Capital inflows into Brazil, 1992-98: the nature and effects of controls and restrictions

(comments on B. Carvalho & M. Garcia "Ineffective controls on capital inflows under sophisticated financial markets: Brazil in the nineties")

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The issue of the effectiveness of capital and foreign exchange controls in general, and their relevance for emerging markets in particular, has always been a high temperature one, though in recent years, given advanced globalization, banking and financial crises and the worldwide adoption of the Basle Accord, new ramifications in the basic issue of effectiveness are yet to be properly addressed. While old style foreign exchange controls are being phased out around the world, adversaries of globalization increasingly align capital controls as one crucial mechanism to sand the wheels of international finance. The notion of an international "Tobin Tax" has been especially appealing to these audiences and popular to some politicians, though no practical application has yet been truly discussed. Mainstream economists and central bankers do not generally take proposals along these lines very seriously, most usually dismissing capital controls across the board with the same arguments normally thrown at price freezes and other forms of artificial intervention in the working of markets. It is true, however, that the velocity with which anti-globalization proposals to limit capital mobility are sidelined is not the same at which public policy has advanced in the topic of capital account convertibility as a general proposition. In fact, the 1997 defeat of the proposal to advance in this realm in the context of the Articles of Agreement of the IMF can be taken as an eloquent demonstration that there was less certainty in this field than many people thought. Indeed, an indication towards this ambiguity is the development of two distinct branches of empirical literature, one, positive, on the association of measures of capital mobility, or convertibility, and economic growth, and other, negative, on the association between capital mobility and currency crises; neither, actually, especially conclusive. Indeed, the successive episodes of instability, sudden stops, banking and currency crises, not to mention the growing concern with money laundering and

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terrorism's money, have made deregulation in the financial industry, especially when it involves international transactions, a very cautious process. Yet, in one way or the other, the debate on the regulation of foreign exchange transactions, and within which the scrutiny on capital flows, has been kidnapped into the grand world controversy around globalization where it was torn by ideological misconception and prejudice. While anti-globalization groups intend to save the world with capital controls, mainstream economics seems unprepared to concede *any* role for capital controls or regulation even in times of unambiguous exuberance.

The question to address, however, in connection with Carvalho & Garcia's (CG) paper, is very much circumscribed to a specific context, namely, whether there is some middle ground between these extremes, when one considers a brief but relevant episode of targeted restrictions to short term capital *inflows* into 1993-98 Brazil, *combined* with a liberalization of *outflows*, and during years in which there was little doubt that a "capital surge" was taken place. My personal position at the Central Bank, starting in October, 1993, as Deputy Governor in charge of International Affairs, and directly responsible for the creation and implementation of the regulatory changes in the field of foreign exchange regulation, through 1997, when I was elected Governor, where I stayed until early 1999, places me at a privileged position to look back at the episode from a first hand practitioner's point of view, though in a somewhat uncomfortable position to judge "ineffectiveness", as argued by CG. The reader should be warned of the presence of bias in the views expressed in what follows, which, I guess, might be a redundant advice in this profession.

Some context is also very much required. In the early 1990s, Brazil was still enforcing old style foreign exchange controls, though with great strides towards liberalization. Foreign exchange shortage seemed to be the rule since the 1950s, and the notion of *excessive inflows,* bound to deserve *restrictions* rather than incentives, was by all means novel. Indeed, in the early to mid 1990s, these were times in which the concern with "capital surges" and its consequences to exchange rates (and the concrete threat of the "Dutch Disease" phenomenon) led to academic production and also practical experiences with various sorts of impediments to capital inflows deemed of a "lesser quality", as in Calvo *et al.* (1993), Corbo & Hernandez (1996), Dooley (1995), Gavin *et*

al. (1995) and Schadler *et al.* (1993)[2]. More specifically, the experience of Chile, and also of some Asian countries, received some attention in the late 1980s and early 1990s while excess liquidity had been there, in some cases, for more than a decade, and there are mixed reviews as to the effectiveness of controls. Yet, as the pendulum of world liquidity retreated from abundance to scarcity a few years later, after the Asian, Russian and other crisis that followed, it was curious to see that capital account convertibility fell into disregard and the idea of restriction to inflows, as a way to reduce the impact of sudden stops, regained some popularity even where it was criticized. As put by Fischer (2002, pp. 12-13):

