Evolution of the Capital Flows to the Brazilian Economy after 2008[1]

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Abstract

Brazil has a long history of dependence on external savings to foster its economic growth, thus a strong experience in monitoring foreign capital flows. In this context, the register of any transaction that implies an exchange between foreign and domestic currencies should be done in an on line system which allows for the identification of the nature of the capital flow. This register is also needed because transactions in foreign currency in the domestic economy are legally forbidden. These registers provide statistics on different categories of capital inflows and outflows, allowing analysts and policy makers to interpret the current scenario as well as to adopt measures to stimulate and/or restrict the flows. These statistics also allow the evaluation of the effectiveness of the measures implemented. This article presents the system of collection of capital flows statistics and its recent improvements. In the sequence, the evolution of the different categories of capital flows to the Brazilian economy is presented, as well as their performance in face of the macro prudential measures implemented by the government in the aftermath of the international financial crises.

Key words: foreign investment, compilation of statistics, macro prudential measures on capital flows, communication of statistics

1. Introduction

Exchange contracts settled through the national financial system are a legal obligation in all transactions with abroad – transactions that implies the exchange of domestic and foreign currencies, due to the absence of dollarization in Brazil – since Decree 23,258, issued in 1933. In 1962, this exchange system was reinforced with the legal obligation to register at the Banco Central do Brasil (BCB) any inflow of foreign capital in the Brazilian economy, established by the Foreign Capitals Law. The economics behind both laws rely on the need to generate resources in foreign currency to cope with the current account deficits, due to the dependence on foreign savings to foster growth and its consequent income payments. In periods of external sector crisis, like the 1980's, this system worked as a framework for capital controls.

Today, as the country moved progressively towards a more open economy[2], the on line and real time registration of all currency exchange in the country constitutes a closed International Transactions Reporting System (ITRS). Together with the registration system, they allow for the compilation of external sector statistics, both flows and stocks, as well as permit the monitoring of the different flows of capital for economic analysis and policy measures purposes.

These statistics are especially important when capital inflows surge or when reversals occur in a magnitude and rhythm that could present risks to the domestic economy, as illustrated by the periods analyzed in this paper.

The exchange system, through the codification to identify the nature of the exchange transaction in the ITRS, allows the BCB to classify the different types of capital flows.

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[1] This paper should not be reported as representing the views of the Banco Central do Brasil. The views expressed in this paper are those of the authors and do not necessarily reflect those of the Banco Central do Brasil. We would like to thank Thiago Vieira and the staff of the Balance of Payments Division for the help in preparing datasets and graphs for this note.

[2] For an overview of the evolution of the exchange regulation in Brazil, see BCB (2013).

Besides, any transaction should be identified with the investment register in a way that for the BCB it is possible to know the magnitude of the flows and the positions in a one-day lag.

The robust fundamentals and the better performance of the Brazilian economy turned it more attractive to foreign investments (Hennings and Mesquita, 2008). Therefore, the annual flows of foreign direct investment (FDI) have shown an upward trajectory since the middle of the 1990s. In addition the deepening of the financial markets has attracted more foreign portfolio investments, while the inflows of credit changed in nature and magnitude.

The monetary policies adopted by the main advanced economies as a reaction to the financial crises led to record low levels of interest rates and a surge in international liquidity. Part of these resources spread to the emerging markets economies and part of it into the Brazilian economy. In specific moments, the magnitude of capital inflows was identified with an undesirable behavior of the economy in face of policy measures adopted. This led the government to adopt macro prudential measures, like the financial transactions tax (*Imposto sobre Operações Financeiras*, IOF) over fixed income securities and equity investments, both in the country, in 2009 and 2010. The adoption of this kind of measure in other emerging economies highlighted the discussion around the theme again, stimulating new academic studies (Klein (2012), Soares and Barroso (2012)) and the evaluation of the measures, as well as the discussion by the IMF (Ostry at all, (2010)) and other international organizations.

In the next session of this article we present the systems of registers of capital flows available for the BCB to monitor their nature, magnitude and directions, allowing for the compilation of timely statistics for the decision making authorities. In the third session, we present the evolution of capital flows after the onset of the international financial crises and compare with its previous profile. In the fourth session, the macro prudential measures on capital flows are described and the behavior of the investments is presented. Then we end the paper with some final remarks.

2. System of register of foreign currency transactions

In 1962, the Foreign Capitals Law, Act n. 4.131, set the framework for the BCB to establish a system for controlling flows and stocks of foreign capitals in Brazil. In doing so, the BCB also became responsible for the collection of statistical data of capital flows and positions. In this way, the BCB is in charge of compiling the Balance of Payments (BoP), the External Debt and the International Investment Position (IIP).

