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Financialization and the Resource Curse: The Challenge of Exchange Rate Management in Brazil

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Abstract

A stable and competitive exchange rate is imperative for efforts to diversify an economy in an open economy setting. However, there are an increasing number of exogenous economic and political factors in Brazil and other emerging market economies that accentuate the difficulties of shifting toward a more developmentalist economic policy. Nevertheless, over the past decade or more Brazil has developed a broad array of tools that enable the country to address the exogenously determined factors related to exchange rate instability. These tools have been a modest success at best, but lay the groundwork for what may be the necessary economic policies and political conditions for a more comprehensive program to achieve stability-led diversified growth in Brazil.

1. Introduction

Brazil is unique in its ability not to suffer from a serious natural resource curse due to the oil sector as so many other nations have. The authors note that Brazil's earlier period of state-led industrialization (despite limitations in other areas) helped diversify the economy – which has a higher share of industry in the Gross National Product (GNP) in comparison to other Latin America countries – and bolster institutions such that oil has largely been a blessing rather than a curse.

The rise of the commodity boom in the 2000s threatened the delicate balance Brazil was able to achieve. This boom had specific features in comparison with the previous ones as it was boosted not only by real factors (supply and demand shocks, such as huge Chinese imports), but also by the so-called financialization of commodity prices, which refers to the growing influence of financial investor positions in commodity futures markets (Unctad, 2011a e 2011b, Bicchetti; Maystre, 2012). Significant accentuation of the volatility in commodity prices—particularly in iron ore, soya, and beef in the Brazilian context—

combined with other forces to create the very dynamics that can put the resource curse into motion. Those dynamics are an appreciation of the exchange rate (defined as the price of the domestic currency) and a hollowing out of investment in non-commodity sectors that are potentially more productive and employment intensive.

Indeed, Brazil has been blessed and cursed with high commodity prices (from 2003 to mid-2008 and 2009-2011) and low interest rates in the core economies after the 2008 global financial crisis. Such an environment, coupled with the high domestic policy rate and the sophistication of the Brazilian financial system, has made Brazil a much sought after destination for carry trade operations through short-term financial flows that are largely transmitted through the foreign exchange derivatives market. Speculative operations into this market have accentuated the upward pressure on the exchange rate, which has come with higher commodities prices, leading to what we refer to here as “a financialization of the resource curse”.

This concept means that, as in the case of commodity prices, one key determinant of the Brazilian exchange rate path has been financial investors’ purchases and sales in the Foreign Exchange (FX) futures market. In the Brazilian case rising commodity prices also fostered the currency appreciation in an indirect way-- investors’ bets through FX derivatives contracts. Moreover, these bets were supported by the huge interest rate differential (due to the high policy rate in Brazil) in a context of risk appetite and searching for yield by global investors.

Between 2010 and 2012 concerns about exchange rate appreciation, de-industrialization, and financial stability reached a tipping point in the PT government. Against many odds, Brazil put in place a new brand of cross-border financial regulations that were a modest success in maintaining exchange rate and financial stability during this turbulent period.

As we discuss in the next section, according to the ‘capital mobility hypothesis’ and related literature it should be extremely difficult for an emerging market economy to reregulate cross-border finance after it had opened its capital account. Interest group pressure, institutional obstacles, and the sheer power of global capital markets are all factors that would deem such an effort as insurmountable.

Brazil was able to beat these odds, though likely not in a manner adequate enough to address the financialization of the resource curse. Based on the analyses in this paper there were at least four key factors that enabled Brazil to exert countervailing power over the structural power of global markets as articulated in the ‘capital mobility hypothesis’.

1. Brazil has unique institutions that allow financial regulators to act in a timely and counter-cyclical manner.

As noted earlier in the paper it is extremely difficult for the government to take away the punch bowl at the height of the party. The short-term benefits of surges of cross-border finance are associated with increases in aggregate demand. Moreover, firms and households feel richer as asset prices rise and as they have more purchasing power due to exchange rate appreciation. If a government seeks to regulate cross-border finance at this

time they face steep opposition as all the forces described above that would oppose regulation are at their strongest.

Brazil has an institutional framework that allows financial authorities (both finance ministry and central bank) to act quickly and at their discretion to put in place regulations in a counter-cyclical manner. The financial authorities thus do not have to engage in a legislative battle during a boom. Not only would such a battle be difficult to win, but legislation often takes a significant amount of time, after which the capital flows cycle may have already played itself out.

Having legislation in place also gives a government the institutional space to deviate from the increasing trend in central bank mandates of inflation targeting and price stability. Finance ministers and central banks, if they see it prudent to regulate in the first place, can do so with only having to justify their actions to the political system, rather than go through a full on legislative process. Finally, Brazil has the policy space to engage in such regulation given that it does not have trade and investment treaties, or commitments under the GATS, that prohibit the regulation of cross-border finance (Prates and Paula, 2013).

2. Brazil's government is often backed by an export sector that is more concerned about the exchange rate than about their access to global finance.

At the national-level, regulations on cross-border financial flows are a form of countervailing monetary power. In the case of Brazil countervailing monetary power was in part made possible because of a strong export sector that was very motivated by the need to limit exchange rate volatility. This concern overrode the traditional alliance between exporters and the financial sector in EMEs and developing countries. Many authors have shown that the sectors with the closest ties to major cross-border financial actors would be exporters of tradable goods and thus would be less apt to bite the hand that feeds them through regulating cross-border financial actors (Freiden, 1991, Leiteritz, 2012). It has been noted, however, that sometimes those actors have divergent interests because exporters are hurt by exchange rate appreciation while finance benefits from inflows (Frieden, 1991). In Brazil, we will see that the export sector is not as interconnected with the global financial sector as in many other countries. BNDES and BB provide significant levels of finance to Brazilian exporters out of earmarked resources with favorable terms (lower interest rates and longer terms). The Brazilian industrial export sector was thus very concerned about the exchange rate and provided a well-organized constituency rallying for government policy change.

3. Brazil was more likely have the political power to regulate cross-border finance because the prevailing party and government is backed by workers that are concerned about job security than the consumption benefits that come with appreciation in the midst of acute volatility.

As consumers, workers may be less apt to support regulation that would reduce upward pressure on the exchange rate and asset prices. Currency appreciation allows workers to purchase more goods and asset bubbles allow them to feel more wealthy as well.

However, as the case of Brazil highlighted, maintaining job security can override these more short-term concerns. The most organized workers in Brazil are in export industrial sectors. These workers also form a formidable component of the Brazilian Worker's Party (PT) that was in power during the entire period that capital controls were put in place in this study. When the domestic currency appreciated in Brazil many firms began to lose their competitiveness and shed jobs and thus deviated from one of the fundamental tenets of the PT government. Regulating capital flows and foreign exchange derivatives became part of a broader job security package and had strong backing from workers. Indeed, the implicit alliance between the export sector and their workers gave the PT very strong backing. Governments can also evoke past crises to gain further support.

4. Brazil re-framed regulations in the new welfare economics of capital controls.

The new welfare economics and related thinking about capital controls caught on and is linked to the “macroprudentializing” of post-crisis regulation that has occurred since the crisis. Baker (2013) sees macroprudential tools as spreading like wildfire since the crisis for four reasons or “Ps”:

- P1 . presence – the prior intellectual and institutional presence of ideas;
- P2. professional positioning – advocates of ideas becoming better positioned in professional policy networks;
- P3. promotion and persuasion – individual insiders (norm entrepreneurs) willingly engaging in networking and persuasion strategies, actively promoting ideas when the opportunity arose; and
- P4. plausibility – a seeming increase in the explanatory capacity of those ideas based on their diagnosis of the situation and their advocacy of a feasible programme of action that could be accepted by a range of relevant actors, together with the rising professional esteem, status and standing of the advocates of those ideas, based on their prior analytical performance, which increased the plausibility, both of them as individuals and the ideas they were advocating (Baker, 2013, 114).

