

FINANCIAL CAPITAL INFLOWS AND EXCHANGE RATE INSTABILITY: THE CASE OF TURKEY

Özcan Karahan

Balikesir University
Economics and Administrative Sciences
Economics Department
10200 Bandırma – Balikesir
Turkey
karahan@dr.com

Olcay Colak

Rize University
Economics and Administrative Sciences
Economics Department
53100 Merkez - Rize
Turkey
olcay.colak@rize.edu.tr

Abstract

In the beginning of financial liberalization policies, it is generally argued that capital inflows can provide the opportunities for developing countries to accelerate economic growth. Nowadays most of the economists emphasize the role of foreign capital in generating financial instability in domestic economies. From this point of view, the objective of this paper is basically to examine the effects of financial capital inflows on economic growth and exchange rate as an indicator of financial instability in Turkish Economy. Using VAR Model and quarterly data from 1992 to 2010, this study indicates that financial capital inflows is the major cause of the real exchange rate appreciation although promoting economic growth. The findings reveal that the real appreciation of the domestic money induced by the greater availability of foreign financing is a short-term phenomenon that, sooner or later, would have to be reversed because of “expectation of exchange rate depreciation”; and in the mean time, is hampering growth and creating a serious financial instability. Thus it is not possible to argue that the real exchange rate appreciation during capital inflow is only an equilibrium phenomenon in exchange rate market, which does not require policy intervention for developing countries.

Keywords: Capital Inflows to Developing Countries, Exchange Rate Instability,
JEL Codes: F31, F32

1. Introduction

International financial capital movements have particularly become prominent after the advent of financial globalization. Especially large capital flows to developing countries in last decades has been an important global economic phenomenon. As neoliberal policies fostered greater liberalization of the international financial system, developing countries also deregulated their financial system with the aim of attracting much more international financial capital. It would be assumed that this kind of integration with international capital markets severed the link between poor domestic savings and investment by enhancing the depth and efficiency of their financial system.

Finally, while financial markets around the world were rapidly integrating into a single global marketplace, developing countries were increasingly part of this process attracting huge financial foreign capital to their financial system. However, the existence of a consistently positive and significant relationship between capital flows and growth has not been realized. Most of the developing countries have experienced not only expansion but also periodic collapse in their growth rates because of significant financial crisis after the capital reversals. Based on the various definitions, 158 episodes of currency crises and 54 banking crises has identified in the early 1980s and the 1990s (IMF, 1998: 77). This clustering of economic crises in developing countries during 1980s and 1990s was possibly related to their financial sector liberalization process. Thus, the rapid growth of private

financial capital flows reflects the increasing financial integration of developing countries with global markets but not in a sustainable way enhancing their economic growth permanently.

The increase in financial capital inflows to developing countries and the correlated financial crises in these economies have induced economists to rethink the macro economic effects of capital inflows. In economics literature, the exchange rate behavior during capital movements has been found as a vital issue in determining the effects of foreign capital on the developing economy. Indeed, most of the developing countries – mainly in Latin America and East Asia – have experienced exchange instability as a source of financial crises following capital inflows and their subsequent reversals (Edwards, 1999: 22 and Ito, 1999: 124).

From the point of view indicated above, this study presents an assessment of the relationship between financial capital inflows and the performance of developing economies looking at the Turkish Case between 1992 and 2010. Specifically, it examines the behavior of economic growth rate and exchange rate during financial capital movements in Turkey. The rest of the paper is organized as follows. Section II provides a selected review of the literature focusing on the effects of foreign financial capital on exchange rate and real economic instability. Section III set out the data, econometric procedure and empirical results. Final section concludes with the key findings and provides essential policy inferences.

2. Boom and Boost Cycle of Economic Activity and Exchange Rate Instability

The waves of financial globalization since mid 1980's have been marked by a surge in international financial capital flows to developing countries, which has severed the link between local savings and local investment. Of course, during the financial integration process, savings and investment must still match but they now do so in a global rather than a national scale. Thus, it is expected that liberalization of capital movements permits developing countries to accelerate of investment and growth rate by augmenting their poor level of domestic saving with foreign savings (World Bank, 1997: 23).