> The IMF has cautiously supported the use of *market-based capital inflow controls*[3], Chilean style. These could be helpful for a country seeking to avoid the difficulties posed for domestic policy by capital inflows. The typical instance occurs when a country is trying to reduce inflation using an exchange rate anchor, and for anti-inflationary purposes needs interest rates higher than those implied by the sum of the foreign interest rate and the expected rate of currency depreciation. A tax on capital inflows can help maintain a wedge between the two interest rates. In addition, by taxing short-term capital inflows more than longer-term inflows, capital inflow controls can also in principle influence the composition of inflows. …In a nutshell: capital controls may be useful provided they are exercised with care; they are likely to be transitional – albeit possibly in use for a long time – and caution is likely to be necessary in removing them.

Restrictions are never popular in this profession, nevertheless; and looking back at the specific Brazilian 1993-98 experience with *controls imposed on inflows,* even considering that this was *combined with deregulation on the outflow side*, it is not too uncommon to see economists attempting to fit these measures into the stereotype of bureaucrats trying to fight market fundamentals with pointless controls. Capital and foreign exchange controls are easy targets and mainstream profession would always be willing to welcome the claim of ineffectiveness of controls in general, and the one provided by CG for the Brazilian experience in particular, especially if we miss the

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[2] The conclusion of Calvo *et al.* (1993, p. 149) may offer a fair summary of the wisdom of these years: "To summarize, there are grounds to support a mix of policy intervention based on the imposition of a tax on short term capital imports, on enhancing the flexibility of exchange rates, and on raising marginal reserve requirements on short term bank deposits. Given the likely fiscal cost, it is hard to make a strong case in favor of sterilized intervention, unless countries exhibit a strong fiscal stance and capital inflows are expected to be short lived. In any case, we believe that none of the above policies will drastically change the behavior of the real exchange rate or interest rate. The choice of appropriate policies, however, could decidedly attenuate the detrimental effects of sudden and substantial future capital outflows."

[3] My italics. Perhaps it would be more appropriate to say that, as to the restrictions to capital inflows in Brazil, the Fund had mixed views and loudly ignored what was going on for quite some time. By 1997, in view of the commitment to the attempt to amend the Articles of Agreement towards capital account convertibility, there was some indication that the Fund did not like the restrictions 'Brazilian style".

details, and these details can be very confusing to academic researchers with incidental contact with the practitioners' world. CG's paper has the undisputed merit of penetrating the obscure realm of the trading desks to see what *actually* takes place in response to specific policy or regulatory measures. Whether or not they succeeded in forming a comprehensive picture and a fair judgment is an entirely different matter. In fact, in what follows, it is argued that the eleven alleged examples of "circumvention" of controls and restriction to inflows are not as nearly relevant as argued, or are such as to deserve so many qualifications that the conclusion is mostly invalidated. Yet, in arguing along these lines, one does *not* intend to make a case for exchange controls or capital controls *in general*, neither a case for the effectiveness of restrictions to inflows as a general proposition, in times of capital surges. The point here is that under the particularly exuberant circumstances lived by Brazil in the mid 1990s, and having in mind a number of institutional features of the relevant market environment and associated regulation and institutions, the regulatory innovations for both inflows and outflows were relevant and effective *given their terms of reference*. The relevant metric to assess "effectiveness", as we move into the third or fourth best realm where the practitioners are found, are difficult to obtain. Yet, a look at the data on the amounts of taxes (on capital inflows) collected and on the nature of inflows (average tenor, spreads, volumes) also help to raise serious doubts on CG conclusions'.

