

Financial Integration of BRICS Equity Markets: An Empirical Analysis

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ABSTRACT

Brazil, Russia, India, China and South Africa (BRICS) are leading emerging economies and political powers at international and regional level. These economies are attracting huge investment from foreign countries into their economy. The present study examines the comparative study of stock market return of BRICS economies. Each country have their different stock market and their indices such as Brazil has BM&F Bovespa (bovespa), Russia has Moscow Exchange (RTS Index), India has Bombay Stock Exchange (Sensex Index), China has Shanghai Stock Exchange (SSE Index), South Africa has Johannesburg Stock Exchange (FTSE/JSE Index) respectively. It tries to find out the relationship of stock market among these economies and the volatility in the markets. This paper also studies the dynamic relationship between the stock returns volatility in the emerging financial markets. It also analyses the volatility of each individual BRICS stock market returns before and after the 2008 US Subprime Crisis. The idea behind the selection of BRICS economies is to know how the stock markets of these prominent countries are inter related to each other. On the basis of Correlation Analysis all BRICS stock index returns are positively correlated, India and Brazil markets have high positive association and Russia and China markets have lowest correlation coefficient during the study period. Any kind of volatility in one economy will have a cascading impact on other economics due to international trade relation. This shows that there is a chance for the investors to diversify their portfolio to other BRICS countries.

Keywords: *Stock Market Volatility; Stock Market Returns; Capital Market; Global Financial Crisis.*

INTRODUCTION

The term, "BRICS", was coined by economist Jim O'Neill in his publication, Building Better Global Economic BRICS. BRICS is the acronym for of five major emerging economies namely Brazil, Russia, India, China, and South Africa. Till 2010 it was called BRIC as there were only four nations and with the inclusion of South Africa in 2011, it was changed to BRICS. All the BRICS nations are developing and walking toward rapid industrialization. The combined population of all BRICS

nations is around 300 Crores which is almost 40 % of world population. Whereas the combined nominal GDP is around 20 % of world's GDP. They also represent around 18 % of world economy. It is speculated that by 2022 BRICS would become a formidable player in the world economy posing a serious challenge to the USA overtaking its economy. The purpose of the research paper is to explore the relationship between the Brazilian, Russian, Indian, Chinese and South African (BRICS) stock markets. It investigates how these prominent emerging nations are related to each other, and how they can provide global investors with the potential for long-term diversification opportunities.

The original BRIC co-operation was officially founded in 2009, and by that time the participating countries only consisted of Brazil, Russia, India and China (Luckhurst 2013). China subsequently invited South Africa to join the co-operation in 2010 which created the BRICS collaboration as it is known today (Global Sherpa 2019b). Later, in 2014, the New Development Bank was formalized in order to further increase the mobility of resources between different projects among the BRICS nations. It was also supposed to provide economic stability, solidity, and integration among its member countries (New Development Bank 2017, 2019).

The global money crisis of 2007-2008 left each economy in an exceedingly state of shock and conjointly inflated the volatility within the markets across the globe since group action of capital markets not solely offers a chance to speculators to invest their cash in their own country, however conjointly the country of their alternative too. Therefore, throughout the amount of crisis, international investors tried to diversify their investments in additional promising countries. BRICS countries, being a worldwide market hub, are growing quicker than the globe rate of growth and saw a lot of investment movements throughout and when this era.

This study focuses on the analyses carried out to establish whether the BRICS countries stock market return were affected by the financial stress before and after 2008 financial crises. The index of BRICS countries respectively are: BOVESPA-Bo Vespa (Brazil), RTS-Moscow Exchange before known as MICEX (Russia), SENSEX-Stock Exchange Sensitive Index (India), SSE composite-Shanghai Stock exchange (China) and JSE- Johannesburg Stock Exchange (South Africa).

STATEMENT OF THE PROBLEM

Analyzing the dependence of the stock markets of BRICS countries is the main area of research in this study. If there is dependence among the BRICS stock markets, then portfolio diversification is not possible among these countries. The investors can diversify their portfolio and invest in these countries stock markets, only when there is no causal relationship. If there no causal relationship

among these stock markets, then the investors can diversify their portfolio and invest in these countries stock markets. The research questions addressed in this study are as follows;

- Is there any relationship exists between the BRICS nation's stock market?
- Does any stock market of BRICS countries helps in predicting the behaviour of other stock markets in the group?