To enhance their attractiveness to financial capital flows, developing countries made a widespread implementation of liberalization programme and financial reforms across the globe in 1990's. In the framework of liberalization schemes promoted by IMF, developing countries were urged to allow full and free convertibility of their currencies. Once developing countries lift controls on financial capital movements and allow full convertibility of their currencies, the process of exchange rate determination is privatized as well. Thus the external value of a developing country's currency in liberalized financial markets is determined by speculative trading in the international currency market, rather than real economic fundamentals. In conclusion, a stable exchange rate for developing countries is fundamentally incompatible with free capital movements.

The results of theoretical and empirical studies in the literature suggest that exchange rate behavior is essential in order to determine the foreign capital impact on domestic economy. In other words, at the center of debate on how to reconcile international capital mobility with domestic economic stability and developmental priorities in developing countries is what calls the 'real exchange rate problem' (Corden, 1994: 8). So that domestic currency appreciation and depreciation associated with capital inflows or outflows respectively can put developing countries in a vicious circle of boom and bust rather than a virtuous cycle of productive financial integration. The immediate result of capital inflows to developing countries is appreciation of domestic currency. Over time there will be booms and slumps in the economy and eventually when economy reaches its steady state equilibrium again, domestic currency become depreciated. This leads to boom-bust cycles and increase the risks of financial sector vulnerability in the forms of currency crisis and banking crisis.

From a theoretical point of view, developing countries have two level of exchange rate during these capital movements: an appreciated exchange rate with large capital inflows and a depreciated exchange rate with capital outflows. Moreover, there is a dynamic concerning with a systemic risk involved and this systemic risk increases with financial integration for developing countries. "Capital inflows appreciate the real exchange rate, and the latter, if it is gradual, encourages additional inflows.

After a while, when the deficits on current account accumulate and the stock of external liabilities have risen, the appreciation trend is replaced by expectations of depreciation, which in turn subsequently tends to lead to a reversal of the direction of flows” (Agosin, 2001: 206).

The two macroeconomic challenges of overheating and reversal of capital are likely to be particularly important during the capital movements (World Bank, 1997: 171). The emergence of both real appreciation of exchange rate and increasing current account deficit reflects overheating, which creates a basic dynamic of capital flow reversal by shifting to expectations of currency depreciation. Indeed, a hasty and huge financial capital inflows to developing countries leave too many doors open for outflows, effecting the expectations towards currency depreciation (Ffrench-Davis, 1995: 124).

Macroeconomic overheating symbolized here by exchange rate appreciation and current account deficit has been a potentially serious problem for developing countries in the face of large capital flows. Countries that received substantial capital inflows as part of the process of financial integration typically experienced leading booms associating with an expansion in aggregate demand, but in the form of consumption much more not investment. This pattern of absorption, an increase in the consumption-to-GDP ratio, was strongly correlated with the degree of real exchange appreciation. With this way of absorption in which capital inflows translate into exchange rate appreciation also lead to current account deficit and enlargement in non-tradeable sector. Thus, capital inflows bring about an appreciation of the real exchange rate (the relative price of traded to non-traded goods) with adverse affects on traded-goods production in the domestic economy. In conclusion, a surge in capital inflows developing countries increases substantially aggregate expenditure and economic growth on the one hand, and generates significant pressure toward real exchange rate appreciation resulting in a loss of international competitiveness and huge current account deficit on the other hand. In other words, a main unfavorable side effect of capital flows is real exchange rate appreciation, or loss of a country’s competitiveness, which could adversely affect tradeable production and export sectors (World Bank, 1997, 174-192).

Moreover, “if a developing country relies on capital inflows to maintain high levels of domestic absorption, it is natural for the real exchange rate to appreciate, regardless of the exchange rate regime. The increased spending on traded goods will be accommodated through an increase in the trade deficit with no adverse impact on the real exchange rate. By contrast the excess demand on non-traded goods will result in an increase in the price of these goods relative to that of traded goods. This price adjustment occurs either through an appreciation of the nominal exchange rate under a floating exchange rate system or through an increase in nominal prices of non-traded goods in a fixed exchange rate regime, or through a mixture of the two processes in an intermediate regime” (Athukorala, 2003: 613-614).

