



Capital Account Management in Brazil

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Managing Capital Inflows in Brazil

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Introduction

This chapter presents the recent Brazilian experience of dealing with capital inflows associated with domestic currency appreciation, and the use of macroprudential measures to cope with the capital surges. As can be fairly seen, restrictions on the financial account in Brazil are only part of the ingredients of the economic policy, which includes inflation under control along with conventional monetary policy as well as macroprudential measures, fiscal consolidation program, a solid financial system, focus on investment and infrastructure, and a very comprehensive income inequality-reduction policy.

The consequences of the 2008 international financial turmoil have not yet come to an end, as the world is still waiting to see advanced economies addressing important financial and political problems. In the United States, the Federal Reserve has become the main source of economic stimulus, having implemented the third round of quantitative easing, with only partial and less than satisfactory results, but with negative consequences for emerging economies.

In Europe, the crisis still persists, mainly in its periphery with severe economic and social consequences. Therefore, it is important that euro area countries come up with rapid and durable solutions, especially in terms of banking supervision and fiscal consolidation, so that economic growth picks up in the region. Since the fourth quarter of 2011, quarter-over-

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quarter economic growth in the euro area has been zero or below. European leaders are still struggling to find a consistent solution in order to put the region back on track.

Under this particular circumstance, after putting down the monetary policy rates, central bankers in advanced economies started to put forward a zero lower bound monetary policy that includes aggressive quantitative easing. By 2013, more than US\$9.0 trillion has been injected in the world liquidity, with part of this huge amount of money searching for very rare positive returns, mainly in emerging market (EM) economies. The unconventional monetary-easing policies consist of central bank purchases of domestic government bonds or even explicit guidance about the future path of interest rates with medium-term inflation or nominal output and unemployment rates as targets.

As a rational response, Brazilian monetary authorities have put in practice macroprudential measures that include restrictions on the capital accounts. Roughly speaking, they consist of increases in IOF (a tax on financial transactions) rates to short-term financial operations, including external loans up to one year, with the main aim to reduce gains in carry-trade strategies. Foreign direct investments and even long-term financial operations are left aside.

In this note, we highlight the fact that capital inflows management is only part of the policy mix; such a strategy has been effective in dealing with the increasing international liquidity and in preventing inflows of very short-term foreign capital, as well as in changing the composition of capital inflows toward better quality capital inflows. Therefore, the exchange rate staunched its appreciation movement and since then has been less volatile. It is also worth noting that the interest rate may have increasing power to the exchange rate under such a policy.

Summing up our remarks, we know how controversial the role and the effectiveness of capital controls are during episodes of crises. However, there has been a distinct scenario

since 2008 suggesting that countries such as Brazil should care about its exchange rate and quality of capital surges. A combination of zero lower bound monetary policy with quantitative easing, provoking exchange rate realignments across the world, is treated as part of the solution of the fragilities in advanced economies, but at the same time, it represents sizable constraints to emerging market economies. Definitely, we are in a noncooperative, nonzero-sum game, and thus emerging economies are being harmed rather than benefited. Capital account management measures are rather a technical than an ideological issue. They join the policy toolkit with successful results.

We next examine the economic literature on capital controls and then describe the recent Brazilian experience.

The Literature

Several new studies have reviewed the role played by the capital controls in a context of a world economy emerging from the financial crisis. Even the IMF (2012) presents its “institutional view” on capital controls suggesting some signs of progress on the topic. with some progress on the topic. Ostry et al.’s (2010) analysis can be considered one of the first in the new context. They discuss not only the benefit of the capital inflows to emerging markets but also the appropriate policy responses. Baba and Kokenyne (2011) estimate the effectiveness of capital control in response to inflows surges in emerging market such as Brazil, Colombia, Korea, and Thailand, in the 2000s.

It is fair to say that the globalization of capital markets has been beneficial when it is considered that it allows capital flows to move toward its most attractive destination, but at the same time this process has been associated with episodes of dramatic financial crises. In this scenario, there is an instigating debate regarding the role of international capital flows in

triggering such crises, and if that is the case, capital controls become an important policy tool to be used by emerging countries, as happened quite often during the 1990s.

Recently, a number of studies have argued that free capital mobility has created a highly unstable international financial system and that developing countries need to manage capital flows. It is important to say that this idea is not a new one and it goes back to James Tobin (1978), who argued that reducing macroeconomic instability would require the adoption of a global tax on foreign exchange transactions to reduce speculation in international financial markets.

The rationale for imposing restrictions (capital controls) on international capital flows can be associated with the belief that capital markets are usually characterized by market failures and distortions (information asymmetry), and such imperfections are magnified by difficulties in enforcing contracts across borders and by a kind of herd behavior, such as when investors overreact to external shocks.