REVIEW OF LITERATURE

Nashier (2015) examined the integration among the stock markets return of BRICS and the stock markets of the U.S. and U.K, from 2004 to 2013. The methodology used for the study is using the Correlation Analysis and the Johansen's co-integration test. The study concluded that there is a short-term static and long-term dynamic integration between the stock markets. Venkatesh (2013) has studied on the trends, similarities, different patterns and movement of BRICS economies. Kumar(2017) has established a causality relationship among various stock market indices and shown that these indices are co-integrated with each other. Naidu & Subbarayudu (2014) suggests that BRICS' economies stock market movements affect other European markets. This study shows that there is a significant impact of BRICS stock market return to European markets. Kishor & Singh (2014) has analyzed the stock return volatility effect of BRICS nations from 2007 to 2013 using GARCH model. The study pointed out that BRICS stock market except Brazil and China stock indices have been affected by the news of US stock market.

Gambhir & Bhandari (2011) understanding the relationship of BRIC nations stock market return and provides information that is related to the stock market co-integrations to the investors. Bhatia & Binny (2014) examined the volatility in the India and China markets and to assess or evaluates the interconnection between the markets using Granger Causality test. Volatility is highest in year 2008 in the both countries because of financial crisis, but Indian market has more volatile than china's market during the entire period. Kishor & Singh (2017) establish the relationship and linkages among BRICS economics and also found the effect of one stock index of one country on the other countries stock indices. The causes and effect relationship among various indices are founded through Granger Causality analysis. The result shows that there is a significant positive correlation among Nifty and other BRICS indices. Kiranmai (2017) established the relationship of the stock market among BRICS economics and the volatility of the stock markets from 2004 to 2016. The study concluded that there is a positive correlation or relationship among BRICS countries stock market return.

Shachmurove (2006) analyzed the dynamic linkages among the US stock exchanges and the four “Emerging Tigers of the Twenty First Century” – BRICs from 1995 to 2005 using VAR model, Impulse Response and Variance Decomposition. The finding of the study shows that the Brazilian stock markets are significantly influenced by the other countries’ stock markets. Russian stock markets are also affected by the other markets but only to a lesser extent. The study also revealed that the Chinese stock markets are mostly independent from the other markets. Bhar and Nikolova (2009) conducted cointegration analysis between BRIC countries, their respective regions and the world, using the weekly data for the period January 1995 to October 2006. The studies indicated that India has the most regionally and globally integrated stock market among the BRIC countries. After come the stock markets of Brazil, Russia and lastly China. The result shows that investors can gain diversification opportunities in China.

Chittedi (2010) examined the integration of the stock markets return among the BRIC countries, as well as their integration with the stock markets of US, UK and Japan from 1998 to 2009. The result shows that there is a cointegration between BRIC and the developed countries. Gupta (2011) examined the relationship among emerging countries, with special stress on the BRIC countries, during the financial turmoil from 2008 to 2011. Granger Causality test was applied in order to assess the causal relationship among the BRIC indices. The result shows that Chinese economy is highly interdependent on Indian and Russian economies.

Sharma et al. (2013) analyzed the relationships between the BRICS stock market indices. Advanced statistical techniques like VAR model and Variance Decomposition Analysis are applied for studying the interconnections of the emerging market indices. The analysis revealed slight interconnections among the BRICS indices, implying diversification opportunities for global investors. Dasgupta (2014) conducted analysis on integration of the Indian stock markets with BRIC markets from January 2003 to 31st December 2012 using Granger causality tests for estimating the short and long term relationships among the selected indices. This study shows that the Indian capital market has strong impact on Brazilian and Russian stock markets and the Indian stock market has the dominance or top performance among the BRIC countries

Nashier (2015) employed the correlation and Johansen cointegration tests to assess the integration level between the BRICS stock markets and the stock markets of US and UK using the data span from 2004 to 2013. The study concluded that there exist short and long term integrations between the mentioned markets implying low level of diversification. To summarize the above-mentioned literature survey on stock market integration, it is evident that the results and findings contradict each other. The variation of the results is mainly the result of variable selection, the applied research

methodology, the selected countries subject for the analysis, as well as the period of study and its length. Thus, a single general conclusion cannot be driven from the literature survey.