Capital reversals as another macroeconomic challenge for developing countries arise when the perception of foreign investors is created that a devaluation is about to occur. Thus, a developing country can be more or less vulnerable to large reversals of private capital flows depending on the factors affecting foreign investor confidence. Investor confidence here is worsened by high level of current deficit caused by overvalued exchange rate. Increasing trade deficit leads foreign agents to believe that the current conditions are no longer sustainable and creates devaluationist expectations. Therefore foreign agents draw their investment on financial market. In conclusion, sudden stops or reversals in capital inflows are more likely when the exchange rate appreciates and current account deficit increase hugely after country receives an unusually large level of capital inflows. Moreover, it appears to be the case that no exchange-rate regime would have prevented the exchange rate instability during capital reversals from developing economies (Wagner, 2000: 195). Vulnerability will arise when the perception of foreign investor is created that a devaluation in a fixed exchange rate regime or a depreciation in flexible exchange rate regime is about to occur.

Finally, after large capital inflows and overheating, a developing country may find itself confronted with a sudden, large and relatively long-lasting reduction in net capital inflows. “The main theory lessons linking output distress with capital reversals can be summarized in two channels. The first is the ‘Keynesian’ channel, that is, a collapse in credit which in turn reduces aggregate demand and causes a fall in output. The second is the ‘Fisherian’ channel; currency crises that hit the financial

sector and result in debt deflation and real contraction” (Tamayo, 2006: 4). When capital outflows are large, they can lead to depreciation of real exchange rate and so currency and banking crisis. Foreign currency debt exposure in the face of a sudden and large depreciation of the exchange rate makes private and public debt default more likely.

In conclusion, capital flows expose the potential vulnerability of the economy to sudden withdrawals of foreign investor from the financial market, which will affect liquidity and contribute to financial market volatility and result in real economic crisis. On a notable empirical works, analyzing the currency crises of Latin America in the 1990s, both studies below underscored the need of avoiding overvalued real exchange rates since real exchange rates appreciation is incompatible with maintaining sustainable capital inflows. Firstly Calvo et al (1993) have emphasized the role of consumption financing capital flows on exchange rate appreciation and capital reversal. Later Edwards (1998) found evidence on the link between increasing capital inflows, large real rate appreciations and, thus, a loss in international competitiveness. Additionally, Edwards focus on the role of banks in intermediating capital inflows and financial crises. Hutchison and Noy (2002) studied on sudden stops in capital flows to developing economies as key characteristics of financial crises. Using a panel data set over 1975-1997 and covering 24 emerging-market economies, they investigate that sudden stop have a huge effect on output and this risk needs much more concern during capital inflows. Fratzscher and Bussiere (2004) test the inter-temporal trade-off between capital account openness and economic growth for a broad set of 45 countries. They presents evidence that, countries that gain in the initial period after capital account liberalization have a large capital inflows, current account deficits, and thus temporarily higher growth. However, this initial bubble may be followed by a severe bust, financial crisis and economic contraction as the boom becomes unsustainable. Hence countries opening up their financial markets may experience a boom and higher growth in the short-run, followed by a recession and a temporary "bust" in the medium-term and long run. This suggests that there is indeed a trade-off over time, i.e. a short-run “gain” and a medium-run "pain" (Fratzcher, 2004: 8).

3. Data, Econometric Model, and Empirical Results

In this part of study we will examine the effect of financial capital flows on economic growth and exchange rate in Turkish economy by using unrestricted Vector Autoregressive (VAR) Model. In this context, Standard Innovation Accounting Techniques which are respectively Impulse Response Functions (IRFs) and Forecast Error Variance Decompositions (FEVDCs) will be used. In estimating the parameters of VAR Model, quarterly data set is used for the period between 1992QI-2010QIV. The data set of financial capital inflows (FCI) - portfolio investment plus bank lending- and exchange rate (ER) is gathered from Electronic Data Distribution System of Central Bank of The Republic of Turkey while the data set of economic growth (GR) rate is obtained from The Basic Economic Indicators of The State Planning Organization of Turkey.

Before proceeding to the VAR Model, Augmented Dickey Fuller (ADF) and Phillips Perron (PP) unit root tests were performed for the stationary of the parameters. On the other hand to avoid mixing stationary and non-stationary variables in the VAR Model, and in order to use standard VAR techniques, we use the temporary component of the exchange rate. This component was calculated by the first-difference method and denoted as ERN in the model. The basic assumption of this method is that the trend component of the series is a random walk with no drift (Agenor et al., 1997). According to results of the unit root tests displayed in Table 1, parameters are stationary at level at each significance level except ER. Exchange rate parameter (ER) becomes stationary when the first difference is taken.