One of the reasons most often voiced in the defense of using capital controls during periods of crises is associated with the idea that it allows the central bank to stem the drain on foreign exchange reserves and that monetary authorities could initially raise interest rates; once capital controls are in place, it gives room for a lower and more stable interest rate, which acts in a procyclical way. It is also important to note that capital controls introduce a wedge between domestic and foreign interest rates, and the domestic interest rate policy does not need to follow international interest rates when facing the consequences of international crises and the breakdown of uncovered interest parity.

The discussion of some policy issues regarding the effectiveness of imposing capital controls should be carried out with the understanding of the required steps (sequencing reform) toward the liberalization of the capital account. The main issue is not whether or not capital controls should be eliminated, but under which conditions (when and how fast) they

would be effective in achieving desirable economic outcomes. Most countries' experiences with capital controls have shown that the private sector found ways of getting around capital controls, usually adopting strategies based on overinvoicing (underinvoicing) imports (exports) and mislabeling the nature of capital movements (short-term portfolio flows labeled as trade credit).

The majority of the studies have argued that prior to liberalizing the capital accounts, it is necessary to reverse major fiscal imbalances and achieve macroeconomic stability. The past experience of many developing countries, including Brazil in the 1990s, has shown that although price stability was obtained, it still remained necessary to implement fiscal reforms to improve the overall macroeconomic fundamentals of the economy. Other than this, it has been pointed out that establishing a sound banking system is also necessary before developing countries can lift restrictions on capital mobility, as banks will intermediate the inflows of capital, which should not happen in an inefficient way.

Previous works, such as those by Reinhart and Smith (2001) and Kaminsky and Schmukler (2000), examined the role of temporary controls on capital inflows, emphasizing that capital controls have two crucial features: they are asymmetric (the target is on capital inflows rather than on capital outflows) and temporary. The authors examined possible reasons for policymakers to adopt controls on capital inflows and two types of shocks that can result in excessive capital inflows (temporary changes in the foreign interest rate and in domestic monetary policy). The major empirical findings are that the tax rate on capital inflows should be very high to affect the capital account balance, that the economic benefit of taxing capital inflows are not significant, and that taking too long to remove capital controls can reverse welfare benefits.

Malaysia and Thailand are two emerging countries making use of capital controls during episodes of financial crises in the recent past; the experiences of those countries were

examined by Edison and Reinhart (2000). Their main empirical findings suggest that capital controls help reduce interest rate volatility but there is mixed evidence for avoiding exchange rate volatility. Another important finding refers to a wider and more variable bid-ask spread during control periods, and little evidence that capital controls were effective in reducing volatility spillovers.

Kaminsky and Schmukler (2000) dealt with the question of whether or not capital controls affect the link between domestic and foreign stock market prices and interest rates—in other words, if it matters for international market integration. The authors found little evidence that capital controls can segment domestic and foreign markets, and even when they do, the effects do not last long. Finally, they find that it is difficult to distinguish the effects of controls on inflows and outflows.

The Chilean experience during the 1990s has been examined in detail by De Gregorio, Edwards, and Valdes (2000), who developed a work that addressed the issue of whether or not controls on capital inflows are efficient through the use of unremunerated reserve requirement. They also examined the effects on interest rates, the volume and composition of capital inflows, and the real exchange rate. The main empirical findings suggest that it is difficult to find long-run effects, and capital controls generate an increase in the interest rate differential only in the short run, no effects on the real exchange rate, and a significant effect in the composition of capital inflows in favor of a longer maturity.

Another study linked to the Chilean experience with controls on inflows and outflows of capital during the 1990s was developed by Edwards (1999), and the empirical results suggest that controls on outflows are not effective, whereas controls on inflows have the advantage of affecting the maturity of foreign debt, which is a desirable outcome for the monetary authorities. The three main goals of Chile's capital controls were to slow down the inflow of capital and change its composition toward capital of longer maturities, to reduce and

postpone real exchange rate appreciation, and to help the monetary authorities to adopt an independent monetary policy (maintaining interest rate differential). The author also found that controls on capital inflows are not sufficient to eliminate financial instability. The GARCH –Generalized Autoregressive Conditional Heteroskedasticity- estimation reveals that the restrictions on capital inflows were successful in reducing stock market instability, but not for short-run interest rate volatility.

Generally, the discussion about the effects of restrictions on capital inflows has shown that controls are important to explaining changes in the composition of capital flows in the direction intended (reducing the share of short-term and portfolio flows, and increasing foreign direct investment). The literature addresses the issue of whether external factors (international interest rates and liquidity) or internal factors (domestic fundamentals) are more important to explaining the increase in the financial flows to emerging economies, and relate this with the question of how these countries respond to an increase in capital flows.