SCOPE OF THE STUDY

The present study examines the comparative study of stock exchanges of BRICS economies. It tries to find out the relationship of stock market among these economies and the volatility in the markets. For the purpose of this study data has been collected through secondary sources. A period of 19 years i.e. 2000 to 2019 has been considered for the purpose of the study.

SIGNIFICANCE OF THE STUDY

This study helps us to analyze whether the BRICS countries stock market return were affected by the financial stress before and after 2008 Financial Crises. This study can also help the policy makers and practitioners. It helps to examine the nature and extent of linkage between the stock market returns of the BRICS countries and also helps to explore the spillover of changes in price (or returns) and the volatility of stock markets of BRICS countries.

OBJECTIVES OF THE STUDY

- To analyze the growth and trend of BRICS countries stock market return.
- To identify the causal relationship among the stock markets of BRICS countries
- To study the impact of stock market returns of BRICS countries before and after the financial crisis.
- To analyze the impact of Indian capital market return to other BRICS countries capital market return.

RESEARCH METHODOLOGY

The research design followed is 'Exploratory research design'. Capital markets of BRICS countries i.e. Brazil, Russia, India, China and South Africa were included in this research. The secondary information has been sourced from the websites, business related magazines, journals & research papers.

Data Collection

The research is purely based on secondary data collected from official stock exchange websites of respective countries namely Brazil, Russia, India, China and South Africa. The data was collected for a period of 19 years i.e., from 2000 to 2019. In this study IBOVESPA index to represent Brazil stock market, RTS index to represent Russia stock market, SENSEX to represent India stock market,

Shanghai composite index to represent China stock market and FTSE/JSE all shares index as a representative of South Africa stock market.

DATA ANALYSIS

Data can be analyzed with the help of Descriptive statistics and inferential statistics in the research. The correlation coefficient indicates the extent to which a stock market is linearly associated with another stock market. Regression Analysis is to measure the impact of Indian stock market with other stock market of BRICS countries.

LIMITATION OF THE STUDY

This study is mainly based on secondary data. The past performance may or may not be sustained in the future. This study is limited to certain stock markets of BRICS countries of 20 years and is limited to time constraints.

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

The modern portfolio theory implies that when the markets are fully integrated, the investors are indifferent in which market to invest their funds, as they are compensated similarly for taking the systematic risk. Thus, the only factor determining the asset prices is the systemic risk related to the global market. But for a fully segmented market, the deterministic factor of the asset pricing is the domestic market systemic risk. With the current trends of globalization of the world markets, the systemic risk must incorporate the risks related to the other markets, which becomes the deterministic factor of the CAPM. The efficient market hypothesis (EMH) is the proposition that the current stock prices fully reflect all the relevant information, including the information regarding the systematic risk. From the global perspective, the unsystematic risk is the risk related to separate country's stock market and can be reduced through diversification, whereas the systematic risk is inherent to the entire global market. The CAPM uses the non-diversifiable or systemic risk for pricing the assets. In this scope, the international investors can get diversification benefits through investing in different countries' stock markets and are compensated for taking the systemic risk, which is included in the information incorporated in the stock prices. Thus, the CAPM is taken as the theoretical framework for this research. The objective is to investigate the existing interrelationships among the BRICS stock markets and the possibility of the diversification gains in those markets. The study is carried out through using some hypothesis tests for evaluating the short term linkages, and well as the long term cointegration of the stock markets

Stock Market in BRICS Countries: BRICS countries are now being looked as force of reckoned in the international financial markets. Though the stock exchange of BRICS economies may be categorized according to certain criteria. The table 1 indicates the Stock Market Indices used in the analysis.

Table 1: BRICS Countries and their Stock Indices.

