

Almeida Ramos, Raquel

Working Paper

Financial flows and exchange rates: Challenges faced by developing countries

Working Paper, No. 97

Provided in Cooperation with:

International Policy Centre for Inclusive Growth (IPC-IG)

Suggested Citation: Almeida Ramos, Raquel (2012) : Financial flows and exchange rates: Challenges faced by developing countries, Working Paper, No. 97, International Policy Centre for Inclusive Growth (IPC-IG), Brasilia

This Version is available at:

<https://hdl.handle.net/10419/71817>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

FINANCIAL FLOWS AND EXCHANGE RATES: CHALLENGES FACED BY DEVELOPING COUNTRIES

Working Paper number 97 October, 2012

Raquel Almeida Ramos

International Policy Centre for Inclusive Growth (IPC-IG)

Copyright© 2012
International Policy Centre for Inclusive Growth
United Nations Development Programme

International Policy Centre for Inclusive Growth (IPC - IG)
Poverty Practice, Bureau for Development Policy, UNDP

Esplanada dos Ministérios, Bloco O, 7º andar

70052-900 Brasília, DF - Brazil

Telephone: +55 61 2105 5000

E-mail: ipc@ipc-undp.org ▪ URL: www.ipc-undp.org

The International Policy Centre for Inclusive Growth is jointly supported by the Poverty Practice, Bureau for Development Policy, UNDP and the Government of Brazil.

Rights and Permissions

All rights reserved.

The text and data in this publication may be reproduced as long as the source is cited. Reproductions for commercial purposes are forbidden.

The International Policy Centre for Inclusive Growth disseminates the findings of its work in progress to encourage the exchange of ideas about development issues. The papers are signed by the authors and should be cited accordingly. The findings, interpretations, and conclusions that they express are those of the authors and not necessarily those of the United Nations Development Programme or the Government of Brazil.

Working Papers are available online at www.ipc-undp.org and subscriptions can be requested by email to ipc@ipc-undp.org

Print ISSN: 1812-108X

FINANCIAL FLOWS AND EXCHANGE RATES: CHALLENGES FACED BY DEVELOPING COUNTRIES

Raquel Almeida Ramos*

1 INTRODUCTION

With the global financial crisis, emerging developing countries have been experiencing marked cycles of capital flows: significant inflows until the collapse of Lehman Brothers; a sudden outflow in the sequence; a rebound of inflows some months after; and, more recently, more short-lived periods of risk aversion and outflows due to the problems concerning the Euro. This period has been of singular intensity, with cycles changing much more rapidly than previously. The different intensity has major implications for understanding the process, especially regarding the relative importance of push and pull factors and the formulation of policy options.

Although the volatility of capital flows seen in the past years is a singular episode, it should not be taken as unique. Instead, it should be understood as a consequence of the increasing importance of finance-related flows. This is a feature of financialisation, an important process that has been taking place in recent decades and that should not be expected to end soon. In this context, capital flows are expected to continue to be very sizeable and volatile, which demands a clear understanding of their implications.

The consequences of large and volatile capital flows on the exchange rates of developing countries are clear: they intensify volatility and might cause misalignment—problems that create not insignificant policy challenges, as the exchange rate tends to have amplified effects in developing countries.

Moreover, the importance of studying the subject should not be seen only in the context of building macroeconomic stability which enables governments to fight poverty, but also as policies which avoid people from falling into the poverty trap itself and to avoid an increase in inequality, since the consequent decrease in growth rates tends to affect the poorest populations most. These people lose their jobs quicker and have few instruments to protect themselves against the economic contraction (Halac and Schmukler, 2004).

* International Policy Centre for Inclusive Growth (IPC-IG).

The issues related to financial capital flows concern more middle-income countries than others (as these are the core recipients in the process of international portfolio allocation)—countries which are also home to a large proportion of the world's poor people (75 per cent of them, according to Sumner, 2010).

This paper examines the problems of the excessive volatility of capital inflows in emerging market countries and its consequences on their exchange rates. The second section looks at the pattern of capital flows received by these countries, and the third section focuses on exchange rates. It first analyses the theoretical debate on setting exchange rates: the growing importance of financial flows on determining them, and whether it could be seen as a market-clearing price. Then it presents the links through which the exchange rate affects an economy, focusing on the specificities of developing countries which amplify these impacts. Later it discusses the changes seen in developing countries' choices of exchange rate regimes in light of the new pattern of capital flows. The fourth section analyses these issues during the global financial crisis.

2 FINANCIALISATION AND PORTFOLIO FLOWS

Recent decades were characterised by a major change in the relationship between the 'financial' and 'real' sectors, where financial actors or motives assumed an increased role in both national and international economies. These changes have been referred to as the 'financialisation' of the global economy (Epstein, 2005; Plihon, 2007; Stockhammer, 2010). In this process, the pattern of accumulation has been transformed into one that occurs increasingly through financial channels rather than through trade and commodity production (Epstein, 2005) and characterises an important change from Fordism to a new regime where finance plays a more important role than production (Chesnais, 1994).

In the international sphere, the main evidence of financialisation is the growing mobility of capital (Carneiro, 1999) and the relative importance of finance-related flows over trade flows. Financialisation is obviously associated with policies such as the liberalisation of the capital account and deregulation. Other developments also played a significant role. First, the earlier liberalisation of multilateral trade and improvements in communications and information technology were important factors in deepening the globalisation that lies behind financialisation (Blecker, 2001). Second, the demographic transition in developed countries and the subsequent increase in savings also played an important role, as it led to the creation of a few institutions (investment funds), with very large resources, specialised in trading financial assets among different countries in search of higher returns (Plihon, 2007).

2.1 LIBERALISATION AND CAPITAL FLOWS TO DEVELOPING COUNTRIES

Financialisation can intensify the consequences of the liberalisation of the capital account. If financial flows were to cause instability by intensifying boom and bust cycles, the increasing importance and volatility of such flows could intensify this pattern, overcoming the expected gains from liberalisation.

The liberalisation of the capital account has been promoted to developed and developing countries alike since the 1970s with the claim that it would lead to higher economic growth by allowing capital to flow from where it is abundant to where it is scarce. Liberalisation would boost investments by allowing residents to have cheaper loans and investors to reduce risk by

diversifying their investments around the globe. The efficiency of domestic financial markets would be enhanced due to their exposure to competition from foreign firms and better technologies. Institutions and property rights would be improved with a country's exposure to global financial markets (Fischer, 1998; Mishkin, 2006). Furthermore, liberalisation of the capital account would allow a smoothing of consumption patterns over time, which would be particularly valuable if the capital borrowed were used to improve a country's ability to produce goods and services (Neely, 1999).

However, the results of liberalisation of the capital account portray mixed findings. Quinn (1997) found a positive relationship between capital account liberalisation and growth, and the IMF (2001) found a weak but still positive link. On the other hand, Grill and Milesi-Ferretti (1995) and Rodrik (1998) found no robust correlation.

Faced by these conflicting results, Eichengreen (2001) suggests that the difference in the results obtained by Quinn and Rodrik is due to the different weight of developing countries in their samples, putting forward the idea that capital account liberalisation might be positive for developed countries but with negative impacts on emerging economies. It was argued that the early stage of development of the financial markets in developing countries was the reason for the negative results of liberalisation in these countries (see Edwards, 2001). The IMF (2001) holds a similar position. After acknowledging the impacts that excessive capital inflows can have on financial stability, the report states that the net results of liberalisation would depend on "the strength of the domestic macroeconomic policies and financial structures".