The rest of this note is divided into three sections: the first draws attention to the new regulatory realities and particularly to the role of controls to banking operations in a world ruled by the Basle Accord within which it is quite important to have in mind the size of the penalties, and even criminal implications, of evading or "circumventing" the regulator's directives. Section 2 provides specific clarifications on each of the "circumvention" possibilities, and indications on how the Central Bank acted on each situation. The last section present numbers for the collection of taxes on capital inflows of several types, which are significant, thus weakening the "circumvention" claim. In addition, the data on the nature of the mainstream capital inflows into Brazil 1992-99 reveal a clear trend towards extended maturities in external loans, even with significantly decreasing spreads. The aim of restrictions, the improvement in the "quality" of inflows

was accomplished; the precise magnitude of their contribution of restriction certainly deserves more work.

1. Controls and compliance after the Basle Accord

As a background to more specific observations as to the alleged eleven ways to circumvent controls to inflows one should bear in mind that, notwithstanding undisputed "sophisticated financial markets" creativity, and the fact that capital can move around under countless types of disguises, foreign exchange transactions are basically *banking transactions* and, as such, subject to the scrutiny of regulators on several grounds. As one asks whether capital controls on inflows are *possible at all*, and further, whether *selective* controls on capital inflows are feasible, or even when one argues that such controls are effective *only in the short run,* what is at stake is whether the Central Bank is capable of looking into specific operations of banks and impose limitations to certain families of transactions. In fact, there is no reason to assume that forex transactions are any less an object of the regulators surveillance than any other banking transaction. In fact, these days past the Basle Accord, most "controls" directed to banking activities have been internalized through compliance rules that aim at aligning interests of the regulator and its subjects. Internal compliance rules have been created and developed by all banks around the globe with the more specific objective of minimizing problems with the regulator in all its areas of concern, from risk weighted capital, credit scoring, derivatives exposure, to the precise identification of clients and the nature of foreign exchange operations. Indeed, the control of capital inflows can be seen as an activity conducted by banking supervision departments, which are perfectly capable of monitoring individual transactions and exercising the discretionary power to veto specific trades or deals as they are seen as possible violations in existing regulations, whether targeting risk, crime or other endeavors.

It is a fact that banks comply with directives of central banks as a general proposition, even when they restrain their activities and profit possibilities. In many cases banks go beyond Central Bank's directives. If, for instance, the Central Bank issues guidelines regarding foreign exchange transactions aiming at preventing money

laundering, it is common to see banks *expanding* the directive into their compliance departments in order to prevent any questioning that might be transformed into very costly liabilities or damages to the bank's reputation. It is rare to see anyone questioning the overall compliance, for instance, to Basel rules regarding risk weighted capital, even though the by-passing may be as profitable as the by passing of capital controls. Why then one should assume that banks would be willing to jump at any possibility to by-pass regulatory directives in the subject of limitations to capital inflows of certain kinds when banks tend to be "well behaved" in other areas?

Indeed, there is no literature, or bias, in the issue of alleged ineffectiveness of Basel rules, or banking regulation at large, as there is in the case of capital controls. However, as it is common to see in the regulation and in the "crime and punishment" literature, one may say compliance is a game involving a payoff highly dependent on not being caught breaking the law. Yet, in the "repeated game" between banks and their regulators, and in view of the importance of reputation in this business, and also for the normal flow of banking, one hardly see banks challenging aggressively and repeatedly regulatory directives, especially when the negative payoff of a controversy with the regulator may be very costly penalties possibly endangering the continuity of the bank. It is common to see controversies and discrepancies in views, during the course of the banking supervision activity and a wide range of activities, from credit scoring and associated provisioning, to foreign exchange transactions; but the instruction of the regulator is always the final word in practically all matters related to banking supervision. Why this propensity to discipline would not exist when directives are concerning controls to capital inflows? Why this particular subset of regulations is less effective than the rest?