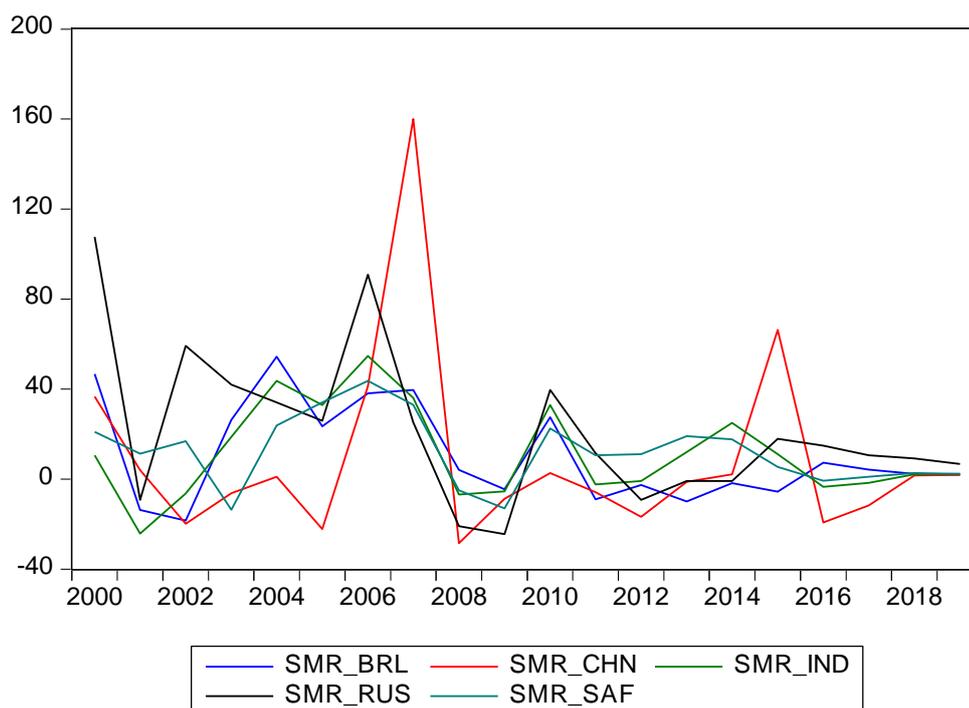
S.no	Country	Region	Stock Exchange	Index Selected	Abbreviations used
1	Brazil	America	Bo Vespa, BM&F	BOVESPA Index	BOVESPA
2	Russia	Europe	Moscow Stock Exchange	MOEX Index	RTS
3	India	Asia	Bombay Stock Exchange	SENSEX Index	SENSEX
4	China	Asia	Shanghai Stock Exchange	SSE Composite Index	SSE
5	South Africa	Africa	Johannesburg Stock Exchange	JSE Top 40 Index	JSE

Table 2: Stock Market Return of BRICS Economies

Year	Percentage of Stock Market Returns				
	BRAZIL	RUSSIA	INDIA	CHINA	SOUTH AFRICA
2000	46.71	107.57	10.53	36.64	21.01
2001	-13.71	-9.29	-24.29	3.94	11.24
2002	-18.44	59.18	-6.47	-19.88	16.8
2003	26.24	41.96	18.76	-6.35	-13.58
2004	54.43	34.02	43.64	1.03	23.84
2005	23.47	25.94	32.89	-22.21	34.03
2006	38.06	90.88	54.74	41.3	43.63
2007	39.63	25.24	36.04	159.99	33.06
2008	4.04	-20.93	-6.88	-28.46	-4.99
2009	-4.54	-24.44	-5.46	-8.79	-13.08
2010	27.5	39.68	32.89	2.73	22.46
2011	-9	11.54	-2.36	-5.8	10.56
2012	-2.62	-9.29	-0.9	-16.79	11.03
2013	-9.94	-0.86	11.95	-1.24	19.13
2014	-1.76	-0.81	24.93	2.12	17.67
2015	-5.59	17.94	11.01	66.27	5.36
2016	7.26	14.83	-3.46	-19.31	-0.71
2017	4.24	10.56	-1.64	-11.67	1.02
2018	2.38	9.15	2.03	1.67	2.67
2019	1.98	6.67	2.35	1.82	2.35
AVG	10.52	21.48	11.52	8.85	12.18
S.D	20.99	33.19	19.75	41.32	14.91

The returns of stock market returns of BRICS economies are plotted on a line graph (Refer Figure No: 1 and table No:2). It is observed that the market providing the highest return is also the most volatile which is in congruence with the high risk-high return theory. From the graph it can be inferred that Russia stock market is found to be the most efficient market among BRICS during the entire period on the basis of return. Indian stock market has shown the least variation and hence appears to be less risky but actually Russian stock market appears to be moderately risky. At the same time China stock market is underperformed from the return point of view.

