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# Analysis of Dynamic Interaction between Foreign Investments and Indian Stock Market

Kavita Rani and Sanjiv Kumar

*Fiscal crisis in global markets have made the outlook of Indian economic system depressive, but the idiosyncratic liberalization and globalization gave emanation to the phenomena of foreign investments i.e. foreign direct investment (FDI) and foreign institutional investment (FII) in India. The present study makes an effort to find out the contribution of foreign investments by analyzing the trends and patterns. Moreover it also examines the relationship and impact of foreign investments on Indian stock market. For the accomplishment of the objectives, secondary sources of information were used. The time period for the study includes 14 years from 2000 to 2014. The collected data were analyzed with the help of Karl Pearson's Coefficient of Correlation and Multiple Regression technique, ACGR etc. Moreover, the study revealed that FDI has high correlation with CNX Nifty ( $r = .781$ ) and BSE Sensex ( $r = .843$ ) in comparison to FII which is significant at 1 percent level of significance. Furthermore, the R Square values, revealed that when there is single variable (FDI) for prediction, there is 71% variation in CNX Nifty whereas when we use FDI and FII both as predictors, they account 82.3% variation in it which depicts that FII accounts only 11.3% variation in CNX Nifty. There are 60.9% variation in BSE Sensex because of the foreign investments where FII plays a very insignificant role.*

**Keywords:** FDI, FII, BSE Sensex etc.

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## Introduction

The ontogenesis contribution of foreign direct investments (FDI) and foreign institutional investments (FII) have created the unprecedented opportunities for India to attain accelerated economic growth. Foreign direct investment is one of the most important reservoirs of foreign investment which is seen as a means to supplement domestic investment for achieving a higher level of economic integration and stimulation. FDI is a direct investment into production or business in a country by an individual or company from another country, either by purchasing company in the target country or by expanding operations of an existing business in that

# Exchange Traded Currency Future Markets and Risk Management in India

C Hussain Yaganti, B Kamaiah and Harshita Gupta

*This paper deals with recent developments in Currency futures markets and it examines the relationship between currency futures and spot exchange rates between Indian rupee and US dollar. Indian Exchanges NSE, BSE and MCX-SX offer futures and options contracts based on rupee-dollar, rupee-euro, rupee-pound and rupee-yen currency pairs, most of trade concentrated in rupee-dollar contracts on the exchanges. This empirical study analyses price formation and hedging performance of currency future markets. India's foreign exchange market has been fronting high volatility from last one decade. With these high variations in exchange rates, derivatives have become one of the risk diversification options for different stake holders. In India Currency futures introduced seven years back and market has reached high turnover. Johnsen's Cointegration and Error correction models are used for the analysis of long term relation and short run dynamics between spot and futures markets for individual contracts and pooled data. The results reveal that long term relationship is existed between spot and future exchange rates, ECM results confirms that there exists bidirectional relation between futures and spot markets. The ordinary least squares and ECM models are used for optimal hedge ratios calculations and hedging effectiveness for individual contracts and pooled data. We find that individual contracts provide moderate hedging effectiveness (30-50%), in more recent period hedging effectiveness is very low. In case of long term data hedging efficiency is average. It also indicates that dynamic hedging strategy based on GARCH estimator is less efficient over the time invariant hedging strategy. Thus these findings provide better advice for market participants for long term hedging strategy with other alternative instruments like options and swaps. Most of the trade happens in looking for profit rather than to hedge risk.*

**Keywords:** *Currency futures, Volatility, Hedge ratio, GARCH*

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## Introduction

The main functions of futures markets are Price discovery process and hedging. Hedging has become a widely used tool for risk reduction. The benefit of hedging on the futures markets is to minimize possible revenue losses associated with adverse spot price changes. The risk of asset price variability of stock or currency can be managed by the hedging mechanism. The hedging decision will depend upon the