Table 1: Unit Root Tests

	FCI	GR	ER	ERN
--	-----	----	----	-----

	Level	1 st Diff.	Level	1 st Diff.	Level	1 st Diff.	Level	1 st Diff.
ADF Test	-4.305*	-9.033*	-2.990**	-7.953*	-0.874***	-6.595*	-6.595*	-8.126*
PP Test	-4.286*	-16.545*	-3.990*	-8.317*	-0.874***	-6.544*	-6.544*	-31.144*

Notes: * represents significance at all levels (1%, 5% and 10%), ** represents significance at 5% and 10%, *** represents insignificance at all levels (1%, 5% and 10%).

3.1 VAR Model

Conventionally, by using large macroeconomic models in estimations and hypothesis tests, at initial phase, each structural equation is estimated individually, then macroeconomic estimations done by combining all equations together (Kasapoğlu, 2007: 39). According to Sims (1980), “existing large models contain too many incredible restrictions, empirical research aimed at testing competing macroeconomic theories too often proceeds in a single-or few-equation framework. For this reason alone, it appears worthwhile to investigate the possibility of building large models in a style which does not tend to accumulate restrictions so haphazardly. It should be feasible to estimate large-scale macro models as unrestricted reduced forms, treating all variables as endogenous”.

Developed by Sims, VAR Model is a dynamic system by which correlating each variable with its own value and lagged values of another variables in the system of equation also contains a few restrictions about the structure of economy. It is often used in the analysis of dynamic effects caused by changing in one variable on other variables in the system (Kasapoğlu, 2007: 40). According to Enders (1995), in two variables case, we can let the time path of y_t be affected by current and past realizations of the z_t sequence and let the time path of the z_t sequence be affected by current and past realizations of the y_t sequence. One may consider the following simple bivariate system:

$$y_t = a_{11}y_{t-1} + a_{12}z_{t-1} + \varepsilon_{yt} \quad (1)$$

$$z_t = a_{21}y_{t-1} + a_{22}z_{t-1} + \varepsilon_{zt} \quad (2)$$

where it is assumed (i) that both y_t and z_t are stationary; (ii) ε_{yt} and ε_{zt} are white noise disturbances with standard deviations of σ_y and σ_z respectively; and (iii) ε_{yt} and ε_{zt} are uncorrelated white-noise disturbances. Equations (1) and (2) constitute a first-order VAR since the longest lag length is unity. The structure of the system incorporates feedback since y_t and z_t allowed to affect each other. For example, $-b_{12}$ is the contemporaneous effect of a unit change of z_t on y_t and b_{21} the effect of a unit change in y_{t-1} on z_t . Note that the terms ε_{yt} and ε_{zt} are pure innovations (or shocks) in y_t and z_t , respectively. Of course, if b_{21} is not equal to zero, ε_{yt} has an indirect contemporaneous effect on z_t , and if b_{12} is not equal to zero, ε_{zt} has an indirect contemporaneous effect on y_t .

After indicating the econometric model theoretically above and testing whether series are stationary, we can estimate the VAR Model empirically. But prior to estimation of model, we add two dummy variables that reflect the impacts of the financial crisis pre and post crisis periods occurred in 1994 and 2001. Our first dummy variable denoted by D1=1 reflects the changes in conditions caused by some macroeconomic problems between the period of 1994-2000 while the second dummy variable denoted by D2=1 shows the changes in macroeconomic policies between the period of 2001-2004. Besides we also need to determine the order of variables by exogenous to endogenous before estimation of the model. In the VAR Model, determining the sources of responses to the shocks namely impulse-response functions and changes in one variable namely variance decomposition of forecast error is sensitive to the order of variables. Common practice in the literature is ordering the variables by the most exogenous to endogenous. The first variable in the system is accepted as the most exogenous one and doesn't respond much more to the temporary shocks coming from other variables in the system. On the other hand, last variable in the system accepted as the most endogenous one. It responds to the shocks coming from other variables. In this context, ordering of the

variables can be determined by economic theory (Örnek, 2009: 112). In this case the variables in estimating our VAR Model should be ordered by the most exogenous to endogenous as capital flow variable (FCI), growth variable (GR) and exchange rate variable (ERN). Finally, after determining the order of variables in the VAR Model and including constant term and dummy variables as exogenous into the system, we estimate the VAR Model by using techniques of Variance Decomposition and Impulse-Response Function in next two sections.