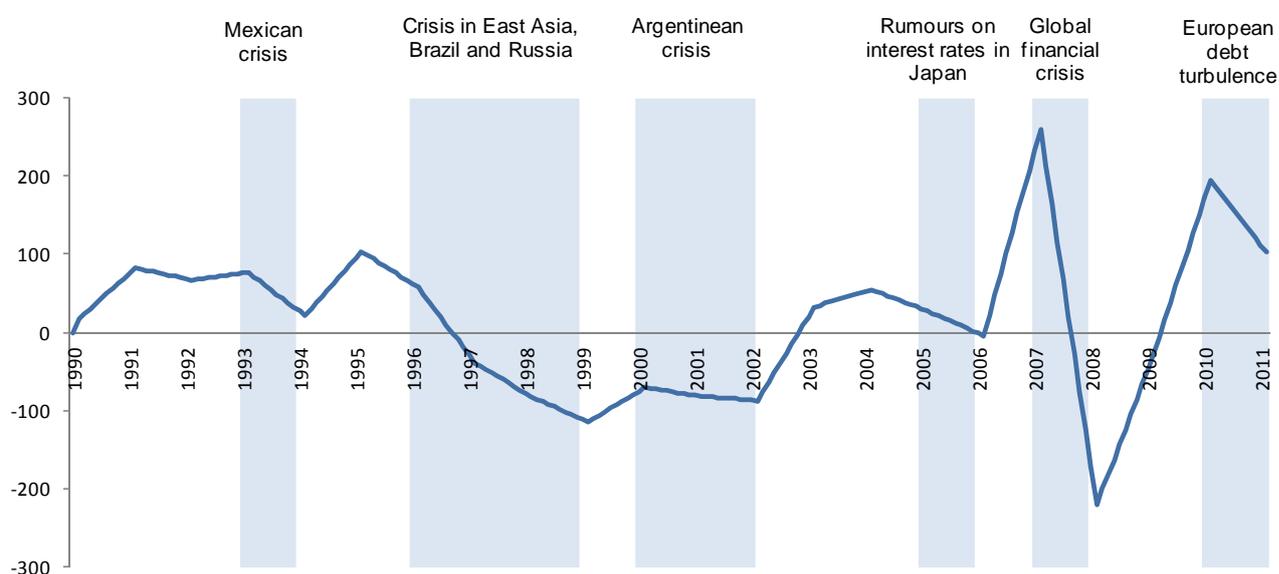
This position limits the negative effects of liberalisation to the instability of financial markets, neglecting other types of turbulence. Indeed, liberalisation, and the financialisation that followed, intensifying the importance and the volatility of finance-related flows, resulted in major turbulence in these countries, through its impact on their exchange rates, without necessarily leading to a financial crisis. But why would this impact be greater in developing countries?

Portfolio flows are procyclical, not only in developing but also in developed countries, and their impact on intensifying boom and bust cycles is broadly known (see Edwards, 2001). The impact of these flows might, however, be greater in developing countries due to their inclusion in the international monetary system. The international monetary system is characterised by a hierarchy of currencies, which are differentiated according to their liquidity; the most liquid being the ones which are used for international trade and as reserves of value. The concept of liquidity is related to the ability to reverse an investment decision in a financial or a physical good (Hayes, 2003). More liquid assets are, therefore, those which can more easily be sold without incurring a monetary loss. In periods of higher uncertainty, it is more difficult for agents to assess their expectations about the future and, therefore, the return of an asset. In these episodes the most liquid assets, such as the currencies of advanced economies, are thus preferred. Due to this characteristic, these periods are known as times of higher liquidity preference.¹

As developing countries' currencies are not as liquid as those of developed countries, capital flows to them follow a different dynamic: they flow to developing economies only in periods of higher international liquidity, flowing back to central economies in periods of higher risk aversion (Carneiro, 2008).² Figure 1 presents the private financial flows to developing countries, excluding Foreign Direct Investment (FDI). It clearly shows this pattern of flows, which depend on the international scenario. It also shows the abovementioned major changes seen in the pattern of flows, which have become more significant and more volatile.

FIGURE 1

Net Private Financial Flows Excluding FDI: Emerging and Developing Economies, 1990–2011
(US\$ billions)



Source: UNCTAD, 2011, updated. Based on IMF, *World Economic Outlook*, April 2011 database.

The result of the flows to developing countries is the increased volatility of their exchange rates. In a circular determination, the resulting greater exchange rate volatility feeds back and contributes to a greater volatility of flows, as it increases the risk perception associated with the developing country's currency, intensifying capital outflows in periods of higher liquidity preference.

While periods of higher risk aversion cause greater exchange rate volatility, periods of higher liquidity internationally lead to an exchange rate appreciation, which can become an exchange rate misalignment. The misalignment concept was introduced by John Williamson in 1983 from the observation that flexible exchange rates could actually deviate from the value that would yield a current account outcome which is "equal to the underlying capital flow over the cycle"—the fundamental equilibrium value (Williamson, 1987). Although the definition and the measurement of misalignments are subject to considerable debate,³ there is consensus on the use of the concept to indicate an exchange rate that does not reflect a country's fundamentals. Some features of capital flows received and of their relationship with a country's currency might indicate whether a process is leading to exchange rate appreciation or depreciation resulting in misalignment.

One of these features is the importance of push factors in determining capital flows. If the capital flows are mainly due to changes in the international scenario, the resulting exchange rate will clearly be less related to a country's specific fundamentals. The determination of the relative importance of push and pull factors is subtle, but very important to indicate whether the cycle is expected to be sustained.

The revival of capital flows to Latin American countries in the early 1990s was associated with developments in the USA such as a decrease in interest rates (push factors) and a restructure of external debt (pull factors). Analysing the importance of these two,

Calvo et al. (1993) concluded that the main role was played by the external factors, since capital inflows had increased in several countries, including in some which had not implemented economic reforms. Moreover, some countries had implemented such reforms much earlier but were receiving capital flows only at that time. Another type of analysis could be the use of econometric estimations, as done by Reinhart and Reinhart (2008).⁴ This might, however, suffer from the drawback of being too broad and, therefore, grouping too many different situations without considering country and time specificities.

If the external economic conditions are the driver for higher flows, the resulting appreciated exchange rate should be seen as misalignment, as it is not related to a change in the country's fundamentals but to external factors. The relative importance of push and pull factors in the surge of capital flows seen after the global financial crisis will be analysed in the third section.

Another feature that must be taken into account when analysing capital flows and exchange rates is the cyclicity that portfolio flows might have. A period of higher international liquidity, and its major portfolio flows, might themselves create conditions that attract even more portfolio flows, producing a vicious cycle. This would happen because the appreciation of a country's assets and currency can lead to an expectation among foreign investors of further appreciation and, therefore, be understood as an extra opportunity for profit: in addition to the return of the asset, the investor would also gain from the appreciation of the asset's underlying currency.⁵

This boom cycle will happen until a moment of greater uncertainty, when the higher liquidity preference will cause investors to convert their assets denominated in developing countries' currencies into more liquid currencies, which are higher in the hierarchy of currencies. Until this moment, the exchange rate will be misaligned: its value does not reflect the country's fundamentals but, rather, a boom of inflows due to the economic situation in developed countries. In other words, portfolio flows create a negative cycle of currency appreciation which will very likely transform into an exchange rate misalignment, as this movement is not related to the country's fundamentals but is only the result of a vicious cycle.