In Brazil the new economics of capital controls and the new terminology of ‘macroprudential measures’ were cloaked to help convince or calm potential opponents. In Brazil, the finance ministry re-framed the rationale for regulating cross-border finance as the need to ‘internalize an externality’ in order to gain central bank backing for regulation.

As can be seen with this new approach in Brazil, reregulation was not a return to a completely closed capital account. Indeed such an approach is impossible and arguably undesirable. What we see in this area of economic policy is analogous to what Lazzarni and Musacchio (chapter X) discuss with respect to the role of the PT in industrial policy—the state becomes a minority stakeholder that tries to set goal posts and use the state to govern the financial cycles within the economy.

The remainder of this paper is organized as follows. Section two discusses the relationship between cross-border finance and exchange rate instability in emerging markets from both an economic and a political economy perspective. In the following two

sections, the Brazilian case is analyzed out of these two perspectives (economic in section 3 and political economy in section 4). The paper ends with a brief conclusion.

2. Cross-border finance and Exchange Rate Instability in Emerging Markets Economies

In the wake of the financial crisis there has been a resurgence of theoretical and economic analysis of the role of cross-border financial flows and economic development. Such work has triggered a re-evaluation of the merits of capital account liberalization and a recognition that cross-border finance has to be regulated in order to have a stable financial system that channels finance toward productive uses in the economy.

For years, treatment about financial instability due to cross-border capital flows was relegated to the Post-Keynesian literature, but has gone mainstream given new developments in theory since the turn of the century. The Post Keynesian literature (e.g., Schulmeister, 1988; Davidson, 1998, 2000; Dow, 1999; Grabel, 1996, 1999; Harvey, 1991, 1999 e 2009) highlighted that in the post-Bretton woods era of floating exchange rates and free capital mobility, short-term capital flows (portfolio investment and short term bank loans) constitute the chief determinant of nominal exchange rates, which are highly volatile. The very instability and the speculative logic of these flows, subordinate to financial investors' risk aversion/appetite, is seen as the main cause of the volatility of exchange rates after the collapse of Bretton Woods. In this specific historic setting, national central banks have been called to intervene in currency markets to curb volatility, undermining monetary policy autonomy.

This perspective has also been recently upheld in mainstream economics. Rey (2013) found that cross-border finance constitutes a 'global financial cycle', which is a function of two dynamically linked variables: the VIX (a measure of investor's risk aversion) and monetary policy (Fed Fund Rate level) in the United States. Monetary conditions of the centre country influence global bank leverage, credit flows and credit growth in the international financial system that are transmitted world-wide through cross-border credit flows. Therefore, as Rey has stressed, this channel challenges the traditional "trilemma" view of the open economy (also called "impossible trinity"), upon which in a world of free capital mobility, independent monetary policies are feasible if exchange rates are floating. Instead, monetary conditions are transmitted from the main financial centre to the rest of the world through gross credit flows and leverage, irrespective of the exchange rate regime. In the author's words: "Fluctuating exchange rates cannot insulate economies from the global financial cycle, when capital is mobile. The "trilemma" morphs into a "dilemma" – independent monetary policies are possible if and only if the capital account is managed, directly or indirectly, regardless of the exchange-rate regime" (p. 21).

Yet, the instability of capital flows is higher in EMEs than advanced ones. As a result, their exchange rates are more volatile (Andrade and Prates, 2013), requiring permanent official interventions in the currency markets (the so-called "fear of floating", e.g Calvo and Reinhart, 2002) which reinforce the interaction between exchange and policy rates. This means that EMEs face an even bigger dilemma as the loss of monetary autonomy under free capital mobility is greater than in advanced economies.

The fact that capital flows to EMEs are more fickle has also become mainstream. Under the ‘new welfare economics’ of capital controls, unstable capital flows to EMEs can be viewed as negative externalities on recipient countries. Therefore regulations on cross-border capital flows are tools to correct for market failures that can make markets work better and enhance growth, not worsen it. This work has been developed by Anton Korinek (2011) and others in the *IMF Economic Review* and other venues. According to this research, externalities are generated by capital flows because individual investors and borrowers do not know (or ignore) what the effects of their financial decisions will be on the level of financial stability in a particular nation. A better analogy than protectionism would be the case of an individual firm not incorporating its contribution to urban air pollution. Whereas in the case of pollution the polluting firm can accentuate the environmental harm done by its activity, in the case of capital flows a foreign investor might tip a nation into financial difficulties and even a financial crisis. This is a classic market failure argument and calls for what is referred to as a Pigouvian tax that will correct for the market failure and make markets work more efficiently.

On the empirical front, the literature now demonstrates that capital account liberalization is not strongly associated with growth and stability. Jeanne et al, (2013) conduct a sweeping ‘meta-regression’ of the entire literature that includes 2,340 regression results and find little correlation between capital account liberalization and economic growth. They conclude: “the international community should not seek to promote totally free trade in assets—even over the long run—because *free capital mobility seems to have little benefit in terms of long run growth* and because there is a good case to be made for prudential and non-distortive capital controls “(Jeanne et al., 2012, 5). Moreover, considerable work has demonstrated that capital account liberalization is associated with a higher probability of financial crises. Reinhart and Rogoff (2010) show that since 1800 capital mobility has been associated with banking crises.

There is also now strong evidence that capital controls can help manage exchange rate volatility and financial fragility. At the same time as these theoretical breakthroughs, a consensus is emerging on the efficacy of capital account regulations. The majority of studies suggest that the capital account regulations deployed in the period from the Asian financial crisis until the global financial crisis of 2008 met many of their stated goals. In the most comprehensive review of the literature, Magud, Reinhart, and Rogoff (2011) analyze studies on controls on inflows and outflows, as well as multi-country studies. The authors conclude that “in sum, capital controls on inflows seem to make monetary policy more independent, alter the composition of capital flows, and reduce real exchange rate pressures”. There are fewer studies on outflows, comprising mostly studies of Malaysia’s 1998 outflows restrictions. In Malaysia, the authors found controls “reduce outflows and may make room for more independent monetary policy.” In the wake of the global financial crisis, Ostry et al (2010) further confirmed this literature when finding that those countries that had deployed capital controls on inflows were among the world’s least hard hit during the crisis.

In the economic analysis of the Brazilian experience (section 3), we will focus on the relationship between cross-border finance and the exchange rate regime¹, which shapes the dynamic of the nominal exchange rate (relative price of currencies) under the dirty floating regime in force since January 1999. This dynamic, in turn, along with domestic and external price inflation, determines the behavior of the real effective exchange rate (relative price of external and internal goods), one of the main determining factors of a country's external competitiveness.

Many mutually reinforcing monetary and financial asymmetries underlie macroeconomic challenges faced by Brazil and other EMEs in a context of free cross-border finance. On one hand, their currencies, at the bottom of the currency hierarchy, are particularly vulnerable to the inherent volatility of capital flows, ultimately determined by an exogenous process (the global financial cycle coined by Rey and mentioned above). Consequently, their exchange rates are more volatile. In turn, the greater exchange rate volatility has more harmful effects than in AEs exactly because EMEs currencies are not international currencies. This fact increases the risk of financial fragility (due to the potential currency mismatches) as well as the pass-through of exchange rate changes to domestic prices. The higher pass-through takes place because the current and expected behavior of the exchange rate (the price of the foreign currency in these economies) is a key parameter of corporations' price setting in face of the non-international character of their currencies². On the other hand, they also result in different degrees of monetary policy autonomy in EMEs and AEs. As Ocampo (2001b, p.10) pointed out: "whereas the center has more policy autonomy and is thus "policy making" - certainly with significant variations among the different economies involved -, the periphery is essentially "policy taking". In other words, the monetary and financial asymmetries result in a macroeconomic asymmetry: the dilemma or impossible duality is greater in EMEs because their position in the IMFS strengthens the relationship between the policy rate and the nominal exchange rate and the influence of global investors' portfolio decisions on these key macroeconomic prices.