3.2 Variance Decomposition

The forecast error variance decomposition tells us the proportion of the movements in a sequence due to its own shocks versus shocks to the other variable. Consider the VAR equation above and if ε_{xt} shocks explain none of the forecast error variance of y^t at all forecast horizons, we can say that the y^t sequence is exogenous. In such a circumstance, the y^t sequence would evolve independently of the ε_{xt} shocks and z^t sequence. At the other extreme, ε_{xt} shocks could explain all the forecast error variance in the y^t sequence at all forecast horizons, so that y^t would be entirely endogenous (Enders, 1995: 310). As a result, forecast error variance decomposition is a tool used for measuring the effects of other variables on relevant variable. However the necessity of restriction in determining the shocks of ε_{yt} and ε_{xt} must be considered as well (Kasapoğlu, 2007: 48).

From the theoretical point of view indicated above, the results of forecast variance decomposition obtained from estimated VAR Model can be determined in Table 3. Approximately 87 % portion of the variance decomposition that occurs in financial capital inflows (FCI) is explained by the shocks that incurs itself. This portion is bigger than same portions in economic growth (GR) and exchange rate (ERN), nearly 79 % and 73 %, respectively. This infers or confirms that capital inflows in the model are the most exogenous one and has an effect on economic growth and exchange rate much more. If we look at variance decomposition of economic growth and exchange rate, this fact can be determined in detail. Table 3 indicates that, changes in economic growth and exchange rate are explained by financial capital inflows much more excluding the effect of each variable on itself. Nearly 14 % portion of variance decomposition of economic growth explained by financial capital inflows while this ratio is approximately 18 % in the case of exchange rate. The effects of economic growth and exchange rate on each other are nearly 6 % and 7 %, respectively, which are very low compared to effects of capital inflows on them. All of these consistent with the theory arguing the direction of relation among variables from financial capital flows to economic growth and exchange rate, and also confirm that changes in capital inflows may be a basic factor creating a fluctuation in economic growth and exchange rate.

Table 3: Variance Decomposition Results

Variance Decomposition of FCI			
Periods	FCI	GR	ERN
1	100.0000	0.000000	0.000000
4	87.81704	7.422508	4.760457
8	87.41192	7.333653	5.254429
10	87.40404	7.331012	5.264944
Variance Decomposition of GR			
Periods	FCI	GR	ERN
1	3.636153	96.36385	0.000000
4	12.36679	82.47445	5.158758
8	14.64388	79.27014	6.085980
10	14.67779	79.22038	6.101822
Variance Decomposition of ERN			

Periods	FCI	GR	ERN
1	12.17969	6.999595	80.82072
4	18.61092	7.979181	73.40990
8	18.65419	7.978831	73.36698
10	18.65677	7.979388	73.36384

Cholesky Ordering: FCI, GR and ERN

3.3 Impulse - Response Functions

Impulse response functions show the effects of shocks on the adjustment path of the variables. Consider the following bivariate VAR system of stationary variables:

$$y_t = \alpha_1 y_{t-1} + \alpha_2 x_{t-1} + u_t^y \quad (3)$$

$$x_t = \beta_1 x_{t-1} + \beta_2 y_{t-1} + u_t^x \quad (4)$$

In this case there are two possible shocks to the system; one to y and the other to x. Here, y and x are related in a dynamic fashion, but not contemporaneously. The current value x_t does not appear in the equation for y_t and the current value y_t does not appear in the equation for x_t . Also we need to assume the errors u_t^y and u_t^x are independent of each other (contemporaneously uncorrelated). In addition, we assume $u_t^y \sim N(0, \sigma_y^2)$ and $u_t^x \sim N(0, \sigma_x^2)$. Consider the case when there is a one standard deviation shock (alternatively called an innovation) to y so that at time t=1, $u_t^y = \sigma_y$ and u_t^x is zero thereafter. Assume $u_t^x = 0$ for all t and since we are focusing on how a shock changes the paths of y and x, we can ignore the intercepts. Then;

1. When t=1, the effect of a shock of size σ_y on y is $y_1 = u_1^y = \sigma_y$ and the effect on x is $x_1 = u_1^x = 0$.