In conclusion, financialisation has increased finance-related flows to developing countries, their volatility and, therefore, their role in determining the exchange rate. Having exchange rates determined by financial flows might, however, lead to great volatility and to misalignments due to the specific patterns of these flows, such as: being excessively volatile, especially in developing countries; highly determined by external factors, such as international liquidity preference; and creating vicious cycles.

3 THE EXCHANGE RATE

After having analysed the changes seen in the patterns of capital flows due to the process of financialisation and its consequences for creating exchange rate volatility and misalignment, this section first analyses whether this is incorporated in the analysis of how exchange rates are determined. It then presents how the exchange rate can have significant impacts on developing countries' economies due to their specific aspects and later analyses how this impacts these countries' choices of exchange rate regimes.

3.1 EXCHANGE RATE DETERMINATION

Theoretical explanations of the determination of the exchange rate have passed through significant changes throughout the development of exchange rate theories. From a focus on automatic trade adjustments, exchange rate theories have been increasingly incorporating financial aspects.

One of the first attempts to explain exchange rate changes was the Purchasing Power Parity (PPP) of Cassel (1918), which explains such changes as the result of changes in the price level of two countries. The implication of this model is the understanding of the exchange rate as a market-clearing mechanism, guaranteeing trade adjustment—as in Hume’s price-specie-flow model.

Other exchange rate theories highlight the importance of financial flows and focus on its determinants. The monetary approach (as in Frenkel, 1976; and Mussa, 1976) explains changes in the exchange rate as defined by changes in the supply and in the demand for money. The supply would be determined by the monetary authorities, while the demand depends on the income and on the interest rate prevailing in the two countries in question. As highlighted by Plihon (2006), this model has the value of shedding light on the intersections between stock (the monetary and financial assets) and flow variables (the income) in determining exchange rates. Additionally, it points to the importance of foreign portfolio investments.

In fact, portfolio decisions are the decisive variables behind exchange rate movements in the models that followed. The portfolio balance models (such as McKinnon, 1969) explain exchange rate movements as the outcome of a constant arbitrage between assets traded in different countries. This mechanism is closer to the contemporary reality, as it includes financial aspects and the idea of a global portfolio choice. It also makes the major contribution of emphasising that the portfolio choice behind the capital flows is determined not only by return, but also by risk factors, including thus the important differentiation between assets of different countries (Plihon, 2006). Such a differentiation is fundamental for the understanding of exchange rate markets, especially when the assets in question involve such very different countries as a developed and a developing one. However, it has the overly simplifying assumption that the uncertainty related to trading an asset in another currency, which has its own risk and return, can be reduced to a measurable risk which, on top of that, is observed by every agent. Moreover, portfolio balance models still assume that the exchange rate is determined by a market-clearing mechanism.

Even if portfolio allocation were considered the main process determining exchange rates, the key decisions behind portfolio allocation are still unknown. In fact, models trying to estimate the exchange rate based on macroeconomic variables have concluded that a random walk performs as well as traditional models (see Meese and Rogoff, 1983; and Goodhart, 1988).

The lack of success in explaining exchange rate movements has given support to the claim that the exchange rate cannot be seen as a relative price that efficiently adjusts markets but, rather, as the result of expectations and positions of participants in the foreign exchange markets (Kaltenbrunner, 2011).⁶ Indeed, the fact that the exchange rate is not a market-clearing instrument as in the PPP theory is related to the current complexity of worldwide portfolio choices and the deepening of the exchange rate markets. The combination of global portfolio allocation—which sometimes responds to chartist approaches—with deep derivative markets, currency internationalisation and a hierarchy of currencies complicates the

determination of exchange rates. For instance, exchange rates now respond to private financial flows—to the flows themselves and to expectations regarding them—which affects the spot and the future rates; and these flows have, themselves, become more volatile.

In this scenario, the variables affecting the exchange rate are not necessarily linked to market clearance. On the contrary, sudden exchange rate depreciation and its possibility is an incentive for major outflows of capital, worsening the depreciation; a currency which has been continuously over-appreciating might attract more capital flows due to the higher expected returns, and high instability will be interpreted as a possibility for a better return, attracting more short-term portfolio inflows.

Is it thus due to the abovementioned changes related to exchange rate markets and to the consequent absence of the exchange rate's balancing capability that issues such as the excessive exchange rate volatility and misalignment emerge.⁷ These changes seen in the global economy have brought significant negative effects to emerging developing countries, which, more than being cycle takers (according to Ocampo, 2002), are the recipients of the major finance-related flows.

3.2 THE IMPORTANCE OF EXCHANGE RATES FOR DEVELOPING COUNTRIES

A key aspect of how the exchange rate affects an economy is through the competitiveness of the domestically produced goods within domestic and international markets. In the case of developing countries, this aspect is even more important, as the competitiveness of their products has a greater reliance on prices than on innovation. Through this channel, the exchange rate has significant impacts not only on the level of net exports but also on the composition of trade—whether this will involve more commodities or industrialised products. By affecting international trade, the exchange rate will also affect the part of foreign direct investments which is oriented towards exports.

One of the first models which tested the hypothesis of a positive correlation between exchange rate volatility and trade presented a clear negative impact (Clark, 1973). More recently, studies have tested the hypothesis that this link would no longer exist due to new developments such as hedging possibilities (Clark et al., 2004). Although some papers argue for the absence of impacts, studies focused on developing countries, where the exchange rate volatility is greater, find an important and negative relationship between volatility and exports (Arize et al., 2008).

An exchange rate change also has impacts on prices, through changes in import prices. The impact of exchange rate on inflation can be directly estimated and is known as the exchange rate pass-through to inflation. This impact is especially important in developing countries, where this rate is higher. In the analysis done by Calvo and Reinhart (2001) on the impact of lagged exchange rate change on inflation, a statically significant effect was found in 43 per cent of the emerging markets' cases, while for developed countries this was seen in only 13 per cent of the cases. The exercise also showed that the magnitude of the effect was different in the two groups, being about four times larger in emerging-market countries.⁸

The reason for the higher exchange rate pass-through in developing countries is associated with the greater exchange rate volatility and higher inflationary history. Choudhri and Hakura (2001) found a strong association between high pass-through and high inflation. As Eichengreen (2002) put it, the high inflation history might have "raised agents' awareness

of and sensitivity to imported inflation and led to formal indexation". Developing countries' greater exchange rate volatility also plays an important role in this process, as it increases the number of episodes when prices must be changed by agents (Farhi, 2007). Thus, agents in developing countries would more frequently adjust prices in response to higher imported prices, causing inflation to more rapidly—and more significantly—respond to exchange rate changes.

As a consequence of these multiple links through which the exchange rate impacts the real economy, its instability has a notable effect on the level of uncertainty of its economic agents. Uncertainty, in turn, plays an important role in determining fixed investments, which, in Keynes's (1936) famous words, are led by animal spirits. Therefore, when exchange rate instability causes greater uncertainty about future investments, the level of investments in the economy will be lower. Serven (2003) has studied the relationship between exchange rate uncertainty and the level of investments and found an important positive link. The relationship found is stronger in economies where uncertainty is at high levels, where the degree of economic openness is higher, and in poorer countries.

In addition to its impact on economic activity, greater exchange rate volatility also increases the incentives for speculation (UNCTAD, 2006), which brings more volatility. Abrupt exchange rate depreciations can also lead to currency crisis in cases of currency mismatch—a common risk in developing countries due to the problem they face issuing debt in their own currency: the original sin problem (Eichengreen et al., 2003). As a consequence, developing countries are subject to fluctuations of their debt level—and of the costs of servicing it—according to changes in the exchange rate.