Political Economy of Cross-Border Finance and Exchange Rate Volatility

The broad literature in political economy demonstrates that the increasing level and sophistication of cross-border finance makes it harder for the nation state to devise policies to manage those capital flows and their subsequent impacts on the exchange rate and financial stability.

¹ This regime refers to the method of determining the nominal exchange rate, encompassing an entire continuum that can be arrayed from most flexible to most rigidly fixed (Frankel, 2003).

² Many studies show that this pass-through is greater in EMEs than AEs (Greenville, 2000; Mohanty & Scatigna, 2005; Ho and McCauley, 2003). Yet, the main explanation put forward by them is the different composition of their price indexes (due to the different consumption basket): the higher pass-through in EMEs is due to the higher share of basic goods, which prices are set in the international market, in the consumption basket.

The prevailing view that explains how capital accounts became liberalized over the past thirty years is that cross-border finance has become so immense and sophisticated that they were virtually impossible for nation-states to regulate. The sheer power of the markets themselves, and the ability of foreign and domestic investors to have veto-power over national regulation by threatening to withdraw their capital, eventually tilted national institutions and ideologies to shift in favor of the free mobility of finance as well (Block, 1977). Those sectors that benefited the most from foreign financial flows became relatively stronger and supported political parties that in turn supported the de-regulation of the capital account as well. Moreover, free flowing capital had become the dominant way of thinking within the economics profession and thus permeated the central banks and finance ministries the world over. Finally, these actions became supported and sometimes conditioned upon good relations with the United States and Europe and the international financial institutions where they held the most voting power.

Put more formally, the prevailing view is of a ‘capital mobility hypothesis’ where in a world of high capital mobility “policy options available to states are systematically circumscribed” because of the structural power of global capital markets (Andrews, 1994, 193). Goodman and Pauly (1993) and Cohen (1998, 132) reinforce this notion by showing how capital mobility empowers those actors that stand to gain the most from deregulating capital account regulations, by providing more leverage for private interests over government regulators. Evoking Hirschman (1970), Cohen argues that private finance is empowered with “Exit, voice, and loyalty.” Private finance becomes more equipped to circumvent capital account regulations, thus giving less loyalty to government regulators. They have the leverage of “exit” or capital flight and thus their voice becomes more accentuated in the political process. In some sense, capital mobility gives private finance veto power on public policy to manage capital flows. Mosley (2003) shows that such power has its limits in developed countries but is stronger in developing countries because investors are more concerned about default and the relative power of global markets over smaller and weaker states.

Frieden (1991) and Leitteritz (2012) extend this logic to the case of emerging markets in separate studies on Latin America. The sectors with the closest ties to major cross-border financial actors would be exporters of tradable goods and the foreign financial sector. Sometimes those actors have divergent interests because exporters are hurt by exchange rate appreciation while finance benefits from inflows (Frieden, 1991). However, big exporters often rely on foreign credit markets and thus exert pressure against measures to regulate such financial flows and thus usually push for capital account liberalization (Leitteritz, 2012).

Henning (1994) adds that institutional arrangements play a role as well. In an examination of Germany, Japan, and the United States he found that those countries that relaxed regulations on capital account and exchange rates often had highly independent central banks and a weak industry-financial alliance, whereas countries that were more apt to intervene had a subordinate central bank and a strong alliance between finance and industry—with finance-industry lobbies putting pressure on the finance ministry to intervene.

These interest groups support right-of-center political parties that seek to de-regulate the capital account through dismantling previous regulations and institutions. Kastner and Rector (2003) show how right-of-center parties played a large role in liberalizing capital accounts in 19 developed countries over the period 1951 to 1998. Garret (1995) shows

that global capital mobility still leaves room for left-of-center governments to maneuver but those governments are penalized through higher interest rates than their right wing counterparts. Right-of-center governing parties are often advised by experts trained in the New Classical tradition (Haggard and Maxfield, 1996; Blyth, 2002; Kirshner, 2005). These governments appoint economists and policy-makers that hold such views into central banks and finance ministries Fourcade (2006).

These factors are reinforced by the international financial institutions and by Western governments. Joyce and Noy (2008) found that the IMF implicitly linked capital account liberalization with its country programs. Abdelal (2007) shows that the OECD codes and credit rating agencies also penalized nations for regulating capital flows. The United States government has also long pushed for capital account liberalization (Wade and Veneroso, 1998; Cohen, 2007).

Moreover, Gallagher (2014) has argued that cross-border finance is inherently pro-cyclical in emerging markets and susceptible to large surges and sudden stops. When talking with policy-makers who attempted to put in place capital account regulations they confirmed that many of the forces previously identified in the literature are dominant. However they emphasized the fact that all of those forces are most powerful at exactly the time when regulation is needed most—the surge. However, a surge is initially associated with exchange rate appreciation, asset price increases, and an increase in GDP. Thus firms, workers, and households can purchase more goods and services during a surge, feel wealthier due to asset price increases, and see that the economy is growing. In the absence of regulation during the surge those that believe that regulation is not optimal policy argue that their observations prevail. One regulator communicated that ‘it is hard to take the punch bowl away when the party is just getting fun!’ New research on the United States has pointed out similar dynamics. In an analysis of the political economy of the United States leading up to the global financial crisis of 2008, McCarty, Poole, and Rosenthal (2013) show that financial bubbles were associated with a ‘political bubble’ that are also pro-cyclical. During booms the beliefs of investors think that ‘this time is different’ and that prices and prospects will continue to increase. These authors show that political actors also take on those beliefs and are thus reluctant to act during a boom. Indeed, during booms then more new politicians with ideologies that do not support regulation come into power. Of course, the financial sector itself also becomes stronger during the boom, and supports politicians with views against financial regulation.

This integration of forces has largely explained why virtually all developed countries and many EMDs liberalized their capital accounts during the second half of the twentieth century and tend not to manage those flows or make major interventions in the exchange rate.

3. Cross-Border Financial Flows and Exchange Rate Stability in Brazil

Like most other Latin American countries and many other EMEs, Brazil has floated its exchange rate and opened its capital account. Unlike many other EMEs however, Brazil put in place three key institutional features that grant Brazil the flexibility to manage cross-border financial flows and monitor the exchange rate in ways that other nations cannot. These three features are: a constitutional provision that allows for counter-cyclical taxation of cross-border financial activity; a special counsel that puts the finance and planning

ministries on equal footing with the central bank on issues related to cross-border finance and exchange rate management; and a policy not to sign trade and investment treaties that prohibit the use of these measures. These institutional factors, in addition to the other factors detailed in the next section, allowed Brazil to take a more active stance on exchange rate management than many of its counterparts after the global financial crisis, especially over 2010-2012.

During the neoliberal 1990s Brazil took numerous measures to open the capital account and adopt a macroeconomic regime featured by a floating exchange rate and an inflation target policy. Paula (2011) provides the most comprehensive analysis of that period in English and it is beyond the scope of this paper to review that entire experience. We focus on the period beginning in 2003. Lula da Silva's (hereafter Lula) economic policies, beginning in January 2003, were marked by the continuity of this economic policy framework. The Brazilian economy became fully open to capital inflows and outflows in 2005, when residents' capital exports were fully liberalized. Another important measure was the exception of the income tax on returns of government bonds owned by foreign investors in February 2006.