It is true that there were times past, long ago, in which foreign exchange regulation was so unrealistically restrictive that one would see the development of "black markets" and "curb markets", yet not usually within the banking system, and mostly involving cash transactions. It is hard to imagine that controls to capital inflows would be such as to provoke any major dislocation towards the "black market", or that the "restricted portions" of the capital account of the balance of payments could be channeled into transaction technologies and platforms mostly used by criminals. As a practical matter, it is not possible in Brazil for the "parallel market" to develop outside the

financial systems in a dimension large enough to disturb macroeconomic policies. It is well known that a "black market" remains in existence in Brazil, as in any other country in the world, in which transactions are almost exclusively in cash and related to crime[4].

In addition to the argument made above that banks strive to preserve a good working relationship with the regulator when it comes to compliance, it is also important to clarify the exact nature of penalties and problems related to the violations that may be involved in the eleven alleged circumvention operations described by CG. Seven of these eleven operations (1, 2, 4, 6, 7, and 9) involve penalties defined in Article 23 of Law 4.131/62, according to which, the furnishing of "false information" (paragraph 2) in foreign exchange operations contracts and "fraud" (or "false identity") (paragraph 3) in such contracts would trigger penalties of up to 100% and up to 300% of the value of the contract respectively. In both cases, penalties are applicable not only to the seller of foreign exchange but *also to the bank, sometimes to their directors*, and to the broker, if acting on the operation. This is an incredibly powerful directive as it makes the bank a partner to the sponsor of any wrongdoings associated with the foreign exchange transaction. This is reason enough for banks to be very selective when it comes to "creative" operations, or more compliance prone in this area than they normally are.

These seven operations also involve violations in tax laws, as they result in evading the tax due at the time of the foreign exchange sale (often the IOF, tax on financial operations, but also, sometimes, the withholding tax on income earned), and the attempt to disguise the liability. Penalties are a multiple of the tax values due and unpaid, and comparable to the ones applicable by the Central Bank for the violation of foreign exchange regulations (which are proportional to the principal amount involved) but their consequences are far worse as tax evasion is also a crime. Furthermore, in these seven transactions, in addition to tax evasion, there are also other crimes involved such as financial fraud and conspiracy. In fact, both the foreign exchange authority and the tax authority are obliged to inform the Public Prosecutor (*Ministério Público*) of the *possible* presence of crime (if not informing, these authorities may face criminal charges themselves). Based in such reports, Prosecutors usually do not hesitate in starting

[4] For a review of empirical findings on the size and scope of "black markets" around the world, with much consideration given to developed countries, see Galbis (1996).

criminal investigations often followed by wide press coverage, on the parts involved. It is not hard to imagine the size of the damage that could do to banks and the effort of compliance units to prevent any occurrence that might possibly entail such course of events.

In view of the above, it seems hardly likely that any significant number of banks would enter in any significant amounts of transactions of these types considering the risks of getting caught and the consequences of such conducts. Compliance units exist with the precise aim at avoiding conducts that might lead to confrontations with the regulator. Of course, lots of anecdotal evidence may be collected on ideas or attempts of "by passing" regulations on capital inflows, especially amongst traders, as one considers the agency problem that evolves as traders try to force quasi or even fully illegal transactions into their employers as they would earn the bonuses before the regulatory, tax and criminal charges and liabilities are presented later on, when traders have already moved into different banks. These were the years in which Nick Leason was active in Singapore; something along these lines may have taken place in Brazil, though with little macroeconomic relevance. The collective memory of trading desks from times of regulatory change must be treated with considerable caution as it one moves into the realm of the academic debate on the effectiveness, however defined, of the regulatory policy mix implemented in 1993-98 Brazil.

2. The "circumventions"

After these general comments we turn to specific observations on the eleven models of transactions depicted as ways to circumvent controls or taxes on inflows of capital. It is useful to group the transaction according to their nature, and examine what took place separately.