2. When t=2, the effect of the shock on y is $y_2 = \alpha_1 y_1 + u_2^y$ and the effect on x is $x_2 = \beta_2 y_1 + u_2^x$.

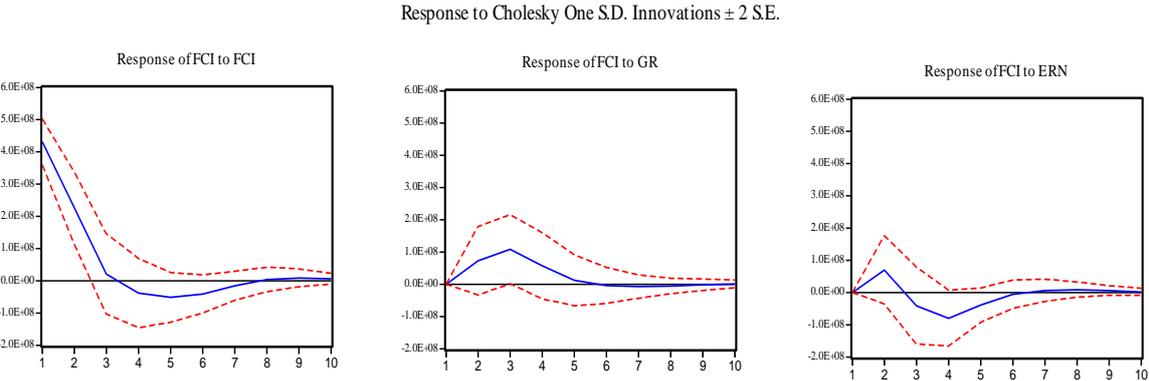
By repeating the substitutions for t=3, 4, 5... we obtain the impulse response of the shock (or innovation) to y on y as $y_t = \alpha_1^{t-1} y_1 + u_t^y$ and the impulse response of a shock to y on x as $x_t = \beta_2 \alpha_1^{t-1} y_1 + u_t^x$. The advantage of examining the impulse response functions (and not just VAR coefficients) is that they show the size of the impact of the shock plus the rate at which the shock dissipates, allowing for inter dependencies (Hill et al., 2008: 352).

In the context indicated above, impulse response graphs of variables concerning with financial capital inflow (FCI), economic growth (GR) and exchange rate (ERC) are shown in Graph 1, Graph 2 and Graph 3 respectively. Vertical axis of each graph represents the direction of the response and magnitude in percentage term to the relevant variable which has a rising shock by 1% standard deviation while horizontal axis represents the number of period (quarters). On the other hand, dashed red lines represent the confidence interval by ± 2 standard deviations and have an important role in determining the significance of the results statistically.

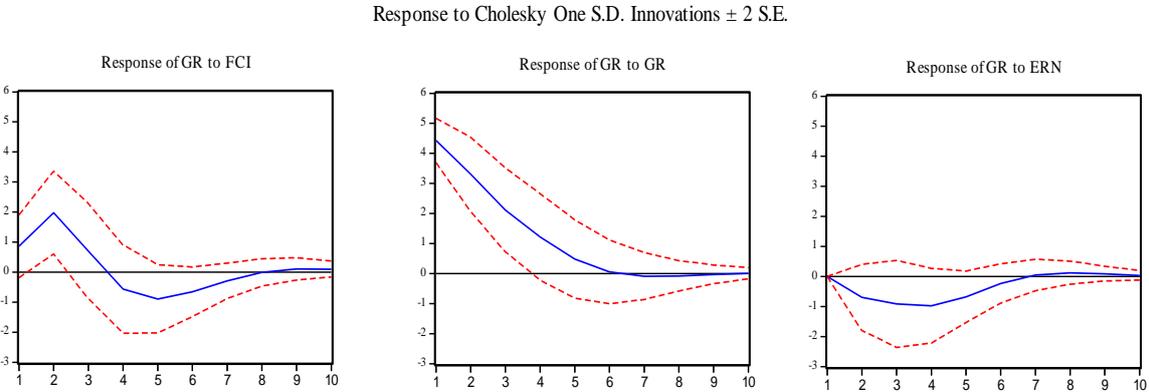
The response of the GR to shocks from ERC follows an increasing pattern for the first two quarters and later a decreasing pattern. Left panel in Graph 2 shows the fact that FCI has not a permanent positive effect on GR. Positive effect of FCI on GR disappear in second term immediately