In contrast with the period of 1999-2002 (Fernando Henrique Cardoso's second term), this framework was implemented in an exceptionally favorable international context, featured by rising commodity prices and a boom of capital flows to emerging countries (Ocampo, 2007). In this setting, opting for a tight monetary policy (which maintained a high interest rate differential) ensured the effectiveness of the inflation targeting policy but forced the monetary authorities to abandon any kind of target for the nominal exchange rate. In this period, the *modus operandi* of the Brazilian inflation targeting policy, under the conditions of free cross-border finance, was an appreciation trend of the Brazilian currency (both in nominal and real terms) along with a buildup of international reserves which aimed at strengthening the country's external position. This "precautionary demand" for reserves (Aizenman et al., 2004; Carvalho, 2010; Dooley et al., 2005) resulted in an excessively high cost of sterilization operations due to the large differential between internal and external interest rates (Prates, Cunha, and Lélis 2009).

A Brazil-specific feature of the currency market has reinforced the relationship between the policy rate and the nominal exchange rate, namely, the central role of the foreign exchange futures market (i.e., the organized segment in the foreign exchange derivatives markets) in BRL/USD (Kaltenbrunner, 2010; Chamon and Garcia, 2013; Fritz and Prates, 2014). This central role stems from the greater liquidity and deepness (i.e., higher number of trades and turnover) of the foreign exchange futures market in comparison with the foreign exchange spot market. As Garcia and Urban (2004) and Ventura and Garcia (2012) uphold, due to its higher liquidity, the first dollar future contract has become the locus of formation of the BRL/USD exchange rate. This same feature has resulted in the aforementioned financialization of the resource curse, which has also reinforced the relationship between commodity prices and the nominal exchange rate.

This specific feature of the Brazilian currency market, in turn, has been determined by the interaction of three factors, which reinforce each other. First, the institutional framework of the Brazilian currency market, wherein foreign currency accounts (bank deposits) are prohibited, with only a few exceptions. Consequently, non-bank residents and non-residents can't hold foreign exchange spot positions (positions in USD). Only banks authorized by the BCB to have foreign exchange portfolios can hold these positions as they

have access to short term external credit lines in the international interbank market (called clean lines, which are not recorded in foreign exchange contracts). This same institutional feature underlies the non-deliverable character of the foreign exchange derivatives markets, namely, gains or losses in this market are settled in domestic (BRL) and not in the foreign currency (USD). Precisely because these operations are settled in BRL, any agent can hold positions in the foreign exchange futures market as long as they fulfill minimum standards required by the Brazilian exchange (BM&FBovespa). Secondly, the floating exchange rate regime has increased the demand for foreign exchange hedge and the opportunities to earn arbitrage and speculative gains through foreign exchange derivatives. Thirdly, there is unrestricted access to the foreign exchange futures market for foreign investors.

It is worth mentioning that with the deepening of financial globalization and the increasing role of derivatives markets since de 1980s, foreign exchange derivatives operations has begun to shape developed countries 'exchange rate trend along with speculative capital flows³. In the 2000s, the so-called derivatives carry trade has had a key role in the behavior of some EMEs' currencies, including the Brazilian real (BRL). In derivatives markets, the carry trade expresses itself as a bet which results in a short position in the funding currency and a long position in the target currency (Gagnon and Chaboud 2007). Therefore, it is a different kind of currency speculation strategy from the canonical carry trade through spot market operations – that is, borrowing low-interest-rate currencies and lending high-interest-rate currencies (Burnside et al. 2006; Gagnon and Chaboud 2007; Kaltenbrunner 2010). This means that monetary conditions are transmitted from the main financial centre to EMEs not only through capital flows, but also through derivatives carry trade. In the case of Brazil, rising commodity prices has come out with expectations of continuing currency appreciation, fostering even more domestic and foreign investors' long positions in the Brazilian currency.

Yet, during the new wave of capital flows to emerging economies that emerged after the 2008 global financial crisis, (IMF, 2011; Akyuz, 2011), the Brazilian government gradually moved towards a macroeconomic strategy where preventing currency appreciation gained relevance alongside the priority of inflation stabilization. This appreciation became an increasing concern of both Lula's and later Dilma's government due to its adverse impact on Brazilian industrial competitiveness which has faced a much greater competition both in the international and domestic markets in the post-crisis setting.

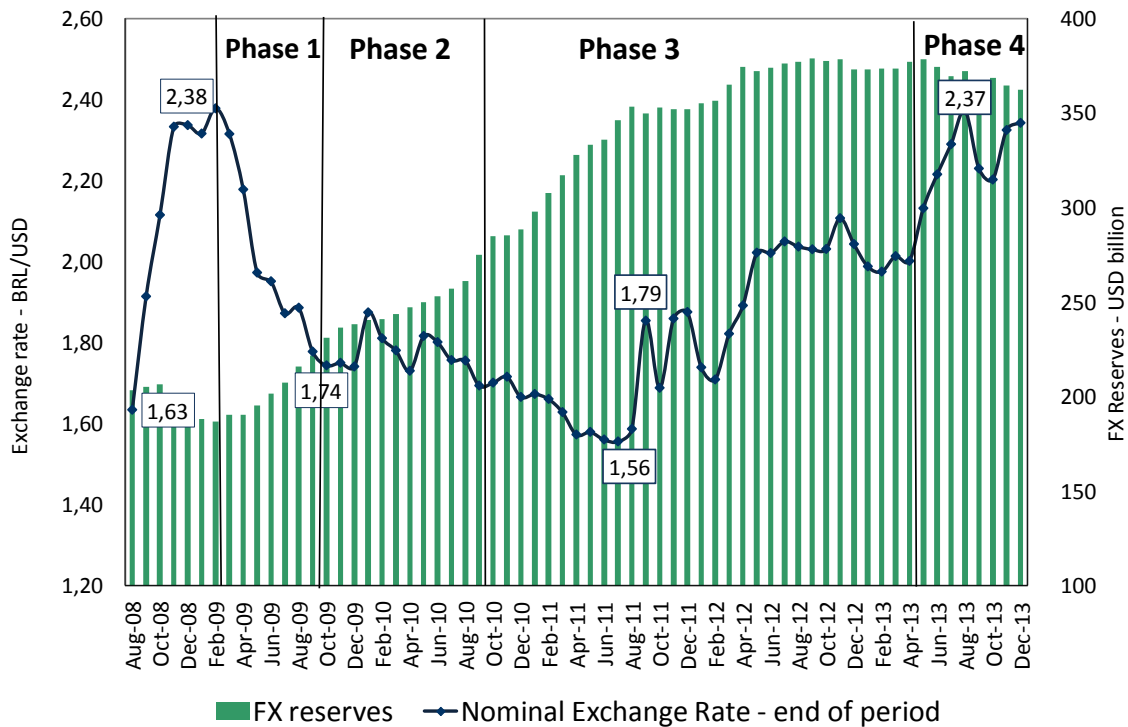
In order to untie the exchange rate and policy rate movements and achieve these goals, Brazilian policy markers added a unique set of cross-border financial regulations – which encompass capital controls (on inflows and outflows) and financial prudential regulation (Gallagher, Griffith-Jones and Ocampo, 2012). Further, due to the key role of the FX derivatives markets in the exchange rate path, these regulations need to be adopted along with what Paula and Prates (2012) referred to as “Foreign exchange derivatives regulations” which apply to the foreign exchange derivatives operations of all agents, be they nonresidents or residents, financial or nonfinancial actors⁴. Prates and Fritz (2013) called this new macroeconomic regime “dirty inflation targeting”.

³ See Schulmeister (2009).

⁴ Therefore, these operations are outside the scope of CAR inasmuch prudential financial regulation reaches only financial institutions and capital controls influence cross-border transactions (Prates, 2014).

From September of 2009 through much of 2013 the very high interest rate differential in comparison other emerging economies⁵ (graph 2) attracted searching for yield capital flows⁶ (see Graph 3) and derivatives carry trade in the Brazilian futures exchange (Graphs 4). In a nutshell, foreign investors again made one-way bets on the appreciation of the Brazilian currency through short positions in the foreign exchange futures market (selling US dollars and buying BRL - (see Graph 4). As in the pre-crisis period (2004 to mid-2008), the new commodity price boom (from 2009 to mid-2011; see Unctad, 2011b) had stimulated these bets, which resulted in downward pressure on the USD price and, thus, upward pressure on the BRL price in the futures market. The measures taken by Brazil to curb these bets are summarized in Table 1.

