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Title: Foreign Capital Flows and Its Macroeconomic Impact in India

ABSTRACT

Foreign capital has been an important constituent in the development trajectory of any economy and it had witnessed turbulent changes in the last three decades. The penetration of global finance significantly rose from 2000s and continued prior to the outbreak of the global financial crisis. The crisis had devastating impact on the capital flows and affected volatile and temporary foreign portfolio flows the most, amongst others. Portfolio flows witnessed net reversal in the aftermath of global financial crisis and they also experienced plummet after the announcement of partial withdrawal of unconventional accommodative monetary policy of the US. In the recent times, the Indian economy has witnessed increase in all types of capital inflows including FDI though the pre-crisis level has not been attained.

Foreign capital flows continue to be a matter of concern for policymakers, academia and researchers, especially for developing economies like India. Countries like India not only requires high investment, but also consistent foreign reserves to finance their burgeoning current account deficits. Moreover, participation of foreign investors enhances efficiency and liquidity of domestic capital market. However, these benefits come in a disguise as sudden capital inflows and outflows have strong implications on stability of exchange rate, independence of monetary policy in terms of loss of monetary control and financial stability of the economic system.

The existing literature shows that there are very few studies evaluating the macroeconomic impact of capital flows on the Indian economy. We found lack of empirical studies which have considered recent global shocks and institutional factors into their analysis in order to examine the factors that motivate capital flows into India. The determinants of foreign portfolio investments into equity and rupee-denominated bonds have rarely been studied in the existing empirical literature. As indicated by new literature, it is highly imperative to study the composition of capital flows in order to assess the certain risks associated with expanding financial integration.

The present study deploys a number of econometric tools for doing the empirical analysis. For the very first objective, Generalized Autoregressive Conditional Heteroscedasticity (GARCH) model is used to estimate the volatility between the FDI and FII. Multivariate OLS technique and Panel Fixed Effect approach have been used to investigate the determinants of FDI in India as delineated under second objective. To find out whether the country-specific factors (known as pull factors) or common shocks (or push factors) were responsible in determining the foreign portfolio flows in rupee- denominated bonds, Autoregressive Distributed Lag (ARDL) model has been chosen for the study. Since it does not impose restrictive assumption of integration of same order as is the case with co-integration techniques. In addition to this, it determines short-run and long-run coefficients

of the model simultaneously and the latter in the level form. For the fourth objective, we used a theoretical multivariate OLS regression to estimate the degree of sterilization of foreign capital inflows. In estimating these models, we have first checked the stationarity for all the underlying variables by applying a mix of parametric and non- parametric ADF and PP unit root tests respectively. Once all the series are found of integration of order 1, we checked for whether the series have long-run relationship or not by estimating co-integration so that the non-stationary series can be modelled at levels only. Likewise, before finding the long-run and short-run dynamics as we proposed under Objective 3, we checked for order of integration of all the variables using ADF and PP unit root tests. Further, the long-run (level) equilibrium relationships among the variables have been explored by using Bound Test approach developed by Pesaran et al. (2001).

From the major findings of the above analysis, FII flows tends to be more volatile than FDI flows in the Indian economy during 2000-01 to 2016-17. The study reveals that despite the rising FDI flows, the share of greenfield investment has not been commensurate in the total FDI flows. This can be owed to surge in relatively new type of FDI such as reinvested earnings and inter-company debt. Among the factors motivating the FDI flows into India, the study reveals that the size of the GDP matters in the determination of FDI, bolstering the theory of market-seeking FDI. Further, cheap labour cost (or wage-gap) turns out to be highly significant and so underpins the FDI of vertical type. This result is highly convincing as India continues to be a low wage economy in comparison to her foreign counterparts.

The both push and pull factors have been the drivers of portfolio flows in rupee- denominated bond market in India. Portfolio investments are found highly sensitive to the differential interest rate and thus, the study reinforces the findings of Mundell-Fleming model. Our results significantly respond to the external shocks emanating from the global financial crisis and winding up of unconventional accommodative monetary stance of the advanced economies including the US. We have found that the RBI has proactively been engaged into selling of foreign currency concurrently with buying of dollars in the foreign exchange market to contain the volatility in the exchange rate. The study has found sharp accumulation of risky external liabilities over the time which may raise concerns towards the long-term financial stability.

Key Words: Capital Flows; Foreign exchange; Foreign Portfolio Investments; Labor costs; Monetary Policy; ARDL; Panel Fixed Effect Model.

JEL Classification: F21; F31; F32; J3; E52; C32; C33.