{ij}.$$

The significance of w is tested against $F\ (\alpha, k-1, N-K)$ where; F is a quintile of the F test distribution, with $k-1$ and $N-K$ its degrees of freedom, and α is the chosen level of significance (usually 0.05 or 0.01).

- Kruskal-Wallis test is used to examine statistical significance of difference in mean returns for month of the year. In the process, trading return for each month is considered as independent sample itself. The Kruskal-Wallis H statistics is obtained in the framework given below:

$$H = \left\{\frac{12}{N(N+1)}\sum_{J=1}^{K}\frac{R_J^2}{n_J}\right\} - 3(N+1)$$

$$where:$$

$$R_J\ is\ the\ rank\ sums\ of\ each\ of\ 12\ months;$$

$$n_J\ is\ the\ number\ of\ each\ of\ 12\ months; and$$

$$N\ is\ the\ total\ number\ of\ months.$$

- The Kolmogorov-Smirnov test is used to decide if a sample comes from a population with a specific distribution. Normalcy's are to be tested with Kolmogorov-Smirnov test. It is based on the empirical distribution function (ECDF). Given N ordered data points $Y_1, Y_2, \ldots\ldots, Y_N$, the ECDF is defined as:

$$E_N = n(i)/N$$

Where n (i) is the number of points less than $\mathrm{Y_i}$ and the $\mathrm{Y_i}$ are ordered from smallest to largest value. This is a step function that increases by $1/N$ at the value of each ordered data point. The k-s test statistic is defined as:

$$D = \max_{1\le x\le N}\{F(Y_i) - \frac{i}{N}, \frac{i}{N} - F(Y_i)\}$$

RESULT AND DISCUSSION

Returns

The summary statistics of daily return of the sample indices are shown in the appendix-II. The mean return of all the countries are showing different picture in different years. In 2003-04, all countries indices indicates positive returns. Also for 2004-05 to 2006-07 same results are observed (except Finland, china, Hong Kong, Taiwan and Malaysia in 2004-05, Peru and Philippines in 2005-06 and Turkey and Pakistan in 2006-07). All European countries, USA, Venezuela, Japan, Sri Lanka and Malaysia have negative returns in 2007-08. In 2008-09, negative returns are shown by all countries (except Venezuela) due to recession. NSE Nifty show the positive returns in all years except 2008-09.

Standard Deviation

It is noted during the study that standard deviation in Russian index for period 2004-05, 2006-07 and 2008-09, Turkey index for 2000-01 and 2002-03, Pakistan index for 2005-06 and Chinese index for 2007-08 are maximum. Therefore, study shows highest volatility during different study periods. India ranks 29th position in 2002-03, 16th in 2003-04, 4th in 2004-05 15th in 2005-06, 6th in 2006-07, 3rd in 2007-08 and 10th in 2008-09 as far as the return volatility is concerned. This study also presents the standard deviation of negative returns and positive returns. The concept of standard deviation of negative returns is based on the assumptions that when prices are rising either at one per cent or at hundred per cent, it has positive effect on investors. Positive variation is not the concept of risk (such as 1 percentage in t day, 100 per cent in t+1 day and 5 per cent in t+2 day), very few positive percentage increase the expectation of investors. Risk only arises when prices are decline. The study reveals that standard deviations of negative returns are less than standard deviation of total returns (positive and negative returns). It can also be seen that standard deviation of negative returns are higher as compare to standard deviation of positive returns in most of the observations.

Skewness, Kurtosis and Kolmogorov-Smirnov

The values of skewness for last six years are fairly negative in case of majority of the indices i.e. 155 observations out of 216 gives negative skewness. Thus it shows that 13 indices, 32 indices, 31 indices, 34 indices, 30 and 15 indices are negative from 2003-04 to 2008-09. However, Indian index shows negative skewness. There is very low skewness for 212 observations (values less than one), whereas the value of 4 observations are more than one. So it can be concluded that the stock prices are not clearly normally distributed, but it's close to curve. The value of kurtosis calculated on study data suggests that 164 observation shows plutocratic curve and 52 observation shows leptokurtic curve. However, 4 indices, 10 indices, 7 indices, 7 indices, 10 indices, 9 indices and 16 indices from 2003-04 to 2008-09 are leptokurtic. In case of NSE index, in 2003-04 the values are plutocratic and after this they are leptokurtic. It also

supports that stock indices are not normally distributed.

Correlation

All North American countries, South American countries (except Venezuela) , European countries , Australia , New Zealand and some Asian countries shows significant correlation at one per cent and five per cent level with other countries. However, insignificant relations are observed in case of Pakistan, china and Sri Lanka. Indian index indicates significant correlation with other countries indices except few one. Hence, through correlation it can be concluded that countries stock indices across the world moves together. It depicts that Indian index has significant relation with all other countries except Venezuela (2003-04 to 2008-09), Peru (2006-07), Argentina (2003-04 and 2004-05), Brazil and Denmark (2003-04), USA (2005-06), Pakistan, china, Sri Lanka, Malaysia (2005-06) and Philippines (2005-06). With their entry into liberalization phase, majority of stock markets have reported interdependence.