Graph 1. Nominal exchange rate (BRL/USD) and Foreign exchange reserves (USD billion)

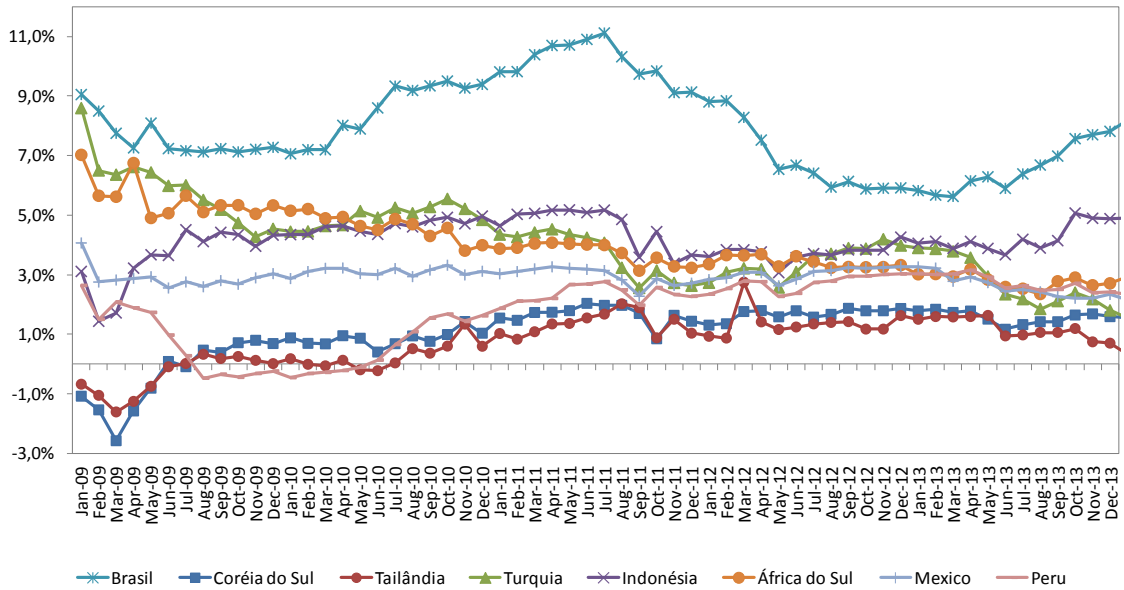


Source: Brazilian Central Bank. Authors' elaboration.

⁵ This high level was due to the maintenance of the policy rate in a high level in comparison with other EE after the global crisis (in despite of its reduction in 2009), which was related with the management of the inflation target regime, as Kaltenbrunner and Paincera highlighted (2012).

⁶ Brazil has been one of the main destinations of the new wave of capital flows to emerging economies since the 2nd quarter of 2009 (IMF, 2011a). Besides the huge interest rate differential, other domestic factors stimulated these flows, among which the fast economic recovery after the contagion-effect of the 2008 global crisis and the post-crisis commodity price boom (Cunha, Prates and Ferrari-Filho, 2011; Akyuz, 2011)

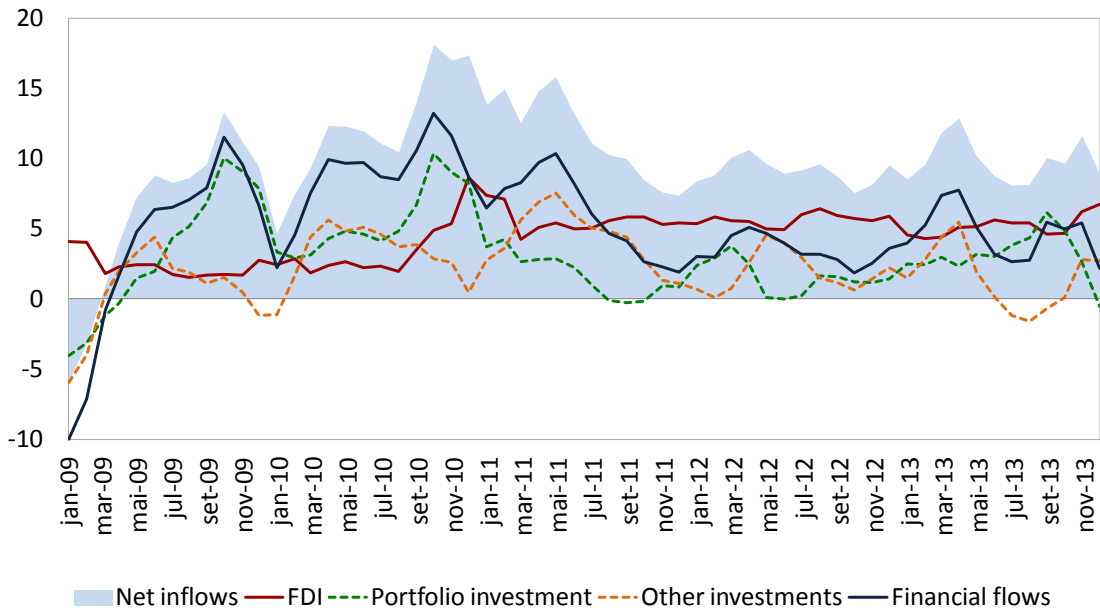
Graph 2: Interest rate differential – Brazil and other emerging economies



Note: Interest rate differential = country policy rate minus Fed Fund Rate plus country-risk (CDS premium).

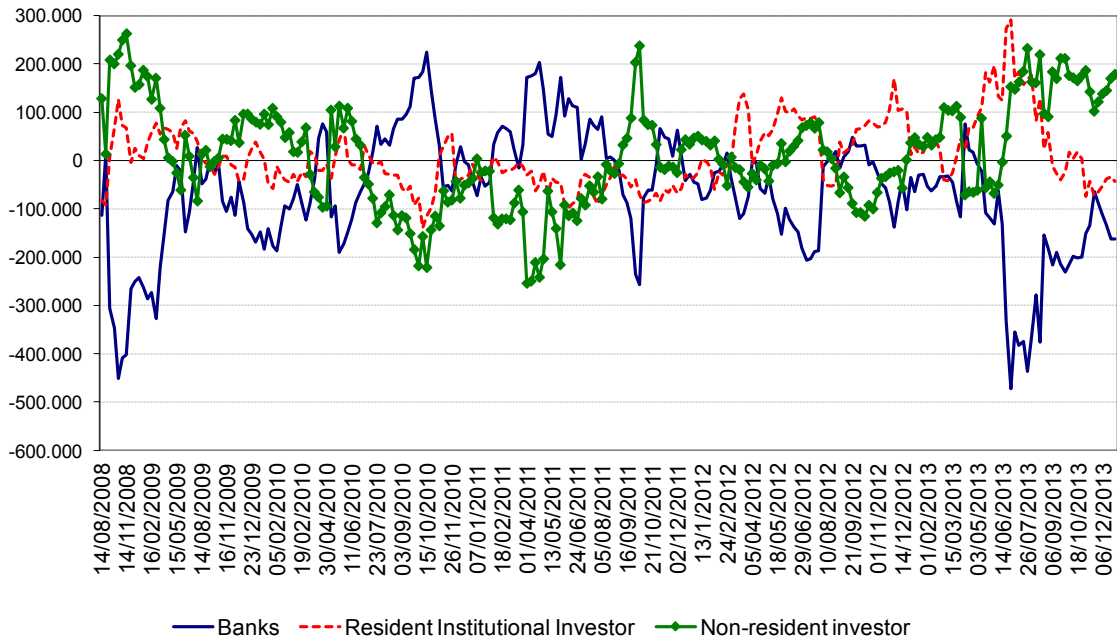
Source: Brazilian Central Bank. Authors' elaboration.