(i) "Disguised" FDI.

From the onset, one should squarely disregard transactions 1 and 2 that, in the point of view of the undersigned, belong in the realm of fantasy. Given the documentary needs of companies with foreign ownership in Brazil the "disguise" is very simply

impossible, and also way too risky in view of the sanctions mentioned above. It is true that the Central Bank saw a more intensive usage of inter company loans, and very specifically in 1993, but the increase in foreign direct investment was much larger, dissolving the impression that multinationals could have been using loans to undertake financial arbitrage and in excess of what would be normal to expect in light of their equity investments into Brazil.

(ii) Portfolio investment under "Annex IV".

It should be said from the start that the misrepresentation, on the part of the investor and the bank undertaking the forex transaction, of a given investment through the regulatory "window" for inflows of foreign portfolio investment (cases 4, 7 and 9), known by an acronym related to the regulatory directive, "Annex IV"[5], would involve the violations and penalties as described above. The problem here was not circumvention but *grandfathering fixed income investments made before the restrictions,* thus avoiding complaints along the lines of "disrespect of contracts" and preserve the *ex ante* character of the restrictions. In fact, in order to be worthy of what Stanley Fischer described as "market based" restrictions, a key aspect of the restrictions would be that their nature and cost should be fully known *before* the foreign investor decides to invest. In this connection, Brazil preferred to work with a tax paid at the moment of entry, with no other obligations in the future, than the Chilean system of a "quarantine", necessarily involving the Central Bank receiving, managing and remunerating deposits from investors for prolonged periods of time.

Yet, the problem with mechanisms 4, 5 and 7 was that foreign investment into some specific fixed income instruments in Brazil, before December 1993, could take place through the portfolio investment foreign exchange "window" - "Annex IV" – without any misrepresentation. Commodities mutual funds, debentures, privatization "currency" (securitized Treasury bonds), and derivatives (entailing constructions such as the "box with options" deals, producing a synthetic of a fixed income instrument) were

[5] Reolution 1,289 of the National Monetary Concil (the regulatory body with the legal competence to issue foreign exchange regulation) regulated portfolio investment in its varied forms. The annexes of the Resolution had regulations for each family of investments. The most popular was Annex number IV regulating investments into the Brazilian stock exchange.

all permitted up to mid 1993. From then on, each such instruments was withdrawn from Annex IV in a sequence and monies invested thereof had to be reallocated. In each case, as time was given to investors to reallocate their investments into different instruments, one saw a sequence of shifts of resources, in a succession, as resources into commodities mutual funds flew partly into debentures, then partly to "box with options", until all varieties of fixed income instruments were formally forbidden. The fact that these restrictions were not done all at once, but in sequence, produced these shifts, which gave the impression of a "cat and mouse" game. More essentially, however, there was little or no "circumvention" as resources were *already invested within the country* in Real denominated instruments. At the end of 1994, all new flows into the portfolio investment window fell to US$ 5,0 billion, from US$ 6,5 billion in 1993, while the inflows into the special class of fixed income funds, created for the specific purpose of removing all fixed instruments, even synthetics, from the portfolio investment rules, received US$ 1,3 billion, with all taxes duly paid, as seen in Table 1 below. Other vehicle, "Privatization funds", was created to capture investors' interest in privatization, receives US$ 1,9 billion in 1994. The fact was that, after the "grandfathering" was completed, through 1994 and after, there was practically no claim or indication of any fixed income investments into "Annex IV", except for rumors of operations known as "Blue Ship Swaps" examined later.