Figure 1: Stock Market Return of BRICS Economies



Financial Crisis: The present study evaluates the impact of financial crisis on BRICS country's stock market performance. The exact impact is examined by analysis the growth rate of BRICS countries Stock market in the pre and post crisis period.

The Table 3 shows the descriptive statistics of BRICS countries for the period 2000 to 2019. It exhibit to know the level of risk or volatility between the BRICS countries before and after the financial crises. A high standard deviation indicates high risk or volatility and low standard deviation indicates less risk similarly a high coefficient of variation indicates that the greater the level of dispersion around the mean and low coefficient of variation indicates the more precise the estimate. It can be infer that the level of risk or volatility before the financial crises is much higher than that after the financial crises for all the countries. China has the highest standard deviation of 55.75 which indicates more risk than the others followed by Russia and Brazil having 35.39 and 25.27 as standard deviation respectably before the financial crises. After the financial crises South Africa and Brazil

Table 3: Descriptive Statistics of BRICS Countries Stock Market Performance

Overall Period:	BOVESPA	RTS	SENSEX	SSE	JSE
Mean	10.52	21.48	11.52	8.85	12.18
Standard Deviation	20.99	33.19	19.75	41.32	14.91
Coefficient of Variation	199.52	154.52	171.44	466.89	122.41
Before Financial Crises:					
Mean	24.55	46.94	20.73	24.31	21.25
Standard Deviation	25.27	35.39	24.86	55.75	16.37
Coefficient of Variation	102.93	75.39	119.92	229.33	77.04
After Financial Crises:					
Mean	0.90	6.82	6.49	1.00	7.13
Standard Deviation	9.86	15.56	11.93	21.95	9.86
Coefficient of Variation	1095.56	228.15	183.82	2195.00	138.29

was less risky with a standard deviation of 9.86. Russia and China having standard deviation of 15.56 and 21.95 respectively after the financial crises. By looking the overall view China is more risky than the other countries followed by Russia and Brazil. While looking the mean return of these countries Russia as the highest mean of 21.48 which means having the highest return followed by India and Brazil having a mean of 11.52 and 10.52 while taking the overall view of descriptive statistics. The study found that BRICS stock market except Russian stock market has been significantly affected by the news of recession in US stock market and stock returns volatility has significantly changed during the crisis and recovery periods but these changes are not uniform and depend upon the individual markets.

The trend of Brazilian stock market return keeps on varying. We can see that in 2001 there is a tremendous decrease from 46.71 to -13.71 and then it kept decreasing till 2002. Then we can see that there is an increase in 2003 from -18.44 to 26.24. Then the movement of trend of the stock market return of Brazil did not shown any decreases until the financial crises 2007-2008. After the financial crises we can see that the returns do not show any increases as before the financial crises. In 2010 the stock returns showed an increase of only 27.5 and did not show much of an increase thereafter. In 2018 and 2019 it almost remained constant.

Russian stock market returns shows a fluctuating trend. Before the financial crises the stock market returns of Russia showed an increasing as well as decreasing trend. In 2001 it shows a decrease from

107.57 to -9.29 and then showed an increase in 2002. Thereafter it did not show much of a decrease until the financial crises. After the financial crises just like the other stock market, Russian stock market was also crashed down but Russian stock market was the least affected. After the financial crises it did not show much of an increase in the following years only during 2010 it showed an increase of 39.68. From 2015 to 2019 it showed only a slight variation but was showing a decreasing trend.