Graph 3. Net inflows – 3 months average (USD billion)



Source: Brazilian Central Bank. Authors' elaboration.

Graph 4. Investor's net positions in foreign exchange futures



Source: BMFBovespa. Authors' elaboration.

Table 1: The cross-border finance regulation in 2009-2013: main measures

Date	Number and Kind⁽¹⁾	Tighten or Loosen	Measure
Oct./2009	1 ⁰ CC	Tighten	Implementation of a 2 percent financial transaction tax (IOF) on non-resident equity and fixed income portfolio inflows.
Oct./2010	2 ⁰ and 3 ⁰ CC	Tighten	(i) IOF increased from 2 to 4 percent for fixed income portfolio investments and equity funds. (ii) IOF increased to 6 percent for fixed income investments.
Oct./2010	1 ⁰ and 2 ⁰ FXDR	Tighten	(i) IOF on margin requirements on FX derivatives transactions increased from 0.38 to 6 percent. (ii) Loopholes for IOF on margin requirements closed.
Jan./2011	1 ⁰ PR	Tighten	Non-interest reserve requirement equivalent to 60 percent of bank's short dollar positions in the FX spot market that exceed US\$ 3 billion or their capital base.
Mar./2011	4 ⁰ CC	Tighten	Increased to 6 percent the IOF on new foreign loans with maturities of up a year.
April/2011	5 ⁰ CC	Tighten	(i) 6 percent IOF extended for the renewal of foreign loans with maturities of up a year. (ii) 6 percent IOF extended for both new and renewed foreign loans with maturities of up to 2 years.
July/2011	2 ⁰ PR	Tighten	Non-interest reserve requirement mandatory for amounts over USD 1 billion or capital base (whichever is smaller).
July/2011	3 ⁰ FXDR	Tighten	Excessive long net positions on FX derivatives of all agents pay a IOF of 1 percent. This tax can be increased up to 25 per cent.
Dec/2011	6 ⁰ CC	Loosen	IOF on equity and fixed income (linked with infrastructure projects) portfolio inflows reduced to 0 percent.
Mar./2012	7 ⁰ CC	Tighten	(i) 6 percent IOF extended for both new and renewed foreign loans with maturities of up to 3 and then to 5 years. (ii) Export advanced payment transactions with maturities of more than a year prohibited.
Mar./2012	4 ⁰ FXDR	Loosen	Exporters hedge operations exempted from the IOF.
June/2012	8 ⁰ CC	Loosen	6 percent IOF only for new and renewed foreign loans with maturities of up to 2 years.
Dec./2012	9 ⁰ CC	Loosen	(i) 6 percent IOF for foreign loans with maturities of up to 1 year

			(ii)Export advanced payment transactions maturity extended from 1 for 5 years.
Jun./2013	10 ^o CC	Loosen	IOF on fixed income portfolio inflows reduced to 0 percent.
Jun./2013	5 ^o FXDR	Loosen	IOF of 1 percent on excessive long net positions of FX derivatives of all agents reduced to 0 percent.
Jul./2013	3 ^o PR	Loosen	Non-interest reserve requirement on bank's short dollar positions in the FX spot market reduced from 60 percent to 0 percent

Source: Own elaboration based on BCB's and Minister of Finance's websites.

Note: (1) FX = Foreign exchange; CC = Capital Control; PR = Prudential Regulation; FXDR = Foreign Exchange Derivatives Regulation.

With respect to currency appreciation, the turning point was July 2011, when a broader set of foreign exchange derivatives regulations was launched (see Graph 1). On 29 July 2010, the Ministry of Finance adopted a financial tax of 1 percent on excessively long positions on BRL in the foreign exchange derivatives market (see table 1). As this tax is calculated on the notional value of the foreign exchange derivatives operations, it has a major impact on the derivatives carry trade. Right after its entry in force, the Brazilian currency started to depreciate, before the loosening of the monetary policy (Graph 1). From the end of August, the depreciation trend has been fostered by the policy rate reductions (Graph 2) and the increase in the risk aversion of foreign agents due to the worsening of the Euro crisis in the second half of 2011. Moreover, the other way around has also taken place. The regulations launched by the Brazilian government to stem the currency appreciation, especially the foreign exchange derivatives regulations, may have amplified the effects of the policy rate drops between August 2011 and October 2012 on the BRL/USD exchange rate.

Until the first half of 2011, the financial regulatory toolkit mainly impacted the composition of inflows rather than their volume and did not stop the BRL appreciation, its main policy goal (Baumann and Gallagher, 2012)⁷. From then, the shift in the macroeconomic regime towards what we called here a 'dirty inflation targeting regime' gave room to a lower policy rate. This regime shift increased the effectiveness of the toolkit of capital account and foreign exchange derivatives regulations in curbing the currency appreciation because it has both led to minor returns of carry trade operations and has reduced to attractiveness of the regulatory arbitrage operations. Furthermore, investors' expectations that the BCB will keep the Brazilian currency in a depreciated level have also discouraged these two classes of operations. Concerning the traditional carry trade (through capital flows), over the second half of 2011, speculative flows have dwindled, resulting in the shrinking of total financial flows (see Graph 3). Therefore, besides shaping the composition of capital flows, the capital account regulations launched by Brazil have

⁷ Based on an econometric model (a GARCH regression), Baumann and Gallagher (2012) have found that the introduction of capital account regulations in Brazil between October 2009 and December 2012 was associated with a shift from short-term to longer-term inflows. They have also found that Brazil's measures had a lasting impact on the level and volatility of the exchange rate and modestly increased Brazilian monetary policy autonomy.

begun to affect the size of flows in the new macroeconomic setting. This new setting, in turn, has allowed the loosening of capital controls since December 2012 (see table 2).

Yet, in the second quarter of 2013, it turned out that the effectiveness of capital account regulations on capital inflows and foreign exchange derivatives regulations on long positions depended on the phase of the cross-border finance cycle; in other words, this effectiveness was highly asymmetric in the boom and bust phases of the cycle. In May 2013, when the Federal Reserve merely indicated that it might begin tapering its long-term interventions toward the end of the calendar year, global investors set into motion a portfolio adjustment that caused a temporary but significant reversal in capital flows to the United States, putting upward pressures on the exchange rates of many emerging economies.

The BRL was one of the most affected, mainly due to the higher liquidity and deepness of the Brazilian currency and financial markets and the huge positions of foreign investors in the foreign exchange future market – which bet on the BRL appreciation in that moment (see Graph 4). In order to mitigate the currency depreciation, the government withdrew in June and July virtually all capital account regulations and foreign exchange derivatives regulation (phase 4 in Graph 1). Only the IOF for new and renewed foreign loans with maturities of up to 1 years remains in force (see Table 1).

Then, in face of the cross-border finance cycle downturn, the broad toolkit was counter-cyclically removed. However, the quick response of Brazilian policy makers was insufficient to curb the currency depreciation. As pointed out in section 2, the monetary and financial asymmetries turn emerging economies' currencies more vulnerable to the very volatile nature of capital flows. In a setting of flight to quality (i.e, to U.S Treasury bonds) and high risk aversion, the removal of the regulatory toolkit which only penalizes bets in favour of the BRL was virtually harmless to curb the currency depreciation. Its only impact was on the foreign portfolio investment in the public bonds market, which were stimulated by the increased returns after the IOF withdrew and the policy rate rise since March.

However, these inflows were insufficient to curb the currency depreciation due to the very dynamic of the Brazilian currency market. As during the boom, in the bust phase the changes in investors' positions in the foreign exchange future markets were the main determinant of the BRL trend. Indeed, the withdrawal of the IOF on long positions made easier the portfolio adjustment to short positions, which means bets on the BRL depreciation. In this setting, only a financial tax on excessive short positions (i.e, a foreign exchange derivatives regulation which penalize bets on the BRL depreciation) could restrain this process. Even if a capital outflow regulation were in force, although useful, it would be insufficient for the same reason⁸ (i.e., the currency market features).