Serial Correlation

Autocorrelation is measured for all countries indices up to sixteen lags statistic. In all years, majority of indices auto correlation such as 88.57 per cent countries, 86.11 per cent countries, 72.22 per cent countries, 83.33 per cent countries, 61.11 per cent countries and 55.26 per cent countries are significant at one per cent level and 2.86 per cent countries, 5.56 per cent countries, 13.89 per cent countries, 8.33 per cent countries, 19.44 per cent countries and 26.32 per cent countries are significant at five per cent level from 2003-04 to 2008-09 for one day lag, statistics 2 through 16 lags are also significant. Therefore, few countries indices are not auto correlated. The Ljung –box statistics which test the autocorrelation in stock returns strongly rejects the null hypothesis and holds the presence of autocorrelation. The significant autocorrelations question the random walk behaviour of stock returns, suggesting that majority of countries stock market is inefficient in information. The prevailing stock prices have not absorbed the historical and available information pertinent to stocks. Inference can be drawn here that the investors' current investment decisions are strongly influenced by the previous time period decisions.

Day of the week effect

In existing studies related to the different market index, daily investigation of the week has revealed that mean return on Friday is higher and on Monday is lower as compared to other days. All these studies are not based on recent year's data. While this study done on the recent data, which investigates five types of anomalies namely Monday, Tuesday, Wednesday, Thursday and Friday. The results show that no specific day is important as compared to other days; there is insignificant difference between specific day and other days. Few countries have significant difference at one per cent and five per cent level. It was found that all days are equally important for investor in world stock markets.

Seasonal Effect

Leven and K-W tests statistic are used for testing the homogeneity of variance and difference between mean return in various months. The result shows that homogeneity of variance is insignificant, only five countries and three countries are significant at one per cent and five per cent level respectively. It was found that there are insignificant differences between all months of all stock markets. This study reveals that foreign markets prices are also not affected by season's anomalies.

CONCLUSIONS

For taking the advantages of diversification in global market, it is important to know the pattern of indices of different continents. The findings of the study are:

Mean returns of majority of countries are positive i.e. all countries in 2003-04, 86.11 per cent countries in 2004-05, 94.29 per cent countries in 2005-06 and 94.44 per cent countries in 2006-07. However, in 2007-08 number of countries decreases to 47.22 per cent and only one country (Venezuela) indicates positive return in 2008-09. Recent years decline is due to recession in the world market. India stands 29th in 2002-03, 16th in 2003-04, 4th in 2004-05 15th in 2005-06, 6th in 2006-07, 3rd in 2007-08 and 10th in 2008-09 as far as the return volatility is concerned. The study shows that less number of countries returns are normally distributed by applying Kolmogorov-Smirnov test. All North American countries, South American countries (except Venezuela) , European countries , Australia , New Zealand and some Asian countries are showing significant correlation at 1 per cent and 5 per cent levels with other countries. Pakistan, china and Sri Lanka shows insignificant relation. India indicates significant correlation with other countries except few one. Stock returns of majority of countries are auto correlated, reject the EMH, and hold that current stock returns are significantly affected by returns being offered in the past. The anomalies related to day of the week do not exist in the all stock markets; there is insignificant difference between specific day and other days of most of countries stock markets. The result of the study also shows that Seasonal effect is not seen in any stock market; there are insignificant differences between all months of stock markets. It means it is not possible to earn abnormal returns. In present scenario, all countries are directly and indirectly linked with each other. This study is useful for investors to know that they do not take full advantage of diversification and pattern of international stock markets.

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APPENDIX-I

NAME OF EQUITY INDEX OF DIFFERENT COUNTRIES

Serial. No	NAME OF COUNTRIES	NAME OF EQUITY INDEX
1	AUSTRALIA	All Ordinaries
2	NEW ZEALAND	New Zealand Stock Exchange 50
3	VENEZUELA	IBC
4	PERU	Lima General
5	ARGENTINA	MerVal
6	BRAGIL	Bovespa
7	MAXICO	IPC AllShare
8	AUSTRAIA	Vienna ATX
9	BELGIUM	BEL20 (BFX)
10	DENMARK	KFX Copenhagen Stock Exhange Index
11	FINLAND	Helsinki General
12	FRANCE	CAC 40
13	GERMANY	DAX 30Deutscher Aktienindex
14	GREECE	Greece Stock Exchange Composite Index
15	ITLY	MIB 30 Milan La Borsa Valori Italiana
16	NETHERLAND	EuroNext Amsterdam AEX General
17	NORWAY	Oslo Stock Exchange (OSE) All Share
18	SPAIN	IBEX 35 Sociedad de Bolsas SA
19	SWEDEN	Stockholm All Share
20	SWIZERLAND	Zuric Swiss Market
21	UK	FTSE 100 Financial Times
22	USA	S&P 500 (large cap)
23	CANADA	S&P TSX Index Composite
24	TURKEY	ISE Istanbul National100
25	PAKISTAN	Karachi 100
26	CHINA	Shanghai Composite
27	INDIA	Bombay Sensex