Exchange rate misalignment also has important effects on economic activity. While a temporarily overvalued rate has important but short-lived impacts on trade, its persistence for a longer period can lead to severe changes in the economic structure and might be a misleading incentive for assuming external-debt-related risks.

Moreover, external shocks to the exchange rate can lead to trade hysteresis, i.e. changes in the link between the trade balance and the exchange rate fluctuations due to aspects such as the sunk costs related with entering a different market. When this process takes place, the shocks to the exchange rate will have permanent effects on trade and, therefore, also on the productive and employment structure. The analysis of hysteresis in exchange rates is crucial for understanding the impact of exchange rate fluctuations on the trade balance. Indeed, the theory used so far—such as the J curve—has emphasised that this impact is not straightforward but has not been able to explain the determinants of the lag period. The study of hysteresis in the field of unemployment has been significantly developed, and its analysis can be very beneficial for the study of exchange rate issues.

3.3 EXCHANGE RATES: POLICYMAKING

The problems of very volatile capital flows bring up the question of which exchange rate regime would better cope with them. The fixed regime was used by a majority of developing countries until an important movement towards more flexible regimes took place in the 1980s and 1990s (IMF, 1997). The major change towards flexible regimes was based on the argument that this would allow for adjustment in case of internal or external shocks; reduction of the external vulnerability; and monetary policy autonomy, as interest rates would no longer

have to target capital inflows and the exchange rate. Moreover, the fixed regime also has disadvantages, the main one being that it is subject to crises which demand a hike in interest rates, causing a loss in GDP growth⁹ (Edwards, 2000; and Ferrari-Filho, 2008).

At an empirical level, several papers have studied the relationship between exchange rate regimes and economic results, mainly in terms of GDP growth and inflation. In short, some studies point to better results in the case of each regime (free-floating or fixed peg), and others state that the exchange rate regime has no impact (see Levy-Yeyati and Sturzenegger, 2001, for a summary).¹⁰

Some authors argue that the best exchange rate regime depends on each country's specific circumstances. Corden (1990) affirms that the shift towards flexible exchange rate regimes was based on the countries' internal conditions: shock-prone countries would have a higher incentive to opt for fluctuation, due to its role in restoring internal and external disequilibria. However, the changes in the international scenario seem to better explain these shifts. According to this approach, the higher degree of capital mobility would have increased the costs of defending the exchange rate peg, causing developing countries to move away from this regime (Eichengreen, 1994).¹¹

The well-marked trends in developing countries' exchange rate regimes might indicate that, indeed, the best regime depends on the international environment. In this case, the more recent trend of the creation of an 'intermediary regime'—by using reserves of international assets and capital controls—could be seen as a response to the current environment of too volatile capital flows and the major impacts of volatile exchange rates on an economy. The current high level of volatility of capital might make the fixed regime too expensive to defend in case of a major sudden outflow, while the impact of volatile exchange rates on an economy would make the free-floating regime too costly.

4 EXCHANGE RATE PROBLEMS IN THE GLOBAL FINANCIAL CRISIS

Since the global financial crisis very different economic scenarios have prevailed in developed and in developing countries, with developing countries having recovered from the crisis much faster than developed ones. As UNCTAD (2011) shows, developing and transition economies would be able to get back to their pre-crisis (2002–2007) growth levels in 2011, while developed economies would, from the crisis until 2011, be constantly growing at less than their pre-crisis levels. This two-speed recovery led to a significant divergence of monetary policies: while developed countries implemented a series of policies of quantitative easing, developing countries' interest rates were back to their usual targets related to domestic policy concerns, which in many cases meant higher interest rates. With developing countries offering both better gains and better economic perspectives than the developed ones, at the same time as a continuous increase in liquidity, capital flows returned to developing countries in significant amounts.

This was a unique scenario in recent decades, where there was abundant capital flowing to developing countries, not due to a traditional situation of high international liquidity which is characterised by high general economic growth and stability, but rather due to the low yields and the greater uncertainties of the developed countries themselves. In such a scenario, capital flows were sizeable, unstable and followed relatively similar paths in every emerging economy, as they were clearly responding to events in the central countries.

As Figure 1 presented, the amount of net private financial flows excluding FDI to developing countries has increased significantly since 2007, and the volatility seen since then has been much greater than at other times. Most recently, four distinct periods can be identified: the rebound of inflows in the mid-2000's until 2007; the major outflows in 2008, especially after the collapse of Lehman Brothers; the rebound of inflows in 2009–2010 due to the two-speed recovery;¹² and the decrease in inflows in 2011, a year marked by several moments of outflows associated with the so-called debt crisis in Europe.

In its annual bilateral surveillance activities with member countries, the IMF has frequently made reference to these higher inflows of capital to developing countries. In the case of Indonesia, it mentioned that gross portfolio inflows to the country had achieved an average of 2 per cent of GDP per quarter from 2009 to the first quarter of 2011 (IMF, 2011a). In the case of Brazil, capital flows had average 4 per cent of GDP from 2009 to 2012 (IMF, 2012a). South Africa was said to be “one of the main recipients of portfolio flows over the last year [2010]”, having received US\$17 billion of inflows since late 2009 (or approximately 5 per cent of GDP; IMF, 2011b).

These higher inflows were partly acknowledged to be the result of the changes in the international liquidity scenario. In different reports, higher capital flows were regarded as the consequence of: “abundant international liquidity”—Peru (IMF, 2012c); “the accommodative monetary stance in many advanced countries”—South Africa (IMF, 2011b); “the temporary pressures due to global sentiment triggered by uncertainty of the US and Euro area economic prospects”—Indonesia (IMF, 2011a); “multispeed global recovery”—Thailand (IMF, 2010b); “spikes in global risk aversion”—India (IMF, 2012b); “calmer global conditions”—Brazil (IMF, 2012a); or, as the Brazilian authorities emphasised, “global push factors, including ultra-easy monetary policy in major reserve currency areas”. The Economic Commission for Latin America and the Caribbean (ECLAC, 2011) has also recognised the impact of the international scenario on developing countries' capital inflows. Specifically, it points to the spill-over effects of the US monetary policies of keeping nominal interest rates close to zero while boosting liquidity through quantitative easing programmes.