The empirical evidence has indicated that capital inflow is more volatile in Latin America than in Asia, and short-term capital is more volatile than all other types of capital flows. The adoption of sterilized intervention increases the volume of total capital flows through short-term capital, and capital controls have no significant effect on reducing the overall volume of flows, but they affect the composition of capital flows in favor of foreign direct investments. Finally, short-term flows are not sensitive to changes in international interest rates, although the composition of capital flows does respond to such changes.

After the 2008 financial crisis, as some important economies reestablished restrictions on financial capital account as part of the policy toolkit, academics, policymakers, and international institutions alike have been trying to shed new light on such controversial issues. Thus, we next present Brazilian recent practices and policy responses in the context of the crisis.

The Brazilian Experience

First of all, it is important to distinguish the current global scenario from that one faced by Latin American economies in the 1990s. At that time, it was observed that liquidity curbs were more related to weak domestic macroeconomic fundamentals in such economies than to international pressures caused by central banks in advanced economies. Financial and currency crises associated with debt defaults used to be commonplace in the developing world. Those crises were usually explained either by wrong domestic economic policies (*crazy policymakers* in the developing economies) or wrong economic agents (*crazy agents* under self-fulfilling features). Asian crises were explained by *wrong markets*, due to contagious and herd behaviors (see Frankel and Wei, 2004).

On the other hand, according to the IMF (2012:6), “Capital flow liberalization has been part of the development strategy in several countries, in recognition of the benefits that such flows can bring.” Actually, it is a novel strategy associated with unconventional monetary policies developed by the central economies trying to resume growth. That is a very different nature of capital flow surges experienced nowadays in comparison with other previous practices. It is “liquidity injection” rather than “capital flows liberalization,” usually coined to define “removal of restrictions.”

This distinction makes quite a difference to policy recommendations, especially on how emerging market economies should deal with it. It is also not a matter of “unrestricted convertibility of local currency in international financial transactions.” (IMF, 2012:10) It seems that the recent capital surges are more associated with the less convertible currencies combating devaluation in international currencies.

The relationship between growth and the exchange rate (devaluations, misalignments, and volatilities) has been approached by the economic literature through different perspectives.¹ It is still a controversial topic, even though it is fair to state that devaluations foster growth through different channels, mainly the trade one. Weak domestic markets in advanced economies result in excessive inventory of manufactured goods searching for international markets; thus, devaluation would be very helpful.

Under such specific circumstance, capital flow management measures put forward in emerging market economies are a very rational response, and as beneficial as they are prudential.

The current context for implementing capital controls is quite different. Currently, problems are caused by *crazy policymakers* in advanced economies. Unconventional monetary policy—including rude quantitative easing programs under zero lower bound monetary policy—has been put forward by central banks in advanced economies. The next two figures show how sizable the expansion of international liquidity is as a result of this practice.

INSERT FIGURE 1 HERE

INSERT FIGURE 2 HERE

As can be seen in these figures, central bankers in advanced economies, such as in the United States, Europe, and Japan, have introduced very aggressive expansionary monetary policies. Notwithstanding the benefits of such monetary stances, emerging markets are concerned that the surge in capital inflows could cause problems for their economies. Exchange rate appreciation, reserve accumulation with some fiscal costs, and incentives to excessively borrow abroad with risks of a domestic credit boom are

¹ See Holland et al. (2013) for new empirical findings on the relationship between growth and exchange rate volatility. According to these authors, it seems that exchange rate volatility matters to growth more than misalignment does.

only some consequences that have recently been observed. It should be added that the international interest rates are pretty low and have remained so for a long period of time, especially in comparison with normal interest rate levels in EM economies, which constitute stimulus to make loans abroad in international currencies. It can also amplify currency mismatches with the well-known propensity for instability in EMs during a sudden cessation of capital flows, sometimes leading to unexpected exchange rate devaluations.

In the Brazilian case, an increase in international liquidity created excessive pressure on the exchange rate. Consequently, the economic authorities created a transaction tax (IOF) on new capital flows. Table 1 shows the evolution of IOF on portfolio investments and external loans, which can be summarized as the following, until June 2013:

- 1) Portfolio investments include fixed income and derivatives. They were all taxed at a 6 percent rate, with exception of capex and infrastructure bonds (there has never been IOF on external flows to these bonds). Also, IOF has not been applied to equities.
- 2) Short-term (up to one-year) inbound loans and offshore bond issues (overseas debt) are subject to IOF at a rate of 6 percent.
- 3) There has not been a 1 percent IOF tax on foreign exchange short positions held by banks, funds, and companies.