(iii) The "CC5 accounts"

Transaction number 10 involves non resident banking accounts within Brazil (known as "CC5 accounts") that enjoy full convertibility. Indeed, since the non-resident that can open such an account must be a bank, and that this bank can transact on behalf of third parties, one is right in pointing out that this vehicle, in theory, represents a full fledged opening of the capital account. The interesting question to raise here is why this platform is not used more widely as there is no restriction whatsoever in the amounts and on the nature of the transactions made *at the outflow end*[6]. Interestingly, the problem here is disclosure. Any such transactions would necessarily involve the full identification of the parties involved and all explanations as to the nature of the transaction made. And, of

[6] For a review on the status of the capital account liberalization in Brazil, see Franco and Pinho Neto (2005).

course, at the inflow end, if the transaction is identical or even similar to the ones that involve an especial tax payment or any other restriction, the Central Bank will make sure that restrictions are obeyed and taxes paid, or simply instruct the bank not to do or to undo the transaction. The public and the regulator scrutiny on the movements in the CC5 accounts is very severe, given cases of fraud, misuse and money laundering, and for this very reason banks and individuals tend to be extra careful with transaction of this kind; it does not seem plausible that operations to circumvent restrictions to inflows were made in this channel in any significant way; it suffices to look at the flows, that are chronically negative. In any event, explicit taxes on inflows through CC5 accounts were enacted by mid 1995 in line with the taxation of fixed income mutual funds, mostly as a clarifying initiative as consultations as to there as an "exemption" there started to mount.

(iv) "Leads" and "lags".

Transaction number 5 in CG treats as "circumvention" what may be described as an "exception". In Brazil, exporters are allowed to enjoy "leads", that is, to anticipate export revenues through bank lines offered by local banks against the collateral of the export receivables. These advances were made, and continue to be made at international costs and indexed to the dollar. They are perfect to allow exporters to arbitrate interest rate differentials and surely a very relevant part of the profitability of exporting from Brazil is related to this possibility. Many see this as a financial "subsidy", as exporters are thus capable of undertaking interest rate arbitrage in ways that were forbidden to financial players more generally by this time. Yet, the fact that restrictions and taxes to short term inflows could not reach "leads" and "lags" undertaken by exporters and importers meant that these groups were "exempted" from the restrictions, which, however, did not seem to bother regulators at all, as any help into exporters profitability, and into the increase in import penetration ratios, was warmly welcome in times the "foreign exchange anchor" was deemed crucial to end hyperinflation. There was some concern, however, with the non-exporter that could go into a Brazilian bank draw fund from a line backed by export receivables he did not have and use the resources to fixed income investments. The only condition this fellow had to obey was to actually undertake exports after a maximum of 180 days. There were some such cases, and what happened, though in a small scale, was that this fellow would have to purchase export performance

from an exporter that did not advance receivables. The exporter would sell his rights at a premium, capturing most of the gain of the arbitrageur. Again, the exporter would stand to gain, even if some of the gain is reaped by the financial middlemen. Again, there was no “circumvention”, or loss of effectiveness, as described.

(v) Derivatives, BTBs and BCSs

Transaction 11 is not really a transaction; is more like a statement of fact, or faith, that in a world so rich in derivatives, including specifically NDF (non deliverable forwards) traded over the counter in New York, or futures in the CME (Chicago Mercantile Exchange), anything is possible, namely, a “synthetic” of a fixed income investment can be made in New York or in the Caribbean without anybody bothering with foreign exchange and banking regulations in Brazil. Yet, this is only true if *some connection* is established with the fixed income market in Brazil; if not, how the interest rate arbitrage can be done?

With derivatives, or with loans, or stocks, one can indeed build what has been called a “back to back” (BTB) operation. Transaction number 7 is one such operation, not quite the typical one. The most common was what was called the “blue chip swap” (BCS) mentioned a bit out of context by CG in connection with CC5 accounts, and also mentioned above as related to “Annex IV”. It consists of two theoretically unconnected transactions done in Brazil and offshore. A bank buys, for instance, Petrobras ADRs with a repo in New York, and the Brazilian branch of the same bank sells the same stock with a reverse repo agreement. The foreign “leg” of the deal was exactly the opposite of the Brazilian “leg”, the short and long positions in the same asset cancel out, but the different financing cost at both repo and reverse repo operations is where the interest rate differential could be captured, if and only if the same entity could book the two “legs” at the same balance sheet, and other market risks are controlled for.