The global financial crises is least affected on the stock market return of India unlike Brazil, China and South Africa. Even though after the financial crises it shows that the Indian stock market returns does not show any huge decrease in stock returns. In 2008 it shows a decrease in stock return from 36.04 to -6.88 and remains almost constant in 2009. From 2010 it shows an increase of 32.89 and then shows a decreasing trend in 2011. Thus it shows a fluctuating trend even after the financial crises and from 2016 to 2019 it almost remained the same but in an increasing trend.

After the financial crises China's stock market returns are affected the most compared to the other countries. In 2001 the returns of stock market of China has been decreased to 3.94 from 36.64 and from 2001 it showed a decreasing trend. In 2005 it started to show an increasing trend and during 2007 it showed a tremendous increase of stock market return of 159.99. During the financial crises it again showed a tremendous decrease from 159.99 to -28.46 and thereafter showed a decreasing trend. Only during 2015 it showed a slight increase of 66.27 and again showed a decreasing trend. In the year 2018 and 2019 the stock returns remained almost the same.

The stock market return of South Africa is showing a fluctuating trend throughout. In 2000 it shows 21.01 and in the following year it started to show a decreasing trend of 11.24 in the year 2001. During 2003 the stock return has been decreased to - 13.58 and then suddenly in the next year it showed an increase of 23.84. Thus it kept on fluctuating until 2008. Even after the financial crises it does not show any huge decreases. From 2010 its stock return showed an increasing trend of 22.46 and remained almost the same until 2014 without any huge variations. From 2015 it started to show a decreasing trend till 2019 and almost remained the same.

It has also been observed through descriptive statistics that, before the financial crises the level of risk and volatility is much higher for all the countries than it is after the financial crises. The risks declined significantly after the financial crises.

Causal Relationship of BRICS Countries Stock Return

A widely known measure of dependence is the correlation coefficient, which provides information on the degree of statistical relationship between the variables of interest. The correlation coefficient indicates the extent to which a stock market is linearly associated with another stock market. If a

stock market is linearly associated with or influenced by another market, the correlation coefficient between the two markets is higher i.e., close to 1.

Table 4: Correlation Matrix of BRICS Countries Stock Market Return

	SMR_BRL	SMR_CHN	SMR_IND	SMR_RUS	SMR_SAF
SMR_BRL	1	0.40	0.76	0.62	0.47
SMR_CHN	0.40	1	0.41	0.28	0.42
SMR_IND	0.76	0.41	1	0.51	0.69
SMR_RUS	0.62	0.28	0.51	1	0.53
SMR_SAF	0.47	0.42	0.69	0.53	1

The Table 4 depicts the correlation matrix for the BRICS Countries stock market indices. The correlation coefficient indicates the extent to which a stock market is linearly associated with another stock market index. There is high correlation between India and Brazil with a correlation of 0.76 followed by correlation between South Africa and India with a correlation of 0.69. This indicates that both markets are following somewhat similar trend over the applicable period. South Africa and Russia are also highly correlated with a coefficient of 0.53. China is the least correlated country among BRICS. But all the selected stock market indices are positively correlated during the study period. The knowledge of relationship of information from one market to another market helps to develop hedging strategy, finds diversification opportunities and captures the efficiency of the market.

Regression Model: A Regression Model was constructed taking India a dependent variable and other BRICS nations as Independent variables using the hypothesis mentioned below.

H0 = India's stock market returns are not significantly influenced by the returns of other four economies i.e. Brazil, Russia, China and South Africa.

H1 = India's stock market returns are significantly influenced by the returns of other four economies i.e. Brazil, Russia, China and South Africa.

The Regression Model is as follows:

$$\text{SMR-IND} = \alpha + \beta_1 \text{SMR-BRL} + \beta_2 \text{SMR-CHN} + \beta_3 \text{SMR-RUS} + \beta_4 \text{SMR-SAF} + \varepsilon \dots\dots\dots (1)$$

Where,

α = Intercept,

$\beta_1 \dots\dots\dots \beta_4$ are respective slopes of Stock market returns.

SMR-IND = Bombay Stock Exchange Return (India)

SMR-BRL= Bo Vespa Stock Exchange Returns (Brazil)

SMR-CHN= Shanghai Stock Exchange Returns(China)

SMR-RUS= Moscow Stock Exchange Returns (Russia)

SMR-SAF= Johannesburg Stock Exchange Returns (South Africa).