It is worth noting that when it was necessary the Brazilian authority promptly withdraw such measures, indicating that they are additional tools to manage capital flows. It is the case observed in June 2013, when IOF to portfolio investments include fixed income and derivatives was reduced to zero.

INSERT TABLE 1 HERE

The appreciation path of the Brazilian exchange rate was interrupted by the financial crisis of September 2008, which was reversed with quantitative easing monetary policies put forward by developed economies. To reduce vulnerability and pro-cyclicality of capital flows, Brazil introduced measures to manage capital account through prudential regulation. These measures are also illustrated over the time shown in Figure 3. From this figure it is possible to infer that after starting the control on surges of capital inflows, the Brazilian real stamped its appreciation and moved to a new stable equilibrium.

INSERT FIGURE 3 HERE

As can be seen, the effectiveness of the restrictions on capital control has been longer than expected by the economic literature. And the results include more stable exchange rate and less vulnerable balance sheets, both in domestic-based companies and in the financial system. There are some plausible explanations for such successes.

First, the Brazilian economy is much less dollarized than it used to be a decade ago. The dollarization of an economy is strongly associated with both current inflation and inflation risk.² It is a rational response of agents to deal with inflation. As inflation and risks of high inflation have decreased substantially in Brazil, along with sovereign risks, currency mismatches in balance sheets have shown a sizable reduction. As a result, capital account management measures do not change foreign investors' perceptions about the country.

INSERT FIGURE 4 HERE

² Financial dollarization is a topic associated with high inflation and inflation risk in Latin American economies, and more recently Holland et al. (2012) associated such phenomena to the sovereign risks as the dollarization remains high, even after inflation and inflation risk decrease.

INSERT FIGURE 5 HERE

Second, the composition of the capital inflows has changed very clearly after restrictions on short-term financial inflow. As described in the literature, restrictions on capital flows play an important role in capital allocation, affecting the composition of capital inflows in favor of foreign direct investments. In Brazil, the foreign direct investment has been as high as it used to be before the restrictions on capital inflows. Meanwhile, as the returns on the carry-trade strategy turned out to be negative (see Figures 4 and 5), short-term capital inflows have been reduced.

According to Figure 6, the long-term capital inflows remain stable at a very high level while portfolio investment has decreased toward a level not seen since before the 2008 financial crisis. Neither intercompany transactions nor equity have been affected by such measures.

INSERT FIGURE 6 HERE

INSERT FIGURE 7 HERE

Third, Brazil has put forward a set of macroprudential policies, including capital account management along with conventional monetary policy. Consistent fiscal results have been accomplished; thus, the ratio of public debt to GDP has decreased very quickly. In addition, Brazil has left behind any probability of fiscal insolvency. The international investor's confidence in the Brazilian sovereign bonds has increased, as shown in Figure 8. According to this figure, the difference between the yields of 10-year Brazilian and U.S. bonds has declined consistently since 2011. A commitment to fiscal responsibility throughout the years, combined with economic growth, has contributed to the reduction of credit risk in Brazil.

INSERT FIGURE 8 HERE

Finally, the medium-term growth prospect also plays an important role so that the foreign direct investments are also searching for opportunities and Brazil nowadays is one of the best countries in the world in which to invest. The Brazilian government has just launched a very comprehensive program of concessions in the infrastructure sector, including airports, ports, railways, high-speed trains, oil, gas, and electricity, totaling the amount of US\$235 billion. It is just the first step toward addressing the entire spectrum of the country's infrastructure needs. Many investment projects in different sectors, such as in automobile, chemistry, health care, and others, are being set up. As a middle-class society, Brazil has a very dynamic domestic market with low unemployment and lower income inequalities. It seems that growth prospects and investment opportunities matter to foreign investors more than restrictions in short-term capital inflows do.

SUMMARY

Excessive international liquidity has provoked side effects in emerging market economies, and Brazil is more a rule than an exception among them. To cope with the effect of unconventional monetary policies implemented by advanced economies' central banks, Brazil has introduced a set of macroprudential policies including capital account management, along with conventional monetary policy. Capital account management is much more a technical issue than an ideological one. Successful results have been obtained under the circumstances. The economic policy stance includes measures to foster investments in the context of inflation under control, a growth-friendly fiscal consolidation program, a solid financial system, and strong income-inequality reduction.

After implementing restrictions on financial account, the Brazilian real stamped its appreciation and took an upward trend until it stabilized at the parity of 2 real per U.S. dollar. It is fair to say that the effectiveness of the controls, begun in 2011, has lasted longer than expected. The benefits of the controls are generally greater than the eventual costs. As such measures are also prudential, borrowing abroad in other currency has been less leveraged.

