Impact of Devaluation of Yuan on Indian Economy and Select Global Stock Indices

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Abstract

On 12th August 2015, the global economies and markets have experienced the Black Monday as China's Central Bank announced a cut in its daily reference rate by a record 1.9%. The decision was made by the China to boost its plunging economy by way of increasing the exports that were on declining trend from past few months; this move of China sent shock waves across the globe by giving the caution to China and the world countries that there would be a slump in the markets ahead. International capital markets, including India have undergone tremendous changes since last 2 decades and have adopted liberalization and globalization policies dismantling the trade barriers internationally. This transformation made local economies to integrate with the international economy inturn seeking information and their impact on other global markets. In the light of the above, the current paper focuses on impact of devaluation of Yuan on Indian economy in general, Indian industries, Global and Asian Stock Market indices, including the correlation with each other markets, descriptive statistics, Kurtosis, and Skewness.

Keywords

Devaluation of currency, Chinese Yuan, Global Stock Indices

I. Introduction

The People's Bank of China, China's Central Bank announced a cut in its daily reference rate by a record 1.9% on 12th August 2015, the jolt to the economy in the last two decades. The decision was made by the China with decrease in exports in the month of July 2015 by 8.3% by giving the caution to China and the world countries that there is a slump in the market and "All is Not Well". The devaluation of Yuan strengthened the U.S. Dollar whereas other currencies reeling for cover and Rupee was not an exception to this and it dropped to two-year low @ Rs.65 per Dollar. While India is already struggling on the domestic front with legacy issues like infrastructure and stalling of key legislation, a loss in currency competitiveness against the Yuan further hurt its ailing exports. This move of China made India to think of the pivotal points like Rupee volatility; exports under pressure, dumping of Chinese goods in India. In addition, importers are going to get products from China at lower prices, and face competition on account of devaluation. Further this move has roiled global financial markets and Foreign exchange markets. With the above backdrop, the current paper focuses on giving empirical evidence on how devaluation has affected Shanghai Composite Index of China and its impact on S&P 500, FTSE 100, S&P BSE Sensex, HangSeng, Nikkie 225, and Bovespa indices across the globe.

II. Need and Objective of the study

With the integration of global markets it has become inevitable for every player of the stock market, to know not only the market where he is playing but also its counterparts which may have direct or indirect influencing relationship. As evidence, in Aug 2015 The People's Bank of China announced a cut in its daily reference rate and the decision was made by the China observing the decrease in exports in the month of July 2015 by giving the caution to China and the world countries. Hence, the present paper focuses on studying the impact of devaluation of Yuan on Indian economy, Indian Industries and international stock market indices.

III. Scope of the study

This research covers about 7 randomly selected global market indices data for a period of 4 months that ranges around devaluation.

The following table gives the country and the exchange with the name of its major indices.

Table1: Major Indices

Country	Stock Exchange Name	Indices Name
India	Bombay Stock Exchange	S&P BSE Sensex
USA	New York Stock Exchange	S&P 500
Hong Kong	Hong Kong Stock Exchange	Hang Seng
China	Shanghai Stock Exchange	Shanghai Composite
Japan	Tokyo Stock Exchange	Nikkie 225
UK	London Stock Exchange	FTSE 100
Brazil	São Paulo Stock Exchange	Bovespa

IV. Data and Methodology

The current study is purely based on secondary data. The data for the aforementioned stock indices is available at the corresponding stock exchanges used in the study. The methodology of the study primarily includes analyzing trend movements in addition to doing correlation, descriptive statistics, and finding kurtosis and skewness during the devaluation of Yuan.

A. Reasons for Devaluation of Yuan by China

- **To help slumping GDP growth by boosting Exports:** Chinese economy is struggling to meet the targeted 7% growth in GDP as against current 6.8%. Earlier the GDP of China was growing at double digit.
- **Expand role in Global Financial System:** A decade- long boom has turned China into the world's second largest economy. Inspite being the second largest economy by trade its role was limited in the Global Financial System.
- **To strengthen itself in Global Currency Politics:** China is pushing itself to build up its presence across the globe by joining the exclusive club of the International Monetary Fund's basket of "Special Drawing Rights" (SDR), reserve currencies.