while even negative effect exist after third term. Concerning the effects of capital inflows on economic growth, results reveal that there is a trade-off over time between boom and bust, i.e. a short-run “gain” and a medium run "pain". On the other hand, left panel in Graph 3 presents the response of ERN to the shocks from FCI. This figure indicates there is a negative relation between them for first second term while floating positive relation exists until fifth term. That means capital inflows firstly appreciate and later depreciate the currency creating exchange rate instability. Finally, the response of growth and exchange rate with respect to the financial capital inflows shows that capital inflows has a big role in appreciation and depreciation cycle of exchange rate and boom and bust cycle of economic growth.

Graph 1: Impulse Response Function of Financial Capital Inflows

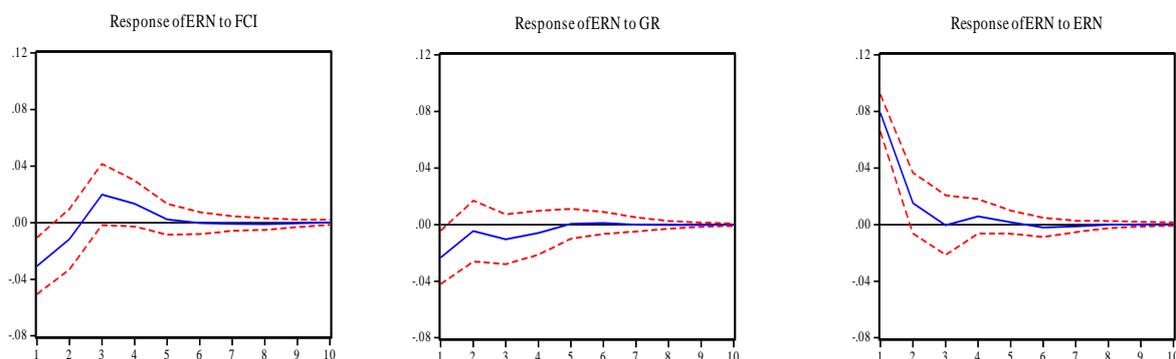


Graph 2: Impulse Response Function of Growth



Graph 3: Impulse Response Function of Exchange Rate

Response to Cholesky One S.D. Innovations ± 2 S.E.



4. Conclusion

Capital flows to developing economies enhance the aggregate demand and economic growth while appreciate domestic currency in the short run. Later, capital inflow induced-appreciation deteriorates the current account balance and creates “expectation of currency depreciation” for foreign financial investors. In the end, capital reversals occur and depreciate currency dampening both financial stability and real economic activity. Thus real exchange rate appreciation and depreciation associated with capital inflows or reversals put developing countries in a vicious circle of boom and bust. Concerning with the Turkish Experience, this fact has been indicated using VAR Model Estimation sourced data from the years between 1992 and 2010. As a basic determinant of economic activity, capital inflows firstly appreciate and then depreciate the domestic currency while making the growth rate fluctuating. Thus, capital inflows to Turkey put the economy in a vicious circle of boom and bust rather than a virtuous cycle of productive financial integration.

From the policy perspective, it can be argued that developing countries need to have an active policy that avoids substantial appreciation of their currencies during capital inflows. Doing nothing in the face of large capital inflows will certainly appreciate currency sharply as the starting point of “a bad story”. The challenge for policymakers here is to prepare their economies to best absorb the potential benefits of capital inflows. This implies a multiplicity of measures that do not let the absorption of international capital flows to foster consumption much more since consumption booms is associated with larger currency appreciation. Therefore, in order to response to the dangers effectively and generate benefits in the long run from capital account liberalization, balance between domestic investment and consumption should be provided during the absorption of capital inflows. Thus, the risks, concerning with the appreciation of domestic currency and unsustainable deficit in the current account after capital flows to a developing country, can be reduced.