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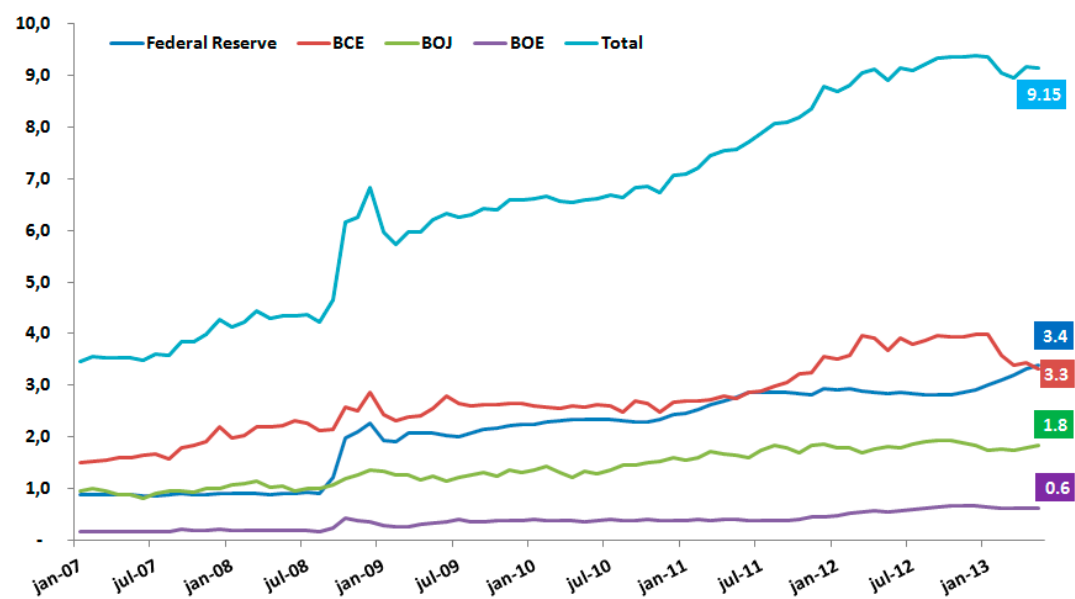
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Table 1. Brazil: Tax on financial transactions, 2008–2013

Portfolio	Dec 3, 2008	Oct 19, 2009	Oct 4, 2010	Oct 18, 2010	Jul 26, 2011	Dec 1, 2011	Feb 29, 2012	Sep 3, 2012	Apr 12, 2013	Jun 4, 2013	Jun 12, 2013
Fixed Income	1.50%	2.00%	4.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	0.00%	0.00%
Long-Term Corporate Bonds	1.50%	2.00%	4.00%	6.00%	6.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Equity	0.00%	2.00%	2.00%	2.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Derivative Margin Deposit	0.38%	0.38%	0.38%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	0.00%	0.00%
External Loan up to											
90 Days	5.38%	5.38%	5.38%	5.38%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
270 Days	0.38%	0.00%	0.00%	0.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
1 Year	0.38%	0.00%	0.00%	0.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
2 Years	0.38%	0.00%	0.00%	0.00%	6.00%	6.00%	6.00%	6.00%	0.00%	0.00%	0.00%
3 Years	0.38%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	6.00%	0.00%	0.00%	0.00%
5 Years	0.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	0.00%
Excessive Long Positions On BRL	0.00%	0.00%	0.00%	0.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	0.00%

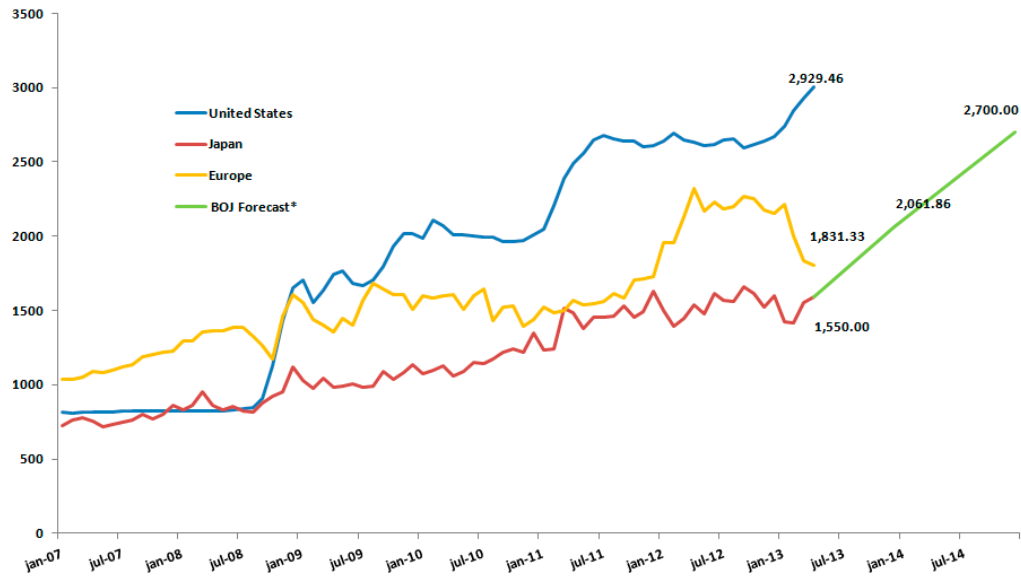
Source: Ministry of Finance, Brazil.