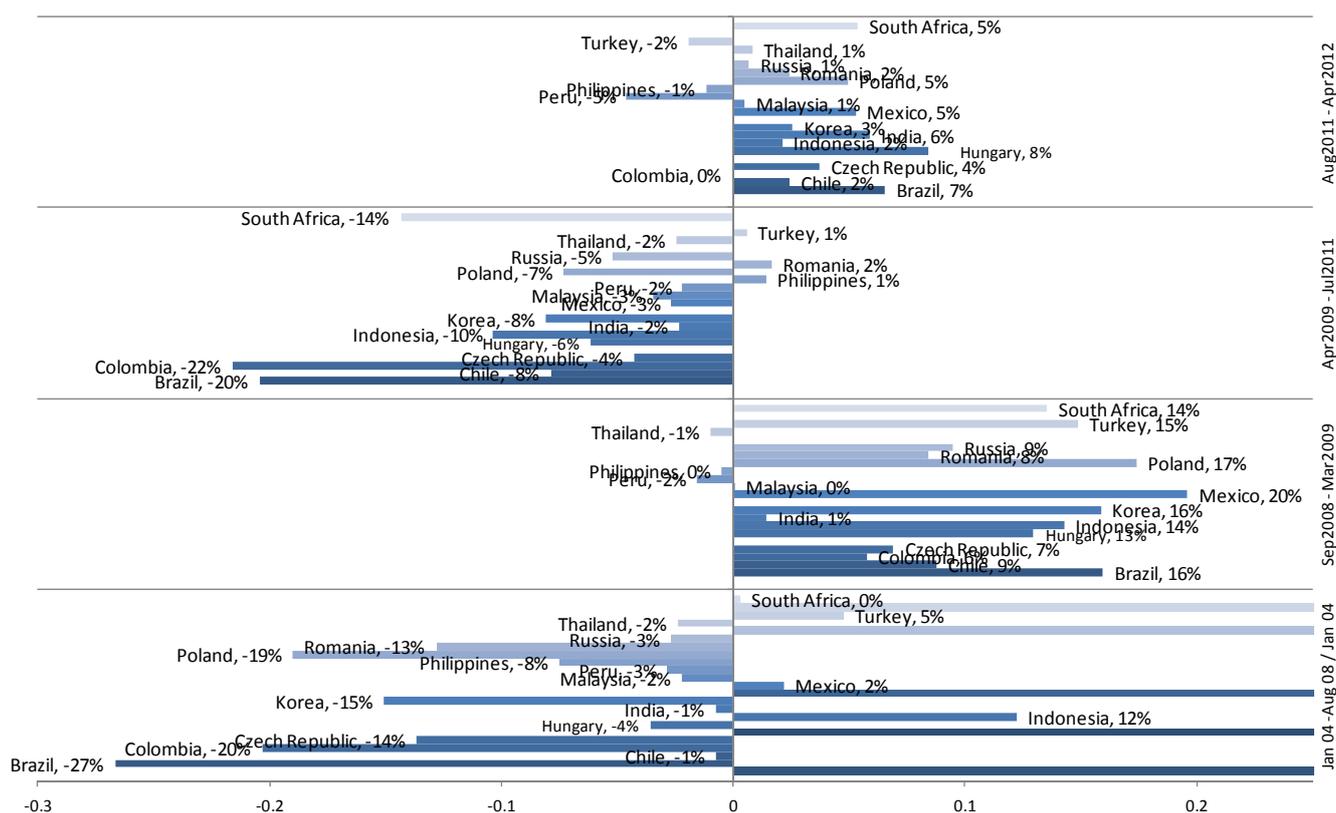
These significant inflows had a clear impact on exchange rates, with several emerging developing countries passing through similar exchange rate patterns through the crisis: appreciation before the collapse of Lehman Brothers, followed by sharp depreciation, a new and strong appreciation from 2009 to 2011 and depreciation thereafter. Figure 2 presents some of the changes in developing countries' nominal exchange rates seen in this period. Although the dates used in this calculation are only approximated dates of changes in the international liquidity scenario, the similarities in the exchange rate path of these countries is clear. Although these are nominal exchange rates—which are the first ones to be affected by capital flows—their impact on the real exchange rates should not be much different, as the inflation seen in these countries did not diverge significantly, especially given the short periods of time considered.

To have the exchange rates of several developing countries following similar patterns indicates the great influence of external factors on these countries' exchange rates, which seems to be the picture portrayed by Figure 2. This might be a sign of misalignment. Indeed, it is very unlikely that all these countries would, simultaneously, have their fundamentals significantly changed in different directions.¹³ The question of whether or not this would mean that these countries' exchange rates are misaligned would, however, depend on features related to the real effective exchange rate and to the country's fundamentals.

In the case of Latin American countries, ECLAC (2011) argues that the exchange rate appreciation seen in Latin American currencies in 2010 has more to do with dynamics of the international economics and foreign exchange markets than with productivity increases in the tradable sectors of the region's economies.

FIGURE 2

Changes in Nominal Exchange Rates in Selected Developing Countries



Source: IMF *World Economic Outlook*, own calculations.

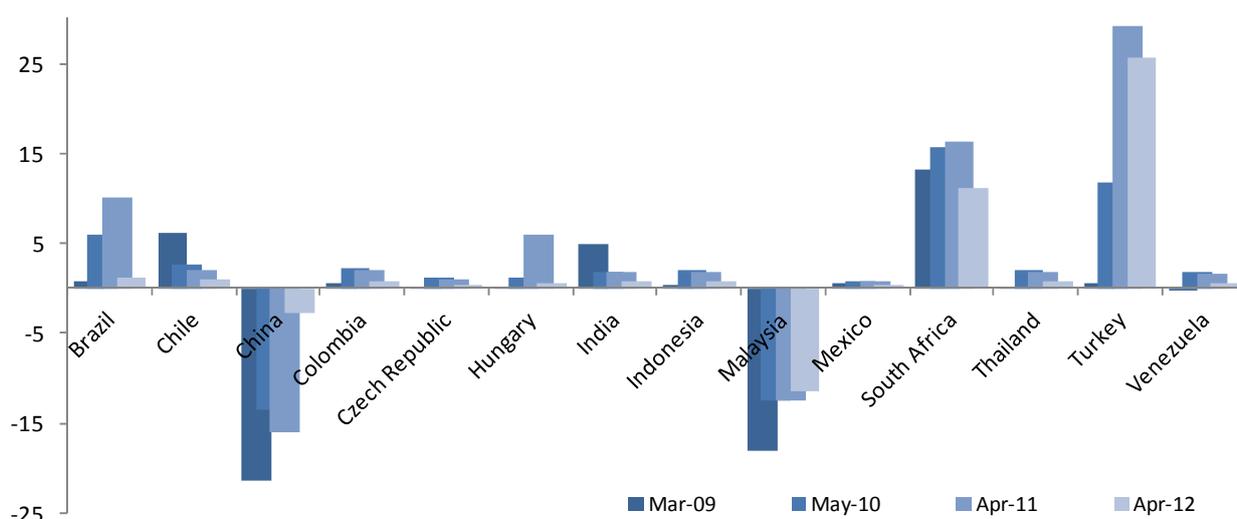
Cline and Williamson (2009, 2010a, 2011, 2012) have been estimating fundamental effective exchange rates for some countries since 2009. As the authors highlight (Cline and Williamson, 2010b), their motivation lies in the current “environment of an exchange rate free-for-all”, in contrast with the Bretton Woods System, when the IMF had a mandate of surveillance of the exchange rate system. Figure 3 shows a summary of their results. Indeed, their estimations picture an environment of rapidly changing real exchange rates and that the post-crisis flows had a significant impact on deviating several countries' exchange rates from their equilibrium values, especially in 2010 and in 2011.

The misalignments are remarkable in Turkey, South Africa and, to a lesser extent, in Brazil. By March 2009, the currencies of the three countries were much undervalued in comparison to pre-Lehman and post-rebound of capital flows (2009–11). In this moment of relative depreciation, the Turkish lira and the Brazil real were estimated to be only slightly overvalued. The South African rand, however, was estimated to be importantly overvalued even after this depreciation. By April 2011, after the important rebound of capital flows, the currencies of the

three countries presented significant misalignments. These were softened by April 2012 only in the case of Brazil, remaining significant in Turkey and in South Africa. It is important to mention, though, that the authors disagree with the IMF's forecasts for the Brazilian current account balance, which is said to be too optimistic. If their assessment of the IMF's position were to be right, the overvaluation calculated for Brazil would be underestimated (Cline and Williamson, 2012). An important similarity between these three countries is their use of inflation-targeting as a main policy anchor and their high interest rates, which offer a higher portfolio gain, attracting foreign portfolio investors.