As these deals started to appear, many regulators, in Brazil and abroad, jumped in to understand the transaction and fit it into their rules. Tax authorities in Brazil grasped the “spirit” of the transaction, as it involved very visible fingerprints in the stock exchange, and attacked very directly all parties suspect of such dealings. The Central Bank, on its turn, leveraged the attack as the foreign exchange regulation forbids what is

called "private compensation", or schemes through which parties "evade" a foreign exchange transaction offsetting credits and debits on shore and off shore. Penalties here may go up to 100% of the values transacted.

BCS deals existed much more as legend than fact, and known deals were subject to very high penalties, whose values were made public to further discourage banks from undertaking such risks[7]. BTB deals became a primary model of laundering monies offshore that could not "enter" the country either in view of tax consideration, or worse. During the course of 2005, in a high profile Congressional Commission of Inquiry, it was found that the Workers Party appeared to have entered into several BTB transactions to use illegal campaign money held abroad to pay for things and bribe people within the country. This deal certainly belongs to the "circumvention" family described by CG: monies held offshore by PT could have been deposited in an offshore branch (or parallel bank) of a Brazilian bank, which, *quid pro quo*, lent money to PT in Brazil, through an intermediary, entirely out of market conditions, especially regarding collateral.

Indeed, as a conclusion, one may admit that there are many theoretical ways to "circumvent" banking and foreign exchange regulations and undertake fraud. It is an entirely different matter to presume that this could be done on large scale to the point of turning regulations into a pointless exercise, given compliance discipline and penalties involved.

4. IOF collection and the nature of inflows

Lastly, some interesting pieces of evidence could be offered to provide some comfort to taxpayers, understandably concerned about CG allegations. As one of the most important restrictions to inflows subject to the accusation of ineffectiveness, given alleged "circumvention" possibilities, is the IOF, the financial transactions tax due after the liquidation of certain foreign exchange transactions, I searched my archives to find

[7] Often the Central Bank implemented its penalties and informed the tax authorities which, however, queue the process so as to apply the penalty only at the year before the expiration of the five year prescription period.

the documents used at the time by the Central Bank to indicate the amounts to be collected by the tax authorities. Table 1 offers the estimates of the Central Bank of the amounts collected in the several varieties of incidence of the IOF tax through time. Even though these amounts are *not* the ones reported by tax authorities based on actual collection[8], there is no reason to doubt that these amounts were actually paid as the Central Bank works technically as a "substitute" to the tax authority requesting the proof of tax payment in order to confirm the registration of foreign capital along the lines of existing legislation, and to authorize any remittances such as interest and repatriation.

[8] Which, by the way, are not published with this level of detail.

Table 1

Some forms of capital inflows into Brazil, IOF tax rates (1) and estimates of amounts collected (2), December 1993 to June 1996 (monthly flows, US$ Million)