Figure 1. Expansion of international liquidity (US\$ trillion)



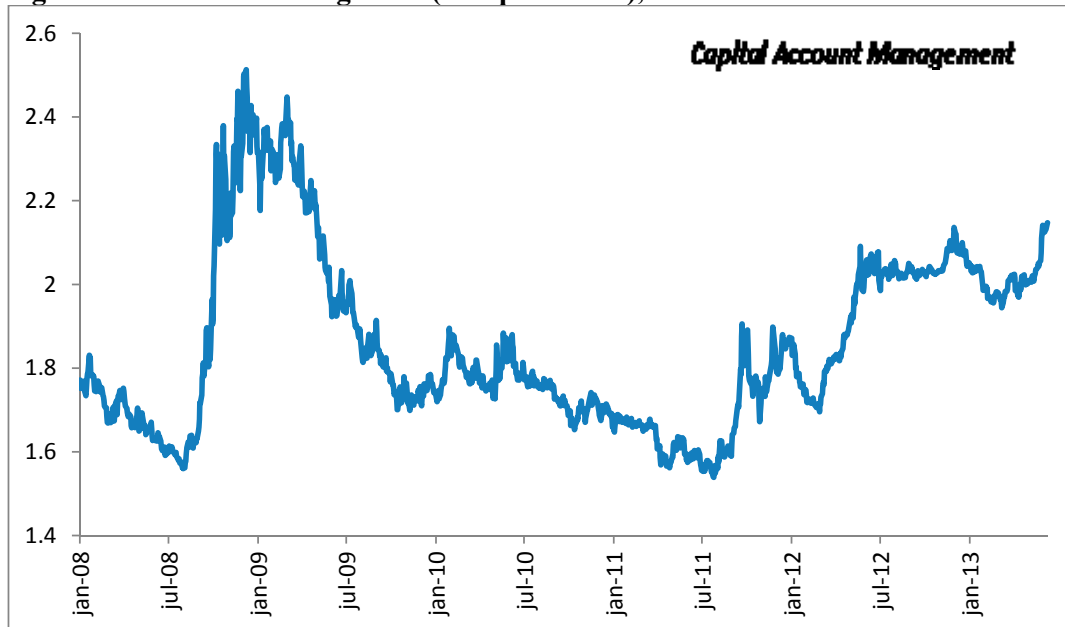
Source: Bloomberg.

Figure 2. Expansion of the monetary base in advanced economies, 2007–2014 (US\$ billion)



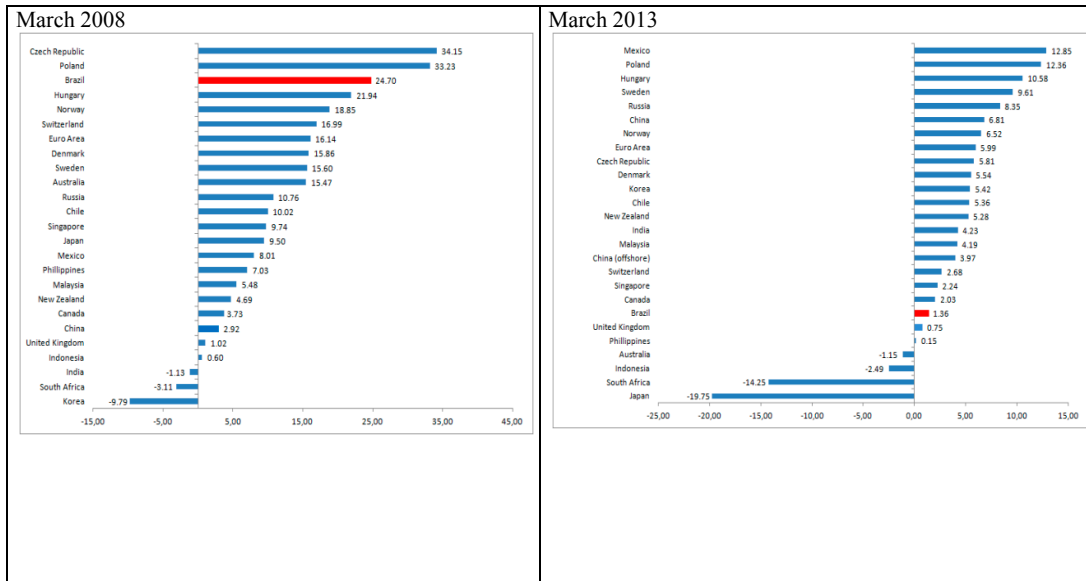
Source: Bloomberg.