⁸ On the objectives of the capital outflow regulations, see Epstein (2012).

4. The Political Economy of Cross-Border Financial Management and the Exchange Rate in Brazil

This section of the paper, derived from Gallagher (2014), takes a snapshot of the period between 2009 and the end of 2012 discussed above in order to analyse the politics behind the economic policies discussed in section 3. There was a great deal of political debate throughout this whole process in Brazil, and in response to each measure taken in particular. Table 3 maps the major actors, their position on capital account regulations, and the arguments used by each actor during the debate. Brazil's measures are widely seen as being moderately successful on an economic level (Gallagher, 2014).

Each measure was publicly announced by Guido Mantega, Brazil's minister of finance since 2006. Mantega has long held positions in Brazil's worker's party (PT), a center-left party with roots fighting Brazil's dictators and neo-liberal economic policies. The PT came to power in January of 2003 after two terms of neoliberal policies and a subsequent financial crisis in the late 1990s. The PT ran on a platform of promoting full employment, worker rights and productive development as well as reducing social inequalities and improving income distribution. Mantega had been on the economic coordinating council for PT presidential elections in 1984, 1989, and 1998. Mantega also articulated Brazil's policy globally. Throughout the course of speeches on the use of these measures, Mantega repeatedly referred to the capital flows as a 'tsunami' that was a result of loose monetary policy in the US and beyond. He said the IOF and related measures were Brazil's only defense of the tsunami and the 'currency war' thrust upon them by the US and China.

Regulating Capital Flows and Domestic Politics in Brazil

<u>Supportive of Measures</u>	
<u>Actor</u>	<u>argument</u>
Finance ministry, Central Bank Exporters (FIESP, CNI, AEB, FACESP) Workers party (PT)	asset bubbles, appreciation, dutch disease "something" to control appreciation autonomous monetary and fiscal policy employment generation asset bubbles anti-US rhetoric
Economists/Analysts	prudential measure dutch disease best of bad alternatives buying time (for deficit reduction, interest rates)
<u>Against Measures</u>	
<u>Actor</u>	<u>argument</u>
Bovespa Domestic finance International finance IIF Economists/Analysts BNDES	market sentiment evasion too easy, distortionary evasion too easy, distortionary evasion too easy, distortionary evasion too easy, distortionary commodities prices focus on innovation, productivity US too powerful, okay but 'tsunami'
International Monetary Fund	tackle budget deficit, interest rates

In terms of party politics, it should be also be noted that the second and third capital controls and the first and second foreign exchange derivatives measures (see Table 1) were taken in the midst of a heated election campaign that pitted the workers party (PT) against the center-right Brazilian Social Democratic party (PSDB). Capital flows and controls played well because they could resonate with the worker's party base of trade unionists and progressives who have a long history of disdain for the US and the IMF and other external forces interfering with the ability of government to conduct pro-growth and employment strategies. Whereas the IMF, many in the banking sector, and the PSDB were saying that Brazil should cut its fiscal budget to deal with capital flows, Dilma Rousseff, the PT candidate, repeatedly argued that the Brazilian budget would not be subject to the whims of foreign finance and she would not let foreigners hold domestic growth and employment 'hostage.' (Ennes, 2010). Employment creation and job security is the central tenet of the PT and drove all major macro-economic decision-making. Thus the lack of competitiveness of Brazil firms became one of the largest concerns of the PT government from 2009 to 2011. Firms were losing competitiveness, shedding jobs, and thus eroding the base of support for the ruling party.

The PT was also backed by the general public well aware of the potential for crises and inflation. Brazilians have experienced at least three major financial crises since the 1980s, and the specter of crises and inflation hangs in the memories of many. They thus see a longer-term view, recognizing that the currency appreciation can lead to the loss of export markets and subsequent loss of jobs. Moreover, Brazilians remember the capital flight that often follows. The related inflation is something that no Brazilian wants to go back to. These memories are strong and were evoked by leaders and proponents of capital account regulations throughout the process. This is not to say that inflation and stability trump the purchasing power concerns of Brazilian consumers, it simply suggests that Brazilian consumers have a higher tolerance for some (but not drastic) depreciation in the currency as long as it is stable and job enhancing.

The PT put in place myriad technocrats and policy-makers that saw the intervention in capital markets as good policy. Many of these economists came from the 'Minskian developmentalist'⁹ tradition and were trained in Brazilian universities and some Western ones where such ideas continue to thrive. The training and background—as well as some post-election turnover — of some of the key players in Brazil provided the basis for the country to design and implement innovative regulation. The thrust of the new ideas—to impose the IOF and to create new foreign exchange derivatives measures and fine tune these measures as markets reacted—came from the Finance Ministry. As noted already, the Finance Ministry had long been headed by Guido Mantega. Mantega holds a PhD in Development Sociology from the Philosophy, Sciences and Liberal Arts School of the University of São Paulo and he also studied at the Institute of Development Studies (IDS) of the University of Sussex, England. Both of these places have strong 'developmentalist' traditions.

⁹ Minskian developmentalism merges two strands of thought — post-Keynesian macroeconomics and structuralist developmental thought. These economists recognize the importance of structural change as well as of macroeconomic and financial stability that supports structural change (see Gallagher, 2014).

The real brainchild of the effort was the Deputy-Minister of Finance, Nelson Barbosa de Filho. A younger economist, he was hired by the Brazilian government in 2005 and worked his way to be the Economic Policy Secretary from 2008 to 2010 before becoming Deputy Minister until 2013. Barbosa and his team are seen as the masterminds behind the design and introduction of the capital account regulations in Brazil. Barbosa (2011) described his approach to macroeconomic policy in Brazil as “structuralist-keynesian”. Structuralism is a deep-rooted school of thought in Latin America owing its origins to Raul Prebisch. Core themes of this school are the need for the state to provide macroeconomic stability and channel finance toward productive sectors that can change the structure of an economy toward higher valued-added and employment intensive goods. Barbosa studied under Lance Taylor at the New School for Social Research in New York and moves in the same circles as Ricardo Ffrench-Davis and Jose Antonio Ocampo. Taylor, a former MIT professor of Paul Krugman and others, is a pioneer of structuralism and has spawned many high-level financial policy makers across the developing world (Taylor, 2004).

Paramount to the outcome of innovative capital account regulation in Brazil is an understanding of the varying jurisdictions assigned to different Brazilian institutions. Brazil’s finance ministry, like many of its counterparts, has jurisdiction over all *tax* policy, including any taxes on cross-border finance (Prates 2012a). Moreover, all monetary, credit, and exchange rate policies in Brazil must be agreed upon by consensus by its National Monetary Council (CMN). Founded in 1964 the CMN is comprised not only of the Central Bank president, but also the Minister of Finance and the Minister of Planning, Budget, and Management (Paula, 2011). The initial IOF taxes were put in place by the Finance Ministry under its own discretion. It was at the CMN where the Ministry of Finance introduced the innovative measures to regulate foreign exchange derivative markets.

During the administration of President Luiz Inacio Lula da Silva, Barbosa was not able to garner support for broader measures in the CMN, and resorted to the taxation measures that did not need CMN approval. However, after the election there were moves in the Central Bank that brought individuals to power who saw more eye to eye with Barbosa’s team. Henrique Meirelles, who headed the Central Bank through the Lula administration (and the IMF loans), would make numerous public statements about being on the “same page” of Finance Ministry about the measures, but privately was much less supportive. Meirelles was educated in Brazil and the Harvard Business School and headed BankBoston’s Brazil operations from 1984 to 1996 and then was head of global finance for FleetBoston Financial in Brazil. Moreover, interviewees noted that under Meirelles and Lula the goal was to regain credibility with the markets (Brazil had a severe crisis under the Cardoso administration and Lula had to regain global market confidence thereafter) and Meirelles was concerned that regulating inflows might send the wrong signals. On Meirelles’ watch, Brazil repaid its debts and accumulated enough reserves (having enough for almost 12 months of imports or 90 percent of external debt at the time the IOFs started) by the time consideration of these measures occurred. The Central Bank thought it had the “space” to act with controls in this post-credibility phase but may not have done so earlier. Indeed, while many nations such as Colombia next door deployed controls on inflows between 2003 and 2009, Brazil had not.