The main data sources are the ITRS and a set of Electronic Declaratory Registration Systems (*Registros Declaratórios Eletrônicos*, RDE). Due to the fact that it is legally forbidden to settle transactions in the country with foreign currencies, any foreign inflow to be used domestically must be exchanged for the Real (BRL), the domestic currency. This exchange should be conducted at an authorized institution and should be registered via an exchange contract in the ITRS[3]. In this way, the ITRS registers transactions between residents and nonresidents in or out of the country on a cash basis, without any threshold, and is the main source of information for BoP flows. This system requires the identification of the seller and the buyer of the foreign currency (one part is always a resident bank), their economic sector, the sender/receiver abroad, their relationship, the purpose of the transaction, its amount and the exchange rate. There is a list of codes to identify the objectives of the transactions that allows the BCB to classify the transaction in the different BoP accounts and, therefore, to compile it.

For foreign investment inflows, the exchange transactions system is linked to the set of RDE systems of direct or portfolio investments, and financial operations (borrowing/issuance of debt abroad or financed import).

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[3] A brief summary of the new exchange system main innovations is in BCB (2013). The full details are found at http://www.bcb.gov.br/?camsisat (only in Portuguese).

The Register of Financial Transactions (*Registro de Operações Financeiras*, ROF) is a mandatory system for enterprises that issue external debt comprising: loans, including leasing operations and intercompany loans, import financing, fixed income securities issued abroad, and also the debt service settled abroad. The ROF system includes Government liabilities abroad, from all levels of Government, making it possible to compile both private and public external debt.

The registration for enterprises that receive capital from non residents is also mandatory and should be done in the session for FDI on the RDE. This registration allows to link the flow of investments to the resident invested enterprises, as well as to indicate its foreign investors, helping in the classification of the economic sector and other relevant information to economic analysis. However, since the data in this system is recorded when the first investment is done and new inflows/outflows are just added, the FDI positions derived from this system are at historical values. Therefore, since 1995, every five years the BCB conducts a survey with invested enterprises (the Foreign Direct Investment Survey) do compile inward FDI positions in the IIP liabilities. Beginning in 2011, the BCB conducts an annual survey with a sample of the invested enterprises, which contributed with the check of the robustness of the data available.

There is also a BCB's registration system for portfolio investment, defined as the investments owned by nonresidents in the equity markets (less than 10% of total capital of the company), in the securities market, public and private securities, and in the derivatives markets. Foreign portfolio investors also have to register themselves at the Securities Exchange Committee (CVM, in Portuguese), that has a register for the assets held by non residents in the Brazilian stock market and in domestic-issued fixed income securities. In those cases, the BCB compiles BoP flows statistics from the exchange contracts but uses as a data source for the compilation of IIP liabilities CVM data, which considers market values of the stock of these foreign investments at the end of each month.

Each register receives an individual ID code and must contain the identification of all parties of the operations, the identification of the sector and the type of transaction, as well as the financial details. For financial operation, for example, the information set includes interest rate, amortization and interest payment schedule, among others. Any exchange contract related to a flow of capital, like disbursements, interest payments, amortizations, as well as any contract modification (due to, e.g., debt reorganization, write-offs, debt assumption), to be accepted by the system, must provide the correct ID-code for the original record.

The link between the ITRS and the RDE allows a double-checking of the operation nature-of-operation code informed, since the nature of the operation should match the type of capital registered.

Although the availability of the registers recorded in the RDE and the data of the surveys, for the purpose of monitoring the flows the main source of statistics is the ITRS. Thus, data used for the analysis of the performance of the different categories of capital in the next sessions came from the monthly BoP, which uses the ITRS as the main source for its statistics.

3. The behavior of capital flows since the onset of the financial crises

For the evaluation of the performance of the different categories of capital flows to the Brazilian economy, the period considered began in January 2006 and ended in February 2013. We assumed the period from January 2006 to May 2008 as the regular scenario before the crises. The period between June 2008 and February 2009 was marked by higher uncertainty and lower international liquidity, due to the deepening of the crises. From the second quarter of 2009 on, the Brazilian economy began to resume growth with stronger external sector fundamentals, with the country being classified as investment grade by two of the three major rating agencies (Standard & Poor's and Fitch in May 2008, while Moody's rated IG in September 2009).