Figure 3. Nominal exchange rate (real per dollar), 2008–2013



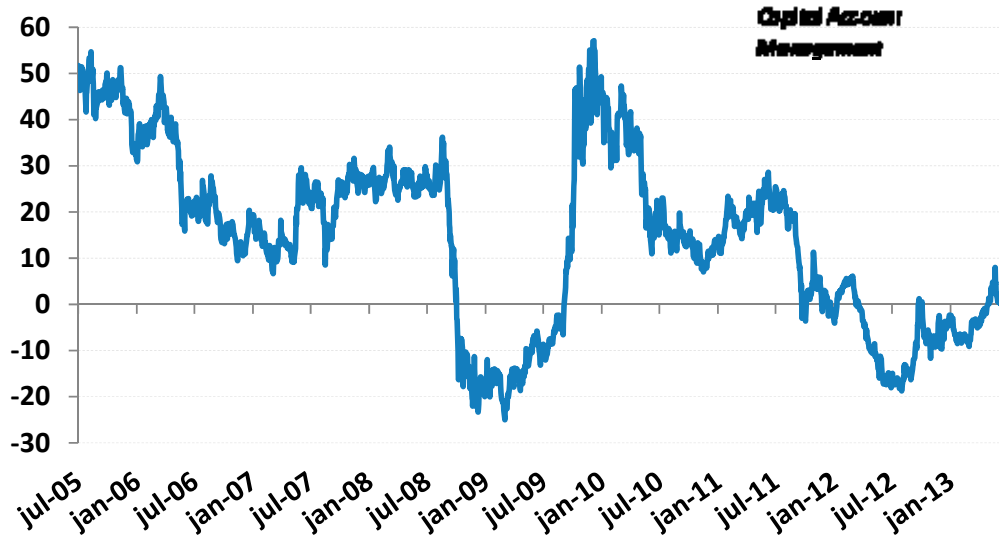
Source: Central Bank of Brazil.

Figure 4. Returns on carry-trade strategies in selected countries, 2008 and 2013 (percent, 12-month accumulated)



Source: Bloomberg.

Figure 5. Brazil: Returns on carry-trade strategy (2005–2013) percent per annum



Source: Bloomberg.

Figure 6. Brazil: Financial accounts, 2008–2013 (US\$ billion)