B. Impact of Yuan Devaluation on Indian Economy:

- **High volatility in Rupee -** The devaluation of Yuan strengthened US Dollar and mounted pressure on other currencies, including Rupee to depreciate. Rupee has been depreciated @ 4.22% against US Dollar and the following would be observed if the same trend continues: the imports would be costlier, increase in inflation, increased interest rates, increase trade deficit, sluggish economy with decreased industrial output and further increase the current account deficit.

- **India from import Angle -** India solely imports 80% of its crude oil requirements, and a weaker Rupee would mean that oil companies will have to hike petrol and diesel prices. Costlier transport fuel will knock up prices of most goods and stoke inflation. All imports right from raw material to finished goods would turn costlier and squeeze profit margins. This may prompt companies to raise prices of consumer goods such as cars and TVs.
- **Selling spree of FIIs –** FIIs (Foreign Institutional Investors) have invested billions of Dollars in Indian stock market. Their returns are negatively impacted due to falling Rupee and squeeze in profits of Indian companies. Compared to large stock markets like in U.S., Indian stocks can fall drastically even if FIIs sell stocks worth few billion and repatriate the funds.
- **Impact of Inflation on interest rates –** Expensive imports would lead to inflation and that force Reserve Bank of India (RBI) to hold on to high interest rates, which hampers ongoing economic recovery.
- **Impact on Dollar denominated loans of Indian Companies -** Falling Rupee is bad for those companies that have Dollar-denominated as repaying loans will become costlier.
- **India Vs China -** China and India compete for several common export items such as textiles, gems and jewellery, etc. and China would gain an advantage over India with a devalued Yuan. Imports from China mounted to $60 billion in 2014-15, compared with a year ago, while exports from India plunged to $12 billion, leading to a huge trade gap between the two countries.
- **Declining Exports -** India and China are competitors in several export items like Textiles, Metals, Consumables, Gems & Jewellery as well as E-commerce sector. As China would export the product at low cost by taking the advantage of devaluation India could not do that as it was price sensitive but not competitive. This way China get competitive price advantage and could take away the export share of India. The economic slowdown in China - which is among the top five countries for Indian exports - is another negative for Indian exporters, analysts say.
- **Dumping of Chinese Goods -** The Indian manufacturers would have the threat of China dumping goods into Indian market. By taking the advantage of devalued Yuan the China could dump the goods into India and sell them at the price that would be less than the cost of production by Indian manufacturers. As Imports from China increased to $60 Billion in 2014-15 compared with year ago, while exports from India to China plunged to $12 Billion, leading to a huge trade gap between the two countries.
- **Mounting Pressure on Central Banks -** Devaluation of Yuan has strengthened U.S. Dollar against many currencies by mounting pressure on RBI too to devalue its currency, followed by FED not hiking the rate, decreasing of interest rates by many countries Apex banks to ease in doing business. This inturn throwing the economies into deflation.

C. Impact of China's Yuan devaluation on Indian Industry

- **Textiles Industry:** The biggest sector in which India competes with China is textiles. Though China is moving on to high-end textiles, there is still an inherited lower end segment where Indian companies could face competition on account of devaluation. Since margins are the smallest in the lower end of the textile segment, a devaluation of Yuan would eat away the profits of some textile companies in India.
- **Chemicals Industry:** India and China are major producers of both organic and inorganic chemicals. The margins in complex chemicals are higher, whereas base chemicals attract lower margins. China lowering its prices will impact Indian players who were already affected by crude oil prices.
- **Metals Industry:** Indian and global metal producers are impacted by a surge in Chinese exports. China is already facing a number of legal cases for selling its products at lower than cost price in many countries. Indian steel players have faced the burden of the attack from Chinese imports. The recent hike in import duty would be nullified by the Yuan's depreciation.
- **Electrical Consumables:** Most of the electrical consumables in India are imported from China. These can get cheaper in the coming days. But Indian companies generally do not pass on the benefit but pocket the difference. Companies who are importing their components or the entire equipment are clear gainers from China's move.
- **Goods sold by E-commerce:** Mobiles, laptops, garments, toys and most of the goods that are sold by e-commerce companies are largely imported from China. They are the ones who will not be complaining about the fall in Chinese currency. One can expect some more mega- sale promotions being announced by e-commerce players in the days to come.

V. Data Analysis

In the following section, the study looks at analyzing the response of global indices with respect to Shanghai Composite Index by using Descriptive statistics with devaluation of Yuan.