For the purpose of this analysis, we will classify capital flows in three categories: FDI is the capital invested in resident enterprises by foreign investors that aims at a long relationship with the invested enterprise and wants to have a significant degree of influence on its management – in accordance with the 5th edition of the IMF's Balance of Payment Manual. Portfolio investment is the capital flow that is primarily concerned about its safety, the likelihood of its appreciation in value and the return generated. These features turned the portfolio investor very volatile and changed the composition of the portfolio with the short term developments in the invested financial markets and with the international financial conditions. We will consider separately portfolio investments in Brazil (equities and debt securities) and abroad (in this case we will add loans to debt securities). The foreign investments in equities and in debt securities issued in the invested economy results economically in capital flows to and from the domestic economy that behave closer to the above definition of portfolio investment. Loans and debt securities issued abroad tend to behave as a long term investment, with its volatility having lower impact on the invested economy.

Analyzing data for the selected period reveals that FDI to the Brazilian economy has been a very stable capital as expected. Also FDI flows are being kept within a narrow range. Before the crises, the monthly average net inflow was USD 2.3 billion, resulting from an average gross monthly inflow of USD 3.7 billion and a gross monthly return of USD 1.3 billion. Even with the deepening of the international financial crises from June 2008 to February 2009, the gross monthly average inflow reached US$ 6.1 billion, while the outflow increased to US$ 2.2 billion, keeping the inflow to outflow ratio essentially constant. Interesting to notice that with the worsening of the crises in the advanced economies, which are the main foreign direct investors in the country, the remittances of profits and dividends increased substantially. Before the crises the monthly gross remittances were US$ 1.4 billion, decreasing to US$ 1.2 billion from Jun.08 to Feb.09, climbing to US$ 2.0 billion from March 2009 on. This collection of cash by the headquarters possibly has had a role in the capitalization of the enterprises during the shortage of liquidity in the financial market.

From the second quarter of 2009 onwards, the Brazilian economy resumed growth and was strongly stimulated by economic policies. The FDI inflows from 2010 on, even with the kin performance of the investor economies, grew to high record levels, reaching US$ 6.7 billion gross monthly average, US$ 4.3billion net monthly average.

Capital inflows targeting the equities market and the debt securities domestic market is, as one should expect, significantly more volatile that the FDI. Not only is the net inflow is more susceptible to changes in the domestic economic environment, but also to the investors' risk aversion. In this context, the net inflow to equity market and to debt securities domestic market plummeted after the onset of the crises, with net outflow (US$1.6 billion) and surged after this record low, reaching US$ 6.1 billion in the first quarter of 2011.

Besides the volatility, other feature of this investment is its high turnover. There are huge monthly inflows and equally huge outflows, with the balance being expressively low relatively to gross figures. Before the crises, from January 2006 to May 2008, the average monthly gross inflow of investments in equities was US$8.7 billion, while the outflows reached US$7.4 billion. During the deepening of the crisis, the gross monthly average inflow grew to US$16.4 billion, while the outflow was US$18 billion. The balance changed from a net monthly average inflow of US$ 1.4 billion to a net monthly outflow of US$ 1.5 billion. With the resumption of the Brazilian economic activity while the dynamics of the mature economies were still fable, the net inflows tended to increase. Thus, the net monthly average was US$ 2 billion, from March 2009 onwards.

Foreign capital directed to securities issued in the host economy showed similar behavior, relevant amount of investments flowing in and out in short periods of time, with a resulting small and volatile net inflow.

Both these types of capital are perceived as speculative, since they don't look for any longer term commitment with the economic performance of the host economy, but with its own short term profitability. Frequently these investors show a herding behavior that makes their change in opinion to be followed by a huge change in the direction of the capital flows.

This behavior not rarely poses difficulties to the governments to manage the change from excess of liquidity to a shortage, with impacts on the exchange rate and the liquidity conditions of the host economy.

The loans and debt securities issued abroad are also strongly affected by the international liquidity conditions and the risk aversion of the liquidity suppliers. Thus, the worsening of the financial international conditions before the onset of the international crises and during its deepening decreased the inflow of this category of capital. The improvement in international liquidity conditions just turns in an increase in the inflows if domestic issuers decide to search for these resources. In Brazil it happened when the domestic economy resumed its activities in 2009.

Despite the fact that loans and debt securities issued abroad have a predetermined schedule of payments of principal and interest, the term of the issuance have influence in the liquidity conditions of the domestic economy.