The situation in Asian countries is clearly different. The Chinese renminbi and the Malaysian ringgit were estimated to be significantly undervalued, and other countries' currencies were mostly in line with fundamentals. Although the estimation of exchange rate misalignments involves an important set of controversies and should not be used as the only evidence when arguing for an exchange rate problem, these estimations illustrate how real exchange rates were rapidly changing in this period and reaffirm the magnitude of the concerns over the exchange rate problems faced by emerging developing countries.

FIGURE 3

Misalignment Estimations, Selected Countries

Source: Cline and Williamson, 2009, 2010a, 2011, 2012.

Although Cline and Williamson point to misalignment using IMF forecasts in their estimations, the exercises undertaken by the IMF rarely came to the same conclusion. Its common practice is to estimate misalignment by three different methodologies and to base its conclusion on the average of the results. Although some of these estimations in the 2010 country reports indicated misalignment issues, the IMF has mostly concluded that the exchange rate was broadly in line with fundamentals and has not provided adequate policy advice (Roy and Ramos, 2012).

ECLAC (2011) highlighted the misalignment issue and its possible consequences for the structure of an economy in a Dutch disease style. As argued in the report, the pressure for appreciation of real exchange rates caused by the higher capital inflows could create an

incentive for specialisation in commodities, whose rise in prices would compensate for the loss of value of the foreign currency.¹⁴ The report also goes into the problems of such a specialisation in terms of future economic growth in these countries, since the manufacturing sector offers a more enabling setting for innovation and technical progress through horizontal and vertical linkages.

Although the IMF reports do not affirm that the currencies are misaligned, they recognise related problems, such as that: “further real appreciation driven by short-term capital flows could weaken medium-term growth prospects” in Egypt (IMF, 2010a) and that the appreciation of the rand, which was attributed to capital inflows, has exacerbated South Africa’s competitiveness problem (IMF, 2011b). The issue of bubbles was mentioned in Thailand— “[that sustained inflows] could threaten to create asset bubbles” (IMF, 2010b)— and in Peru: further capital inflows risk “fuelling a boom” (IMF, 2012c).

Some country authorities have mentioned concerns about exchange rate issues. Indonesia’s authorities were concerned with “the risk of a reversal in portfolio flows related to a sudden drop in foreign investors’ demand for government bonds” (IMF, 2011a). Egyptian authorities underlined “the danger of hot money, and the importance of protecting the economy from excessive volatility, including if driven by hot money inflows” (IMF, 2010a).

These concerns are also evidenced in the several policies implemented, such as accumulation of reserves of foreign currencies; the implementation of taxes, fees and unremunerated reserve requirements on capital inflows; the imposition of taxes on gains from bonds or equities; and the restriction of certain types of trading.¹⁵ These were broadly implemented, including in Argentina, Brazil, Colombia, Chile, Indonesia, Peru and Thailand (ECLAC, 2011; Forbes et al., 2011).

To conclude, the experience of emerging developing countries in recent years seems to corroborate the theoretical examination presented in the last two sections. Private financial flows have been very large, and excessively volatile, responding mainly to changes in the international liquidity scenario due to crisis or to policy choices of central economies. As a result, developing countries’ exchange rates are responding to these external reasons, rather than to their own fundamentals. This creates problems of exchange rate volatility and misalignment and the consequent impacts on competitiveness, inflation or debt servicing. This whole process has been documented in academic papers and in regional and bilateral surveillance activities of international organisations. The response of these organisations has, however, failed to provide guidance on the use of policy instruments to deal with these issues, especially in IMF bilateral annual reports (Roy and Ramos, 2012).

IMF new policy recommendations (as seen in some of its publications, such as Ostry et. al, 2010) also do not seem to have been developed in light of this challenging environment. Instead, it argues for the use of reserves of international assets and the monetary and fiscal policies. However, reserves of international assets have proved inefficient in avoiding large exchange rate volatility, apart from creating the liquidity for more inflows and incurring costs when sterilised. Fiscal policies are not flexible enough to deal with the very rapidly changing international economic scenario and capital flows, and focusing fiscal or monetary policies on these issues shows a lack of policy independence which can have negative effects on a country’s economy.¹⁶

5 CONCLUDING REMARKS

The world economy has been experiencing significant changes with regards to the role of finance, one of its features being the increasing size and volatility of finance-related capital flows. By becoming more important and more volatile, financial flows have acquired a more important role in determining exchange rates, especially in emerging developing countries, which tend to receive more volatile flows. These flows are, however, different from trade flows, as they do not lead to an automatic adjustment. On the contrary, capital flows can create vicious cycles of appreciation, depreciation or volatility. As a result, several developing countries have been facing problems of exchange rate misalignment and volatility, which have significant impacts on their economies, especially through the uncertainty created and the loss of competitiveness.

The global financial crisis was marked by the intensification of these problems, as the capital cycles were intense and altering rapidly. This helped to raise awareness of the problem and led to the implementation of policies in some emerging developing countries. Yet, these policies must be better developed, especially with regards to international coordination. IMF recommendations of a hierarchy of policies must also be reviewed. Another important point which was clear during the crisis is the importance of external factors in the volatility of capital flows. This feature should be better analysed and taken into account in the development of policies to avoid the exchange rates of developing countries floating at the speed of changes in the international economic scenario.

REFERENCES

- Arize, A.C., Osang, T. and Slottje, D.J. (2008). 'Exchange-rate volatility in Latin America and its Impact on Foreign Trade', *International Review of Economics*, Vol. 17, No.1.
- Blecker, R. (2001). 'Financial Globalization, Exchange Rates, and International Trade', *Political Economy Research Institute Working Papers*. Amherst, University of Massachusetts.
- Calvo, G.A., Leiderman, L. and Reinhart, C.M. (1993). 'Capital Flows and Real Exchange Rate Appreciation in Latin America: the Role of External Factors', *IMF Staff Papers*, Vol. 40, March. Washington, D.C., International Monetary Fund.
- Calvo, G.A. and Reinhart, C.M. (2001). 'Fixing for your Life', *NBER Working Papers*, No. 8006. Cambridge, MA, National Bureau for Economic Research.
- Calvo, G.A. and Reinhart, C.M. (2002). 'Fear of Floating', *Quarterly Journal of Economics*, Vol. CXVII, No. 2: 379–408.
- Carneiro, R. (1999). 'Globalização financeira e inserção periférica', *Economia e Sociedade*, No.13: 57–92.
- Carneiro, R. (2008). 'Globalização e Inconvertibilidade Monetária', *Revista de Economia Política*. São Paulo, Centro de Economia Política, Vol. 28, No.4, (Dec. 2008): 539–556.