The following table summarizes the descriptive statistics of the concerned indices:

Table 2: Descriptive Statistics of Select Indices with devaluation of Yuan

Descriptive Statistics	Bovespa	FTSE	Hangseng	S&P	Sensex	Nikkie	Shanghai
Mean	49775.83	6519.785516	24292.76216	2055.731975	27204.74145	19714.19822	3857.169737
Standard Deviation	3064.485	276.5764665	2066.563082	67.75452567	906.7902815	1089.383497	631.6452869
Kurtosis	-1.4273	-0.796002229	-1.141844695	0.246256385	-0.992096723	-0.694286537	-0.555622376
Skewness	-0.02763	-0.577037877	-0.085780964	-1.206781934	-0.50876703	-0.870258849	0.626161669

Looking at the above statistics, it is clearly evident that the S&P 500 index has resulted in balanced returns (2055) with less risk (67.75) surpassing all the counterparts. Further, FTSE 100, Shanghai and BSE Sensex proved to be next best indices ranking next to S&P 500.

The Kurtosis values of the concerned indices are saying that all are Platykurtic i.e. being less than 3 in value. The returns distribution of all these indices is less clustered around the mean. Hence, the Platykurtic returns will have fewer large fluctuations than the returns displaying normal or leptokurtic distributions.

All the indices are negatively skewed except Shanghai Composite that is positively skewed.

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Table 3: Correlation Analysis of Select Indices

Index	Bovespa	FTSE	HangSeng	S&P	Sensex	Shanghai	Nikkie
Bovespa	1						
FTSE	0.86069	1					
Hangseng	0.933382	0.926533	1				
S&P	0.741759	0.919721	0.81886	1			
Sensex	0.477833	0.698834	0.555142	0.77229	1		
Shanghai	0.838762	0.822813	0.931105	0.692528	0.321661	1	
Nikkie	0.729753	0.887137	0.822007	0.865835	0.80096	0.704065	1

It is clearly evident from the above results that the Shanghai Composite index is showing high correlation with the Hang Seng (93%) followed by Bovespa (84%), FTSE 100 (82%) , Nikkie (70%), S&P (69%) and Sensex (32%) viz. Shanghai is showing positive correlation with almost all its counterparts indicating that the movement of one market index influence the other positively in the same direction. Hence with the devaluation of Yuan all the indices were affected worse.

VI. Conclusion

- As the barrier of boundaries started dissolving with respect to investments, as the pattern of holdings of portfolio investment is jumping between the counterparts by Foreign Institutional Investors (FIIs). Also, during the post devaluation of Yuan, all the markets started showing negative returns indicating the integration of markets and their connectivity. In fact, this move came as a blow to the Indian export market given the situation that the markets have already been going week in the recent past due to the recessionary conditions in the global arena!
- It is clearly evident from the above results that the Shanghai Composite index is showing high correlation with the Hang Seng (93%) followed by Bovespa (84%), FTSE 100 (82%) , Nikkie (70%), S&P (69%) and Sensex (32%) viz. Shanghai is showing positive correlation with almost all its counterparts indicating that the movement of one market index influence the other positively in the same direction. Hence with the devaluation of Yuan all the markets across the globe have affected adversely during this period and across the globe the markets lost billions of dollars.
- Further, the descriptive statistics, of S&P 500 index has resulted in balanced returns (2055) with less risk (67.75) surpassing all the counterparts. Further, FTSE 100, Shanghai and BSE Sensex proved to be next best indices ranking next to S&P 500.
- The Kurtosis values of the concerned indices are saying that all are Platykurtic as the returns distribution of all these indices is less clustered around the mean indicating that no single index has yielded abnormal returns. All the indices are negatively skewed except Shanghai Composite that is positively skewed.
- Thus it is clearly evident that the select global market indices are integrated with each other, and more specifically Sensex is more integrated with other Asian exchanges. This can be very well noticed in the period of devaluation which has affected the entire globe and sending strong indications that the markets are well Knitted by way of automation and they move in accordance with other markets and if one market affects adversely the ripples and waves will be sent to other markets.

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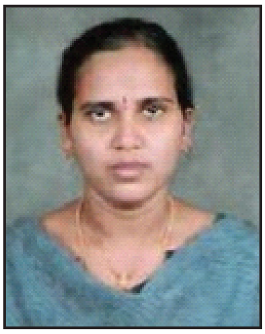

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