# Global Integration of Indian Financial System: Empirical Evidence from Money Market

Nayia Mahajan and Satish Verma

*The present study endeavors to empirically measure the global financial integration of India. While considering interest rates from Indian market (money market), efforts have been made to find long run co-integrating relationship (if exists) between domestic and foreign interest rates with the help of co-integration analysis and error correction model (for short term dynamics). Monthly time series data on 3-months Treasury bill rates for domestic markets as well as foreign markets have been collected encompassing the period April 1996 to June 2013. To represent the global market, three foreign markets i.e. United States (U.S), Europe (U.K) and Asia (Japan) have been considered. These three countries are considered the major financial centers around the globe. The empirical analysis reveals that all the foreign as well as domestic markets have no tendencies of long run relationship, but relation between Indian money market with individual foreign market has been found significant with the help of Engle-Granger two variable approach. As far as short run relationship is concerned, there is absence of such relation of Indian money market with European and U.S money markets and Japanese money market is found to be related with India, which shows the prominence of regional financial integration.*

**Keywords:** Money Market, Financial Integration, Treasury Bill Rates, Error Correction Mechanism.

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## Introduction

Integration is the process by which markets become open so that investors from all over the world enjoy open access to various assets. The integration of national financial markets thus implies an increase in capital flows and a tendency for the prices and returns on similar traded financial assets in different countries to equalize. This can occur through the removal of domestic and international controls on trade in the financial assets, resulting into free flow of capital inflows and outflows at international level. Policies to deregulate markets at national as well as international levels are the first step towards financial globalization.

# Intra-Industry Trade and Trade Complementarity: Evidence from India-Sri Lanka Bilateral Trade

**Sushil Kumar and Shahid Ahmed**

*The present study investigates the intra-industry trade between India and Sri Lanka over the period of 1975 to 2013. GL index is used to calculate intra-industry trade at 1, 2 and 3 digit level of SITC. The study also calculated the trade complementarity index, and revealed comparative index. The extent of intra-industry trade is high in sectors like crude materials, machinery and transport equipment, chemical elements and compounds and rubber manufactures. More over the growth of Intra-industry trade between India and Sri Lanka shows that Sri Lanka's industrial base is changing from low value addition to high value addition products, especially since the free trade agreement was put into effect in 2000. The study also reveals mismatch between Indian imports and Sri Lanka exports. India has exhibited comparative advantage in transportation, chemicals, metals, food products and minerals products while Sri Lanka has comparative advantage in vegetable, textile and clothing, plastic and rubber products. The study also suggests that both countries shows diverse revealed comparative profile having more opportunities to trade with each other.*

**Key words:** *Grubel Lloyd index, trade complementarity index, Free trade*

## Introduction

Today the world is more integrated than it was a few decades ago. Regional groupings have become the key to prosperity. The concept of global fragmentation of production has emerged with the development of cheaper and reliable transportation and communication technologies. International fragmentation of production is one of the factors that explain the high rise in intra industry trade<sup>1</sup>. The world trade pattern has changed very markedly in the past few decades and is no longer dominated by the simple nineteenth century Ricardian model of exchange of British cloth for Portuguese wine or the Heckscher-Ohlin explanation of inter-industry trade patterns, Tayyebi *et al* (2006). One of the most important trends in the world trade has been the emergence and growth of intra industry trade.

<sup>1</sup> Akram, 2013

# Linkages between Foreign Capital, Domestic Capital and Economic Growth in India

Kalpana Sahoo and Narayan Sethi

*This study empirically examines the causal relationships between economic growth and its four major determinants i.e. domestic capital, foreign aid, FDI, trade liberalization by using the annual time series data from 1980-81 to 2010-11 for India. By using the Johanesen-Jusselius multivariate Co-integration test and Engel-Granger causality test, the study finds that among all the independent variables domestic investment is the only growth determining factor in India. The Granger causality test results state that there exists one-way causal relationship from domestic investment to economic growth and economic growth to foreign capital. The study finds that components of foreign capital i.e. foreign aid and FDI have shown no long run significant impact on economic growth of India even in the presence of trade liberalization. It concludes that foreign capital is not properly utilized in India. This suggests that for a developing country like India, both foreign capital and domestic investment are crucial for higher growth. The policy should be based on the efficient utilization of both foreign capital and domestic capital along with the continuation of trade reforms.*

**Keywords:** *Co-integration test, Economic Growth, Granger-Causality test, India*

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## Introduction

In the era of globalization and economic integration, the importance of foreign capital in accelerating the growth process of a developing country like India is crucial. Currently, India became a major investment hub in the world due its massive skilled manpower, abundant natural resources and large market. The importance of foreign capital on economic growth is not a new line of investigation. Both theoretical and empirical research on the role of foreign capital in the growth process has generally produced contradictory results (Waheed, 2004). The current wave of financial globalization and its aftermath has been marked by the huge transfer in international capital flows to the industrial and developing economies. This allocation of external capital is based on the assumption that huge amount of capital inflows leads to high economic growth in the developing countries (Edwin, 1950).