- Cassel, G. (1918). 'Abnormal Deviations in International Exchanges', *The Economic Journal*, Vol. 28, No. 112: 413–415.
- Chesnais, F. (1994). *La mondialisation du capital*. Paris, Syros.
- Choudhri, E.U. and Hakura, D.S. (2001). 'Exchange rate pass-through to domestic prices: does the inflationary environment matter?', *IMF Working Paper*, 01/194. Washington, DC, International Monetary Fund.
- Clark, P.B. (1973). 'Uncertainty, Exchange Risk, and the Level of International Trade', *Western Economic Journal*, Vol. 11: 302–13.
- Clark, P.B., Tamirisa, N. and Wei, S.J. (2004). 'A New Look at Exchange Rate Volatility and Trade Flows', *IMF Occasional Papers*, No. 235. Washington, DC, International Monetary Fund.
- Cline, W. and Williamson, J. (2009). '2009 Estimates of Fundamental Equilibrium Exchange Rates', *Policy Briefs*, PB09-10. Washington, DC, Peterson Institute for International Economics.
- Cline, W. and Williamson, J. (2010a). 'Estimates of Fundamental Equilibrium Exchange Rates, May 2010', *Policy Briefs*, PB10-15. Washington, DC, Peterson Institute for International Economics.
- Cline, W. and Williamson, J. (2010b). 'Currency Wars', *Policy Briefs*, PB10-26. Washington, DC, Peterson Institute for International Economics.
- Cline, W. and Williamson, J. (2011). 'Estimates of Fundamental Equilibrium Exchange Rates, May 2011', *Policy Briefs*, PB11-5. Washington, DC, Peterson Institute for International Economics.
- Cline, W. and Williamson, J. (2012). 'Estimates of Fundamental Equilibrium Exchange Rates, May 2012', *Policy Briefs*, PB12-14. Washington, DC, Peterson Institute for International Economics.
- Corden, W. (1990). 'Exchange Rate Policy in Developing Countries', *The World Bank Working Papers*, No. 412. Washington, DC, World Bank.
- ECLAC (2011) *Economic Survey of Latin America and the Caribbean 2010–2011*. Santiago, Economic Commission for Latin America and the Caribbean.
- Edwards, S. (2000). 'Exchange Rate Regimes, Capital Flows and Crisis Prevention', *NBER Working Papers*, No. 8529. Cambridge, MA, National Bureau for Economic Research.
- Edwards, S. (2001). 'Capital Mobility and Economic Performance: Are Emerging Economies Different?', *NBER Working Papers*, No. 8076. Cambridge, MA, National Bureau for Economic Research.
- Eichengreen, B. (1994). *International Monetary Arrangements for the 21st Century*. Washington, DC, Brookings Institution.
- Eichengreen, B. (2001). 'Capital Account Liberalization: What Do Cross-Country Studies Tell Us?', *World Bank Economic Review*, Vol. 15: 341–65.
- Eichengreen, B. (2002). 'Can Emerging Markets Float? Should They Inflation Target?', *Brazilian Central Bank Working Paper Series*, No. 36. Brasília: Central do Brasil.
- Eichengreen, B., Hausmann, R. and Panizza, U. (2003). 'Currency Mismatches, Debt Intolerance and Original Sin: Why They Are Not the Same and why it Matters', *NBER Working Papers*, No. 10036. Cambridge, MA, National Bureau for Economic Research.
- Epstein, G.A. (ed.) (2005). *Financialization in the World Economy*. Cheltenham, Edward Elgar.

- Fahri, M. (1999). 'Derivativos Financeiros: Hedge, Especulação e Arbitragem', *Economia e Sociedade*, Vol. 13: 93–114.
- Ferrari-Filho, F. (2008). 'Regime cambial para países emergentes: uma proposição a partir de Keynes', *Economia e Sociedade*, Vol. 17, No. 2: 107–122.
- Fischer, S. (1998). 'Capital Account Liberalization and the Role of the IMF' in 'Should the IMF Pursue Capital-Account Convertibility?', *Essays in International Finance*, Vol. 207: 1–10.
- Forbes, K., Fratzscher, M., Kostka, T. and Straub, R. (2011). 'Bubble Thy Neighbor: Direct and Spillover Effects of Capital Controls', *MIT Sloan Research Paper*, No. 4962-12. Cambridge, MA, Massachusetts Institute of Technology.
- Frenkel, J. (1976). 'A Monetary Approach to the Exchange Rate: Doctrinal Aspects and Empirical Evidence', *The Scandinavian Journal of Economics*, Vol. 78, No. 2: 200–224.
- Garbor, D. (2012). 'Managing Capital Accounts in Emerging Markets: Lessons from the Global Financial Crisis', *Journal of Development Studies*, Vol. 48, No. 6: 714–731.
- Goldfajn, I. and Werlang, S. (2000). 'The Pass-through from Depreciation to Inflation: A Panel Study', *Central Bank of Brazil Working Paper*, No. 5. Brasília, Central do Brasil.
- Grilli, V. and Miles-Ferretti, G.M. (1995). 'Economic Effects and Structural Determinants of Capital Controls', *IMF Staff Papers*, No. 42, Vol. 3: 517–551.
- Halac, M. and Schmukler, S. (2004). 'Distributional Effects of Crises: The Financial Channel', *Economia*, No. 5: 1–68.
- Hausmann, R., Panizza, U. and Stein, E. (2001). 'Why Do Countries Float the Way they Float?', *Journal of Development Economics*, Vol. 66, No. 2: 349–582.
- Hayes, M.G. (2003). 'Investment and Finance Under Fundamental Uncertainty', *PhD Dissertation*. Sunderland, University of Sunderland.
- Helleiner, G. (1997). 'Capital account regimes and the developing countries', *International Monetary and Financial Issues for the 1990s*, Vol. 8. New York, NY, United Nations Conference on Trade and Development.
- IMF (1997). *World Economic Outlook. October*. Washington, DC, International Monetary Fund.
- IMF (2001). *World Economic Outlook. October*. Washington, DC, International Monetary Fund.
- IMF (2010a). 'Arab Republic of Egypt: 2010 Article IV Consultation – Staff Report'; 'Public Information Notice on the Executive Board Discussion'; and 'Statement by the Executive Director for the Arab Republic of Egypt, April 2010', *IMF Country Report*, No. 10/94. Washington, DC, International Monetary Fund.
- IMF (2010b). 'Thailand: 2010 Article IV Consultation – Staff Report'; 'Public Information Notice on the Executive Board Discussion'; and 'Statement by the Executive Director for Thailand, December 2010', *IMF Country Report*, No. 10/344. Washington, DC, International Monetary Fund.
- IMF (2011a). 'Indonesia: 2011 Article IV Consultation – Staff Report'; 'Staff Statement'; 'Public Information Notice on the Executive Board Discussion'; and 'Statement by the Executive Director for Indonesia', *IMF Country Report*, No. 11/309. Washington, DC, International Monetary Fund.

IMF (2011b). 'South Africa: 2011 Article IV Consultation – Staff Report'; 'Staff Supplement'; 'Public Information Notice on the Executive Board Discussion'; and 'Statement by the Executive Director for South Africa', *IMF Country Report*, No. 11/258. Washington, DC, International Monetary Fund.

IMF (2012a). 'Brazil: 2012 Article IV Consultation – Staff Report'; 'Public Information Notice on the Executive Board Discussion'; and 'Statement by the Executive Director for Brazil', *IMF Country Report*, No. 12/191. Washington, DC, International Monetary Fund.

IMF (2012b). 'India: 2012 Article IV Consultation – Staff Report'; 'Staff Statement and Supplements'; 'Public Information Notice on the Executive Board Discussion'; and 'Statement by the Executive Director for India', *IMF Country Report*, No. 12/96. Washington, DC, International Monetary Fund.

IMF (2012c). 'Peru: 2011 Article IV Consultation – Staff Report'; 'Supplement'; and 'Public Information Notice', *IMF Country Report*, No. 12/26. Washington, DC, International Monetary Fund.

Isard, P. (2007). 'Equilibrium exchange rates: assessment methodologies', *IMF Working Paper*, 07/296. Washington, DC, International Monetary Fund.

Kaltenbrunner, A. (2011). 'Currency Internationalisation and Exchange Rate Dynamics in Emerging Markets: A Post Keynesian Analysis of Brazil', *PhD Dissertation*. London, University of London.