References

- AGENOR, P-R., McDERMOTT, C.J., and ÜÇER, M. (1997). Fiscal Imbalances, Capital Inflows, and The Real Exchange Rate: The Case of Turkey. *European Economic Review*, vol.41, pp. 819-825.
- AGOSIN, M. – FRENCH-DAVIS, R. (2001). Managing Capital Inflows in Chile. In GRIFFIT-JONES, S.- MONTES, M.- NASUTIN, A. (eds.) *Short Term Capital Flows and Economic Crisis*. Oxford: Oxford University Press, pp. 199–226.
- ATHUKOROLA, P. – RAJAPATIRANA, S. (2003). Capital Inflows and the Real Exchange Rate: A Comparative Study of Asia and Latin America. *The World Economy*, vol.26, Issue. 4, pp. 613-637.
- CALVO, A. G. – LEIDERMAN, L. – REINHART, C. M. (1993). Capital Inflows and Real Exchange Rate Appreciation in Latin America. IMF Working Paper 1993-40/1 Washington: International Monetary Fund
- CORDEN, W. M. (1994), *Economic Policy, Exchange Rates and the International System*, Oxford: Oxford University Press.
- EDWARDS, S. (1998). Capital Flows, Real Exchange Rates, and Capital Controls: Some Latin American Experiences. NBER Working Paper 1998-6800. Cambridge: National Bureau of Economic Research.
- ENDERS, W. (1995). *Applied Econometric Time Series*. New York: John Wiley and Sons.
- FRATZSCHER, M – BUSSIÈRE, M. (2004). Financial Openness and Growth: Short-Run Gain, Long-Run Pain? ECB Working Paper 2004-348. Frankfurt: European Central Bank
- FRENCH-DAVIS, R. - AGOSIN, M. – UTHOFF, A. (1995). Capital Movements, Export Strategy, and Macroeconomic Stability in Chile. In FRENCH-DAVIS, R. - GRIFFIT-JONES, S. (eds.) *Coping with Capital Surges*. Canada: Lynne Rienner Publisher, pp. 99–145.
- HILL, R.C., GRIFFITHS, W.E., and LIM, G.C. (2008). *Principles of Econometrics*. New York: John Wiley and Sons.

HUTCHISON, M. M. – NOY, I. (2006). Sudden Stop and the Mexican Wave: Currency Crises, Capital Flow Reversals and Output Loss in Emerging Markets. *Journal of Development Economics*, vol. 79, pp. 225-248.

IMF. (1998). *World Economic Outlook: A Survey by the Staff of the International Monetary Fund*. Washington DC.

ITO, T. (1999). Capital Flows to East Asia. In FELDSTEIN, M. (eds.) *International Capital Flows*. Chicago: Chicago University Press, pp. 111–132.

KASAPOĞLU, Ö. (2007). *Parasal Aktarım Mekanizmaları: Türkiye İçin Uygulama*. Qualification Specialization Thesis, Ankara: Central Bank of Republic of Turkey.

ÖRNEK, İ. (2009). Türkiye’de Parasal Aktarım Mekanizması Kanallarının İşleyişi. *Maliye Dergisi*, no. 156, Ocak-Haziran 2009, pp. 1044-125.

SEBASTIAN, E. (1999). Capital Flows to Latin America. In FELDSTEIN, M. (eds.) *International Capital Flows*. Chicago: Chicago University Press, pp. 5–42.

SIMS, C.A., (1980). Macroeconomics and Reality. *Econometrica*, vol. 48, no. 1, pp. 1-48.

TAMAYO, E. C. (2006). Capital Flows, Exchange Rates and Growth: Evidence from Developing Countries. In *Proceedings of the Banco de la Republica Colombia*. Medellin:1-15 (<http://www.banrep.gov.co/documentos/conferencias/medellin/2006/CapitalFlows.pdf>)

WAGNER, H. (2000). Which Exchange Rate Regime in an Era of High Capital Mobility, *North American Journal of Economics and Finance*, no. 11, pp 191-203.

WORLD BANK. (1997). *Private Capital Flows to Developing Countries*, A World Bank Policy Research Report, Oxford: Oxford University Press.