4. Macroprudential measures and its effects

The abundant liquidity in the international financial markets and the record low levels of interest rate in mature economies stimulated investors to look for higher yield alternatives in other countries. At the same time, the historical high level of Brazilian domestic interest rate, combined with strong fundamentals, made its assets more attractive than usual.

However, an intense net inflow of capital for a sufficiently long period of time could led to a biased behavior from domestic economic agents, like the expectation that the exchange rate would always appreciate, fuel an unsustainable credit growth and reduce the effectiveness of the monetary policy. Additionally, a sudden stop or a reversal of the inflows - when the international conditions changed or when the investor's mood changed - could cause permanent impacts on domestic markets and agents. In this context, the Brazilian Government announced some increases on the IOF tax on credit and exchange transactions for investment on specific assets.

On March 2008, the IOF tax on new foreign investments on fixed income securities, on private equity funds and on emerging companies investment funds (FIEE, in Portuguese) were raised from zero to 1.5%. With the onset of the crises, this tax became null again on October 2008.

On October 2009, the IOF tax on the mentioned modalities of investments, plus in the equity markets, including IPOs, were increased to 2%, due to the increase in net flows to record highs. On October 2010, the same tax was raised to 4% and then to 6%, but only in new investments on fixed income securities, FIEE, FIP. Two months later, on December, the IOF tax was decreased to 2% for all mentioned investments, except on fixed income debt securities in the country and derivatives margin deposits, that remained at 6%. On December 2011, these taxes were further reduced to zero, with the same exceptions, plus the secondary markets of Brazilian depositary receipts.

The measures taken by the Brazilian Government from 2009 on were classified by Klein (2012) as episodic controls, since they are imposed and removed on a narrow set of assets. The objective was not to impede foreign capital inflows, but to reduce incentives that contribute to excessive risk taking and also to reduce the gross inflows via the decrease of the profit margin offered by the interest rate differential. For this reasons, an increase on the tax rate was imposed on more profitable assets.

The decrease in the average monthly inflow of investments in the assets taxed suggest that the macro prudential measures have had an effect on quantities, even if it is argued that they were not the only facts that affect the foreign investments (Figures 1 and 2).

Figure 1: Foreign Portfolio Investment in Brazil: Equity
US$ million

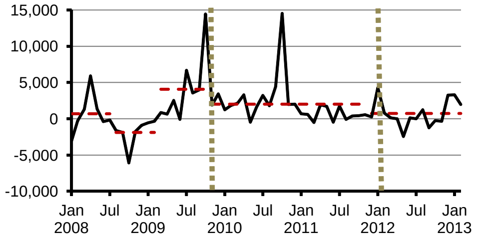
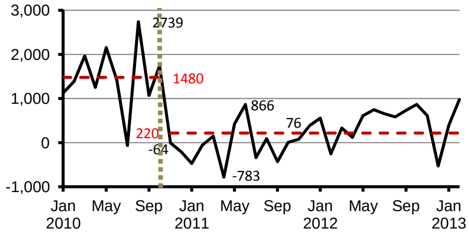


Figure 2: Foreign Portfolio Investment in Brazil: Debt Securities
US$ million



The composition of nonresident portfolio investors shows higher proportion of equities (around 2/3) and fixed income securities fund quotas (more than 1/5), with public securities, contracts of exchange rates and contracts of interest rate in markets of futures also composing the portfolio. The proportion of equities used to be higher than 80% on total foreign investor portfolio in the beginning of the 2006. But its share decreased with the increase of the inflow and the diversification of the investments, especially with fixed income securities, whose capital gains were exempted from income tax on March 2006.
The data of the value and composition of the foreign investor capital market portfolio also shows the impact of the measures, but the mixed impact of the value of the equities and the inflows turn the evaluation more difficult.

5. Final Remarks

A precise measure of the magnitude and the nature of the capital flowing to and from an economy showed its importance in different countries and in different situations, not only to understand the scenario and its implications, but also to allow authorities to adopt correct policies to avoid the worse impacts of capital flows reversals.
The Brazilian systems to compile statistics of capital flows have shown its robustness and reliability, constituting one of the most important tools for policy decision makers, market analysts and academics. The monthly release of data for the general public is carefully followed, as well as the forecasts published in Monthly Press Release and in the quarterly Inflation Report.
The system allows the monetary authorities to access daily statistics in the flows and "on request" data on the stocks and its distribution between different assets, allowing them to have a privileged view of the foreign investment financial landscape.
This framework was relevant when the decision to adopt the macro prudential measures on capital flows was considered, especially to select the targeted foreign investments and the best policy control, considering the objectives of the measures.

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