Keynes, J.M. (1936). *The General Theory of Employment, Interest and Money*. New York, NY, Harcourt Brace Janovich.

Levy-Yeyati, E. and Sturzenegger, F. (2001). 'Exchange Rate Policy and Economic Performance', *IMF Staff Papers*, Vol. 47: 62–98.

Levy-Yeyati, E. and Sturzenegger, F. (2005). 'Classifying Exchange Rate Regimes: Deeds vs. Words', *European Economic Review*, Vol. 49, No. 6: 1603–35.

McKinnon, R. (1969). 'Portfolio Balance and International Payments Adjustments' in R. Mundell and A. K. Swoboda (eds), *Monetary Problems of the International Economy*. Chicago and London, The University of Chicago Press.

Meese, R. and Rogoff, K. (1983). 'Empirical Exchange Rate Models of the Seventies: Do They Fit out of Sample?', *Journal of International Economics*, 14(1–2): 3–24.

Mishkin, F.S. (2006). *The Next Great Globalization*. Princeton, NJ, Princeton University Press.

Mussa, M. (1976). 'The Exchange Rate, the Balance of Payments and Monetary and Fiscal Policy under a Regime of Controlled Floating', *The Scandinavian Journal of Economics*, Vol. 78, No. 2: 229–248.

Neely, C. (1999). 'An introduction to capital controls', *St Louis Federal Reserve Bank Review*, No. 81, Vol. 6. St Louis, MO, St Louis Federal Reserve Bank.

Ocampo, J.A. (2002). 'Developing Countries' Anti-Cyclical Policies in a Globalized World' in A. Dutt and J. Ros (eds). *Development Economics and Structuralist Macroeconomics: Essays in Honour of Lance Taylor*. Aldershot, Edward Elgar: 374–405.

- Ostry, J.D., Ghosh, A.R., Habermeier, K., Chamon, M., Qureshi, M.S. and Reinhart, D.B.S. (2010). 'Capital Inflows: The Role of Controls', *IMF Staff Position Note*, SPN/10/04. Washington, DC, International Monetary Fund.
- Plihon, D. (2006). *Les Taux de change*. Paris, La Découverte.
- Plihon, D. (2007). 'La Globalisation Financière' in C. Chavagneux et al. (eds), *Les enjeux de la mondialisation. Les grandes questions économiques et sociales*, Vol. 3. Paris, La Découverte.
- Quinn, D. (1997). 'The correlates of changes in international financial regulation', *American Political Science Review*, Vol. 91, No. 3: 531–551.
- Ramos, R. A. (2012). 'Dealing with exchange rate issues: reserves or capital controls?', *IPC-IG Policy Research Brief, forthcoming* No. 32. Brasilia, International Policy Centre for Inclusive Growth.
- Reinhart, C. M. and Reinhart, V. R. (2008). 'Capital Flow Bonanzas: An Encompassing View of the Past and Present', *NBER Working Paper*, No. 14321. Cambridge, MA, National Bureau for Economic Research.
- Rodrik, D. (1998). 'Who Needs Capital Account Convertibility?', *Essays in International Finance*, No. 207.
- Roy, R. and Ramos, R.A. (2012). 'IMF Article IV reports: an analysis of policy recommendations', *IPC-IG Working Paper*, No. 86. Brasilia, International Policy Centre for Inclusive Growth.
- Serven, L. (2003). 'Real-exchange-rate uncertainty and private investment in LCDS', *Review of Economics and Statistics*, Vol. 85, No. 1: 210–218.
- Stockhammer, E. (2010). 'Financialization and the Global Economy', *Political Economy Research Institute Working Papers*, No. 240. Amherst, MA, University of Massachusetts.
- Sumner, A. (2010). 'Global Poverty and the New Bottom Billion: What if Three-Quarters of the World's Poor Live in Middle-Income Countries?', *IPC-IG Working Paper*, No. 74. Brasilia, International Policy Centre for Inclusive Growth.
- UNCTAD (2006). *Trade and Development Report*. Geneva, United Nations Conference on Trade and Development.
- Williamson, J. (1987). *The Exchange Rate System*. Washington, DC, Institute for International Economics.

NOTES

1. Uncertainty is thus fundamentally different from measurable risk, as it curbs investment in assets that do not provide enough liquidity.
2. In these periods of higher risk aversion (higher liquidity preference) there is great uncertainty about the possibility of selling the developing country's currency in the future without incurring a loss.
3. All the different approaches used for analysing exchange rate misalignments involve econometric estimations of what the exchange rate should be according to current and expected figures, such as macroeconomic results and prices of the main imported or exported goods. These estimations are, however, subject to considerable uncertainties, as they are extremely simplified and involve the estimations of unknown parameters and the forecast of significant volatile prices (Isard, 2007).
4. Reinhart and Reinhart (2008) analysed data regarding capital flow bonanzas in 181 low- and middle-income countries between 1980 and 2007. They found a positive impact on capital flows from lower economic growth in advanced economies and higher non-oil commodities prices, but no significant impact from low interest rates in advanced economies— all being push factors
5. To deem a currency as an asset class *per se* is a development related to the internationalisation of currencies and to financialisation. Currency trading is in fact a different process from trading an asset in that currency due to money's special attributes as the denominator of contractual obligations and the medium with which these are met (Kaltenbrunner, 2011).
6. The microstructural models also highlight the importance of the position of participants in foreign exchange markets, together with their expectations, in explaining the exchange rate.
7. In the global sphere, the lack of such an automatic adjusting mechanism allows the emergence of global imbalances, which are not within the scope of this paper.
8. The higher pass-through of developing countries has also been confirmed by Goldfajn and Werlang (2000), Hausmann et al. (2001) and Choudhri and Hakura (2001).
9. There was a broad debate in the 1980s on which would be the best regime in terms of fighting inflation. It was based on the trade-off between the *flexibility* of a floating regime and the *credibility* of a peg. While the first would provide monetary policy independence and, therefore, flexibility to adapt to price shocks, the latter would control inflation expectations, as the public believes that the pegged rate will remain unchanged (Edwards, 2000).
10. The absence of consensus among these studies is not surprising. First, the classification of exchange rate regimes is not straightforward, as several countries follow different regimes from those they are explicitly committed to (Calvo and Reinhart, 2002; Levy-Yeyati and Sturzenegger, 2005). Second, these studies do not take into account differences in domestic institutions or changes in the international scenario such as integration and instability.
11. In fact, many developing countries have not chosen to change their exchange rate regimes but were 'forced' to abandon their pegs with the currency crisis of the late 1990s. As described in Einchengreen (1994), this change was made when reserves were already declining, and output and export growth had already slowed.
12. Total flows in 2009 were negative, due to the high outflows at the beginning of the year.
13. As mentioned in the previous section, the misalignment concept refers to deviations of the actual real exchange rate from its equilibrium value, the one that balances domestic and external needs.
14. ECLAC has also highlighted the possibility of increases in 'beggar-thy-neighbour' policies in the region, which could be implemented as a means to compensate for the loss of export revenues.
15. See Ramos (2012) for a debate on some of these policies.
16. See Ramos (2012) and Garbor (2012).



International Policy Centre for Inclusive Growth (IPC - IG)

Poverty Practice, Bureau for Development Policy, UNDP

Esplanada dos Ministérios, Bloco O, 7º andar

70052-900 Brasília, DF - Brazil

Telephone: +55 61 2105 5000

E-mail: ipc@ipc-undp.org ▪ URL: www.ipc-undp.org