The appointment of Alexandre Antonio Tombini after the election changed things somewhat. Tombini is largely seen as being more ‘flexible’ in his thinking than Meirelles was. Tombini is largely credited (or chastised) for loosening Brazil’s inflation target scheme as he entered office. Tombini received a PhD in economics from the University of Illinois,

Urbana Champaign. The draw for Urbana Champaign for Brazilians, far from being a bastion of New Classical Macroeconomic thought, had long been Werner Baer, a development economist who graduated from Harvard in 1958. Those Harvard years are a high water mark for developmentalist thought with Albert O. Hirschman and many others on the faculty. Tombini had been at the BCB for some time, negotiating country programs with the IMF throughout the 2000s. Tombini was part of a more pragmatic group in the Central Bank, where there is a long history of using capital controls, even during the liberalization period (Paula, 2011; Cardoso and Goldfajn, 1998). The amount of inflows became so large that many of those tools were seen as already in use and up against economic and political limits, especially the accumulation of reserves, which were costly given the high interest rate and becoming increasingly difficult to sterilize. Finally, according to Barbosa, he had to ‘reframe’ capital flows as ‘externalities’ to his colleagues in the central bank. To key members within the bank, this new language on the welfare economics of capital controls and statements of the IMF “spoke the same language” as Central Bank economists with more neoclassical training than in the Finance Ministry. This group was much more willing to go along with ideas of Barbosa’s team.

In addition to the jurisdictions of the CMN and the finance ministry, another institutional feature of Brazilian political economy also played a key role. Exporters in developing country contexts in cases where debt is denominated in dollars tend to be against regulating capital flows because if such measures devalued the currency, the value of their debt would increase (see Freiden, 1991; Leiteritz, 2012). As noted earlier, export industries are often supportive of cross-border finance because they are reliant on foreign capital markets to finance their trade. But in the case of Brazil much of the export sector receives subsidized credit from public banks (Brazilian National Development Bank - BNDES and Banco do Brasil – BB) out of earmarked resources.¹⁰ This partly explains why many export capitalists in Brazil were supportive of the measures taken to regulate cross-border finance.

The forty percent nominal appreciation was affecting the Brazilian export industry. In addition importing competing industrial sectors were voicing concern as well. All of the major business groups, including the Federation of Industries of Sao Paulo (FIESP), National Confederation of Industry (CNI), Federation of the Commercial Associations from the state of Sao Paulo (FACESP), and the Brazilian Foreign Trade Association (AEB) made statements throughout 2009 to 2011 in support of the IOF and related measures. Both Paulo Skaf, president of FIESP and Armando Monteiro Neto, president of the CNI told the press that the measures would save exporters, divert speculators, and prevent layoffs (O Estado de Sao Paulo, 2009). Individual exporters weighed in as well, such as Brasil Foods (BRF), one of the biggest exporters in the country, with external sales around US\$ 5 billion a year. BRF issued a statement that the measures taken by the government to tax derivatives will be “positive for exporters.”(Reuters, 2011).

The strong party ideology and technocrats, the CMN institution, and the backing from industry all integrate to explain how Brazil acted as it did. As theory would predict, many in the financial sector were not supportive of the measures. Domestic banks, international banks, the Institute for International Finance, and even the IMF all weighed in on the measures. The main narrative of each of these actors, as Goodman and Pauly’s

¹⁰ This segment includes bank loans with lower interest rates that follow some kind of earmarking allocation according to government regulations.

(1993) work would suggest, was that the measures would be evadable and thus wouldn't work. They argued that the Finance Ministry and Central Bank should work to lower interest rates and trim fiscal budgets instead.

Until the first quarter of 2013, these were the prevailing interests over those of the private banking system and international banks, the Brazilian stock market head, the Institute for International Finance, and some international experts from ratings agencies and investment banks. As Cohen (1998), Goodman and Pauly (1993), Frieden (1991) and Kirshner (1995) would predict, these actors stood to gain from inflows of foreign finance and to lose from efforts to curtail such flows. Edemir Pinto, President of the Brazilian stock exchange, was constantly in the press saying that each measure would hurt the Brazilian futures market, and/or be circumvented.

International players weighed in as well. Three representatives from JP Morgan, as well as experts from Barclays, the Economist Intelligence Unit, and Bank of America were quoted as saying that the measures taken by the Brazil were worrisome because they would cause uncertainty among investors about Brazil and also warned that the measures would likely be ineffective in meeting their goals. The IMF too, was initially not supportive of Brazil's measures. Instead, the IMF told Brazil that its main problems were with its public budget and public banks provision of credit. If these two trends were curtailed, the problem would be alleviated. However, since the IMF had been paid back by Brazil under the Lula government, Brazil was no longer bound by IMF commitments and therefore had the full policy space under the IMF Articles. Moreover, Brazil had not made many commitments in financial services liberalization at the WTO, nor does Brazil have regional and bi-lateral treaties with neighbours that curtailed its ability to deploy capital account regulations.

In the face of overwhelming capital flows (see Graph 3) and a well organized financial sector, Brazil re-regulated capital flows to modest success. A strong PT armed with economists and technocrats that had the power to channel party policy into the central bank were essential factors, as was the ability of the finance ministry to reframe the regulations as 'corrective' rather than distortive. The party had the backing of its traditional workers and general public, but also of strong international capitalists who were not as linked with global finance as in other countries because of BNDES and regulations on commercial banks. Finally, Brazil had preserved its policy space to regulate at home under the IMF and the WTO.

5. Conclusions

Brazil is part of resurgence of 'developmentalism' in the 21st century. However, while China, Vietnam, and many East Asian economies engage in industrial policy they do so under a closed capital account and a relatively pegged exchange rate regime. Brazil, like many countries in Latin America and the old 'tigers' of East Asia, now has an open capital account and a floating exchange rate regime. Given the massive volume and volatility in cross-border finance into Brazil and other EMEs with open capital accounts, Brazil has significantly more challenges than their Chinese and Vietnamese counterparts. In addition to conducting the right kind of microeconomic policies to build and foster economic diversification, Brazil also has to pay a significant amount of attention to cross-border finance.

This paper has shown that Brazil has attempted to rise to these challenges, but with limited success. Alongside its industrialization policies Brazil has engaged in aggressive exchange rate management and capital account and foreign exchange derivatives regulations in the wake of the 2008 financial crisis. Our subsequent analysis of the politics of post-crisis exchange rate management in Brazil reveals that the country has unique institutional arrangements — the IOF tax, the council, the BNDES, and policy space under trade treaties — coupled with workers and industrial exporters who are concerned with competitiveness, and a party currently in power committed to these interests that helped it overcome the major forces that usually deem government action as futile.

The limited success was due, mainly, to the delay of Brazilian policy makers to use these features, which widen the country's policy space, to manage the exchange rate for purpose of external competitiveness and, consequently, for curbing the hollowing out of investment in industrial sectors. Further, more recently, in face of inflationary pressures, financial group pressures and the sheer power of global capital markets (including rating agencies), the BCB has raised again the policy rate and restarted to use the domestic currency appreciation as a tool of the inflation target policy. Therefore, the 'developmentalist agenda' and the country's economic diversification – pre-condition for a project of stability-led growth – could be once more under threat.

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