# Macroeconomic Determinants of Remittances: A Cross Country Analysis

Devi Prasad Panda and PushpaTrivedi

*Officially recorded remittance<sup>1</sup> flows to the developing countries reached the level of US \$ 400 billion and US \$ 414 billion in 2012 and 2013 respectively and are projected to reach US \$ 435 billion in 2014, an increase of 5 per cent over 2013. This study, covering the period from 1991 to 2012, makes an attempt to identify the macroeconomic determinants of remittance to a panel of 24 emerging and developing economies. While remittances are considered as the dependent variable, World GDP, Bilateral nominal exchange rate of local currencies of recipient nations vis-a-vis US \$ and Consumer Price Index (CPI) of recipient nations are considered as the explanatory variables. The study uses a panel data analysis by applying methodologies, viz., Pooled OLS model, Fixed Effects Model and Random Effects Model. The study also conducts Redundancy test and Hausman test. Regarding determinants of remittances, the elasticity of remittances with respect to world GDP, bilateral nominal exchange rates, CPI is found to be significant, which shows that both host as also home country<sup>2</sup> macroeconomic factors have influenced the magnitude of remittances to the panel of 24 countries.*

**Keywords:** Remittances, Panel Data Analysis, FEM, REM

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## Introduction

Officially recorded remittance flows to the developing countries reached the level of US \$ 400 billion and US \$ 414 billion in 2012 and 2013 respectively and are projected (World Bank, 2014) to reach US \$ 435 billion in 2014, an increase of 5 per cent over 2013. These are expected to rise further, though at a lower rate, by 4.4 per cent to US \$ 454 billion in 2015. It is also expected that the annual rise in remittance flows will be sustained at the level of 4-5 percent and remittances will record a level of US \$ 499 billion in 2017. India is projected to be the highest remittance recipient nation in

1 Following IMF Balance of Payments Manual 6, remittances are defined as personal transfers and compensation of employees.

2 Host country and home country refer to the country of origin of remittances and the remittances receiving country, respectively



# Theory-Based Specifications of the Gravity Equation: An Analysis using European Union as an Example

Mohd Hussain Kunroo and Naushad Ali Azad

*In this paper, we raise various issues caused by omitting some of the relevant variables in the mis-specified gravity equation and argue that the proper econometric specification of a panel gravity model should be three-way and hence should include exporter, importer, bilateral and time effects as well. We work with a panel dataset of 29 European economies from the period 1994 to 2011 for this purpose. However, some variables suggest that two-way (country-specific and time effects) specification is preferable to three-way specification. We conclude with the suggestion that before using the gravity model, one should check whether the country-specific effects, bilateral effects and time effects are of the random or the fixed effects type, which in turn depends on the interests of the analysis, the country sample, the properties of the data used, and the theoretical gravity model.*

**Keywords:** Gravity model, bilateral trade, European Union, omitted variable bias, mis-specification

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## Introduction

The gravity model is one of the most empirically successful tools in international economics. The empirical analysis of bilateral trade flows through the estimation of a gravity equation has gone a long way. The first applications were rather intuitive without substantial theoretical claims. These applications were the object of critics concerning the lack of robust theoretical foundations. However, over the years, it gained respected micro foundations which allowed it to move to a mature stage in which the turn-over gravity equation has been replaced by a gravity model; resulting in dominating the literature on trade policy evaluation. The use of the gravity model as one of the analytical means of international trade theory dates back to the studies by Tinbergen (1962) and Pöyhönen (1963).

Jan Tinbergen in his Shaping the World Economy report (Tinbergen 1962, pp. 262-293) came out with the idea of an econometric model formulated along the lines of