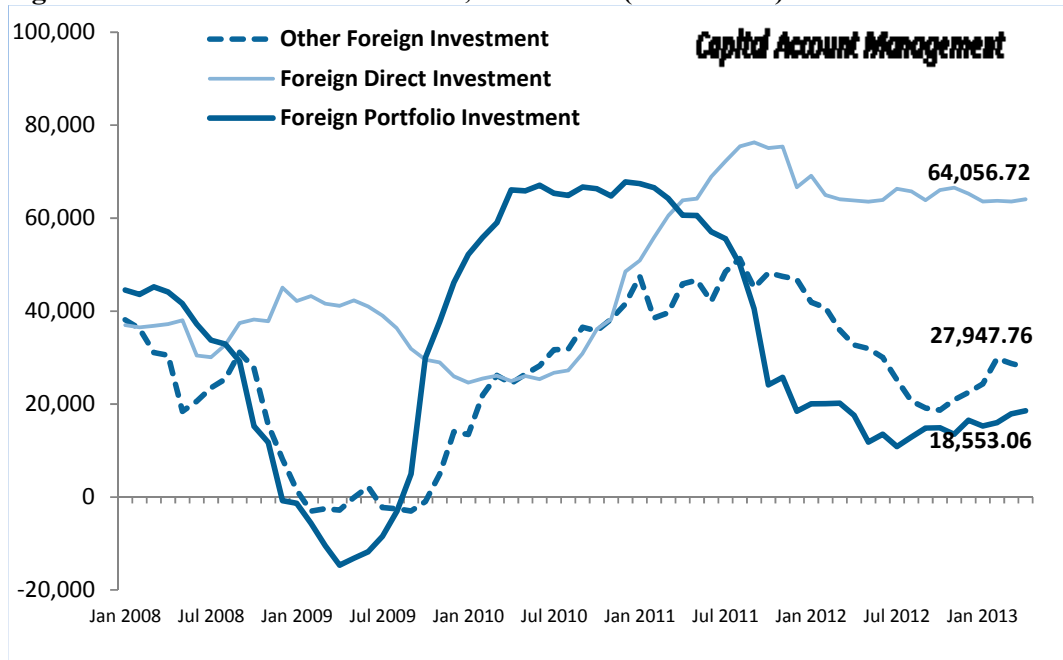
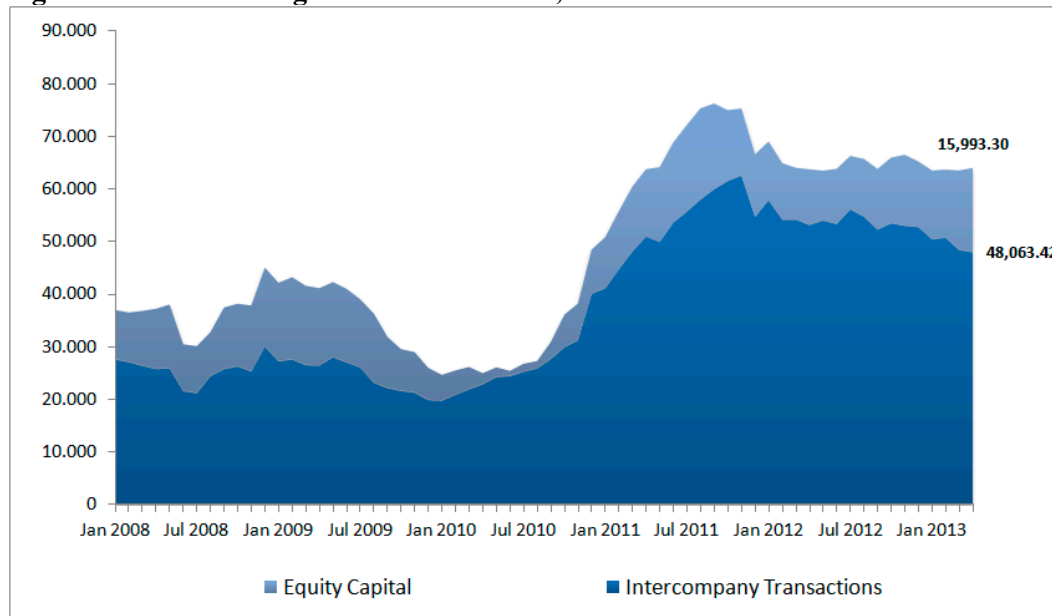
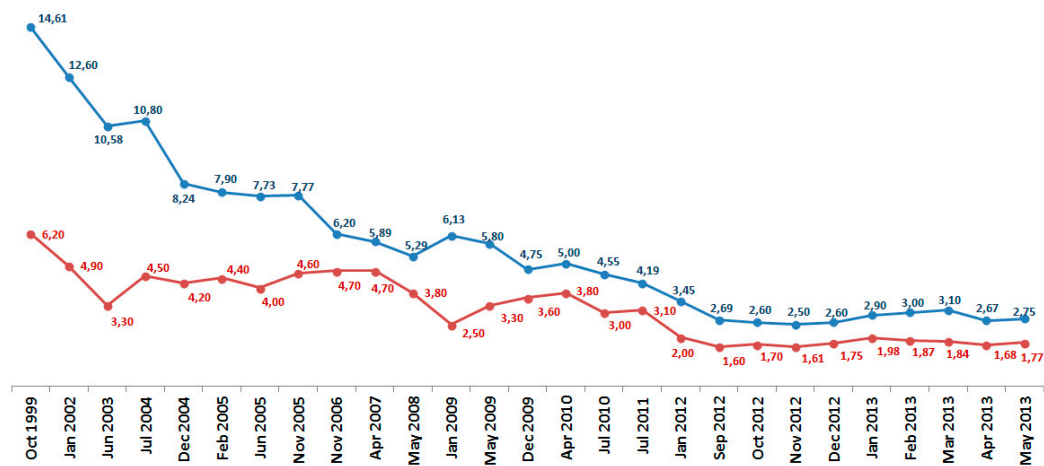


Figure 7. Brazil: Foreign direct investment, 2008–2013



Source: Central Bank of Brazil.

Figure 8. Yield of 10-year Brazilian and U.S. Bonds, 1999–2013 (percent)



Source: Ministry of Finance, Brazil, and Bloomberg.

Notes: * Measured by the differential of yields on issue date from 10-year Brazilian bonds denominated in US\$ and yields from U.S. Treasury bonds (same maturity), traded on the secondary market on the same date. ** From October 2012, yields 10-year Brazilian and U.S. Treasury bonds (same maturity), traded on the secondary market on the same date.