28	HONG KONG	Hang Seng
29	JAPAN	Nikkei 225 Nihon Keizai Shimbun Inc
30	KOREA	KOSPI Korea Composite Stock Price Index
31	RUSSIA	Moscow Times
32	SHRI LANKA	CSE All Share
33	TAIWAN	Taiwan Weighted
34	INDONASIA	Jakarta Composite
35	MALASIA	Kuala Lumpur Stock Exchange Composite
36	PHILLIPINES	PSE Composite
37	SINGAPUR	Straits Times
38	INDIA	S&P CNX Nifty Fifty Calcutta

APPENDIX-II

MEAN STATISTIC OF THE STOCK INDICES UDER STUDY

NAME OF COUNTRIES	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
AUSTRALIA	-	-	-	-	-	-0.2276
NEW ZEALAND		0.0925	0.0281	0.0663	-0.0534	-0.1246
VENEZUELA	0.5309	0.0775	-0.0457	0.2310	-0.1287	0.0725
PERU	0.2217	0.1479	0.1709	0.3289	0.0676	-0.2105
ARGENTINA	0.2852	0.1176	0.0590	0.0170	0.0141	-0.2948
BRAGIL	0.3191	0.0883	0.1339	0.0089	0.1963	-0.1458
MAXICO	0.2288	0.1235	0.1211	0.1188	0.0771	-0.1213
AUSTRAIA	0.1666	0.1616	0.1489	0.0067	-0.0364	-0.3216
BELGIUM	0.1725	0.0866	0.0811	0.0430	-0.0551	-0.2925
DENMARK	0.1874	0.0540	0.0825	0.0585	-0.0215	-0.2327
FINLAND	0.1312	-0.0244	0.1312	0.0362	0.0245	-0.3251
FRANCE	0.1324	0.0267	0.0861	0.0278	-0.0530	-0.2029
GERMANY	0.1875	0.0261	0.1117	0.0528	-0.0026	-0.1782
GREECE	0.1272	0.0836	0.1129	0.0523	-0.0165	-0.3943
ITLY	0.0756	0.0458	0.0676	0.0183	-0.0532	-0.2623
NETHERLAND	0.1397	0.0166	0.0804	0.0226	-0.0366	-0.2658
NORWAY	0.2690	0.0959	0.2309	0.0514	-0.0147	-0.2238
SPAIN	0.1358	0.0414	0.0901	0.0677	-0.0185	-0.1998
SWEDEN	0.1683	0.0422	0.1122	0.0513	-0.0598	-0.1412
SWIZERLAND	0.1476	0.0116	0.1081	0.0377	-0.0564	-0.1641
UK		0.0347	0.0616	0.0132	-0.0206	-0.1545
USA	0.1117	0.0246	0.0231	0.0370	-0.0093	-0.1816
CANADA	0.1235	0.0409	0.0676	0.0091	0.0129	-0.1755
TURKEY	0.2228	0.1444	0.2004	-0.0411	0.0281	-0.1946

PAKISTAN	0.3075	0.2018	0.1187	-0.0114	0.1436	-0.3308
CHINA	0.0459	-0.0995	0.0029	0.2966	0.1724	-0.1841
INDIA(BSE)						-0.2416
HONG KONG	0.1572	-0.0198	0.0656	0.0569	0.0966	-0.2061
JAPAN	0.0222	0.0286	0.1018	0.0334	-0.1135	-0.2062
KOREA	0.1742	0.0514		0.0366	0.1146	-0.0692
RUSSIA	0.2059	0.0484	0.3117	0.1159	0.0535	-0.4827
SHRI LANKA	0.2535	0.1892	0.1466	0.1193	-0.0808	-0.1888
TAIWAN	0.1642	-0.0497	0.0200	0.0526	0.1561	-0.1300
INDONASIA	0.2814	0.1372	0.0663	0.1439	0.0279	-0.2032
MALASIA	0.1293	-0.0048	0.0032	0.0961	-0.0524	-0.1438
PHILLIPINES	0.1372	0.1302	-0.0037	0.1704	0.0245	-0.1615
SINGAPUR	0.1585	0.0499	0.0521	0.0905	0.1177	-0.2262
INDIA (NSE)	0.2345	0.0642	0.2119	0.0562	0.1195	-0.1723
NUMBER OF POSITIVE RETURN COUNTRIES	35	31	33	34	17	1
TOTAL COUNTRIES	35	36	35	36	36	38