Table 5: Regression Analysis of Indian Stock Market and Other Stock Market Economics

Dependent Variable: SMR_IND				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.514409	3.485527	-0.147584	0.8846
SMR_CHN	0.003446	0.072773	0.047353	0.9629
SMR_BRL	0.585381	0.169462	3.454346	0.0035
SMR_RUS	-0.072339	0.108305	-0.667915	0.5143
SMR_SAF	0.607481	0.223049	2.723527	0.0157
R-squared	0.734244	Mean dependent var		11.51500
Adjusted R-squared	0.663376	S.D. dependent var		20.26072
S.E. of regression	11.75513	Akaike info criterion		7.978774
Sum squared resid	2072.746	Schwarz criterion		8.227707
Log likelihood	-74.78774	Hannan-Quinn criter.		8.027369
F-statistic	10.36070	Durbin-Watson stat		1.106738
Prob(F-statistic)	0.000314			

On the basis of the Regression Analysis(Refer Table No:5), R square is 0.73 and adjusted R square is 0.66 which indicates that 66% of Indian (Sensex) Stock returns are explained by Independent variables like Brazil, Russia, China and South Africa stock market return. According to Adjusted R square i.e. 0.663, it is assumed that the Regression Model is good. On the basis of Regression model South Africa and Brazil market returns are significant impact at one percent significance level. At the same time China and Russia markets have no significant impact with Indian marker.

FINDINGS

This research paper investigates growth of BRICS stock market from 2000 to 2019. The descriptive statistic result showing that Russia has highest average value of stock index whereas China has least average value of stock. At the same time china is highly volatile market followed by the Russia and least volatile stock market is South Africa. The purpose of this paper is to measure the level of integration of the BRICS economies stock markets. There is high correlation between India and Brazil with a correlation of 0.76 followed by correlation between South Africa and India with a correlation of 0.69. This indicates that both markets are following somewhat similar trend over the applicable period. The result of this research would be particularly helpful for international investors, as there is a chance to diversify their portfolio. But it is important for the investors to be cautious while making investments in simultaneous international markets.

SUGGESTIONS

This research study is mainly focuses on the performance of the stock market based on returns and risk of each market of the BRICS countries. Investors have to make their investment carefully because capital markets involve market risk. The study suggests that there is a relationship among emerging markets. Investors are advised to invest their money when there is a downfall in the market. This study also suggests substantial diversification benefits depending on the time period under the consideration between the stock market of BRICS countries.

The changes in the stock return distributions can have a number of implications such as portfolio optimization, risk management, valuation of derivative securities, hedging of derivatives which help the portfolio managers and other market participants. Therefore all these factors can be taken into considerations. This also have policy implications from the point of view of government and monetary authorities globally who had to cooperate with each other to mitigate the fallout on the wild swings and massive decline of the financial markets, failure of the firms and the other negative consequences of financial crisis. Therefore all these important factor can be taken as a suggestion for better improvement for policy making and investment decisions.

CONCLUSION

BRICS is considered to be the fastest growing economies in world due to which investors are eyeing on investing in emerging economies rather than developed economies. The study proves that there is a dynamic linkage among the stock market of BRICS countries. The correlation among the five economies is positive and very strong between India, Russia, China and South Africa. There is high correlation between India and Brazil with a correlation of 0.76 followed by correlation between South Africa and India with a correlation of 0.69. The regression model is good and it says that India's stock market returns are influenced significantly by the returns of other two economies i.e. Brazil and Russia. BRICS economies have immense potential to remain powerful and influence the world economy. Since opening of trading linkages and rapid integration of BRICS countries is an important and serious implication for international portfolio diversification, it is a topic of interest for practitioners', researchers and policy makers today. During the last few years, all BRICS countries have opened their trade networks significantly and improved their connectedness. The knowledge of transformation of information from one market to another market helps to develop hedging strategy, finds diversification opportunities and captures the efficiency of the market. To conclude with, the result of this research would be particularly helpful for international investors, as there is a chance to

diversify their portfolio. But it is important for the investors to be cautious while making investments in simultaneous international markets.

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