	Fixed income funds			Privatization funds			Borrowing abroad - all formats (3) (4) (5)				
period	inflows	rate	$	inflows	rate	$	Inflows	agro	taxable	Rate	$
Dec-93	80	5,0%	4	0	0,0%	0	1.714	0	1.714	3,0%	51
January-94	82	5,0%	4	0	0,0%	0	745	0	719	3,0%	22
February-94	82	5,0%	4	0	0,0%	0	770	0	563	3,0%	23
March-94	102	5,0%	5	6	0,0%	0	714	0	710	3,0%	21
April-94	119	5,0%	6	137	0,0%	0	932	0	498	3,0%	28
May-94	68	5,0%	3	232	0,0%	0	283	0	256	3,0%	8
June-94	450	5,0%	23	266	0,0%	0	304	0	241	3,0%	9
July-94	6	5,0%	0	54	0,0%	0	351	0	348	3,0%	11
August-94	81	5,0%	4	87	0,0%	0	349	0	348	3,0%	10
September-94	216	9,0%	19	60	0,0%	0	540	0	529	3,0%	16
October-94	226	9,0%	20	846	0,0%	0	925	0	824	3,0%	28
November-94	0	9,0%	0	174	0,0%	0	1.404	0	1.370	7,0%	96
December-94	2	9,0%	0	77	0,0%	0	1.459	0	1.300	7,0%	102
1994 - total	**1.434**		**89**	**1.939**			**8.776**	**0**	**7.706**		**374**
January-95	0	9,0%	0	16	0,0%	0	401	0	200	7,0%	28
February-95	0	9,0%	0	79	0,0%	0	193	0	193	7,0%	14
March-95	0	5,0%	0	128	0,0%	0	103	0	79	7,0%	7
April-95	1	5,0%	0	67	0,0%	0	650	0	635	0,0%	0
May-95	64	5,0%	3	95	0,0%	0	858	0	850	0,0%	0
June-95	1	5,0%	0	120	0,0%	0	2.839	5	1.804	0,0%	0
July-95	91	5,0%	5	164	0,0%	0	2.383	85	1.497	0,0%	0
August-95	41	5,0%	2	484	0,0%	0	2.318	98	1.832	0,0%	0
September-95	0	7,0%	0	62	0,0%	0	1.121	383	688	2,7%	31
October-95	0	7,0%	0	170	0,0%	0	1.786	112	1.549	2,2%	39
November-95	12	7,0%	1	219	0,0%	0	1.275	187	996	2,9%	37
December-95	1	7,0%	0	351	0,0%	0	1.768	189	1.481	2,5%	45
1995 - total	**211**		**11**	**1.955**		**0**	**15.695**	**1.059**	**11.804**		**201**
January-96	2	7,0%	0	2	0,0%	0	1.359	112	949	2,7%	37
February-96	4	7,0%	0	4	5,0%	0	1.677	203	1.392	3,3%	56
March-96	2	7,0%	0	2	5,0%	0	1.467	258	876	2,1%	30
April-96	3	7,0%	0	3	5,0%	0	1.670	499	1.107	2,1%	35
May-96	0	7,0%	0	0	5,0%	0	2.717	397	2.228	1,2%	33
June-96	0	7,0%	0	0	5,0%	0	3.343	585	2.090	1,7%	58
1996 - total	**11**		**1**	**11**		**0**	**12.233**	**2.054**	**8.642**		**249**
GRAND TOTAL	**1.736**		**105**	**3.905**		**0**	**38.418**	**3.113**	**29.866**		**875**

Notes: (1) Legal instruments: Decree 995, Nov. 25, 1993, 3% IOF on Fixed Income Funds and 3% on foreign borrowing generally defined. Finance Minister Directive ("*Portaria*") n. 534, October 19, 1994, 9% IOF on Fixed Income Funds, 7% on foreign borrowing and 1% on inflows of portfolio investments (stock exchange); *Portaria* n. 95, March 9, 1995, 5% IOF on Fixed Income Funds, zero for all other inflows; *Portaria* n. 202, August 10, 1995, 7% IOF on Fixed Income Funds, 5% on foreign borrowing and 7% on CC5 accounts inflows, and zero for portfolio investments (stock exchange); *Portaria* n. 205, August 15, 1995, zero for loans directed to agriculture; *Portaria* n. 228, September 15, 1995, 5% on foreign borrowing with tenors up to 2 years, 4% for those up to 3 years, 2% for those up to

4 years, 1% for loans up to 5 years and zero if longer; *Portaria* n. 28, February 8, 1996, adds a 5% IOF on inflows to Privatization Funds; *Portaria* n. 149, June 11, 1996, exempts BNDES. (2) Values for taxes due listed according to the date of the inflow, not the date of payment. (3) There are other "non taxable" forms of borrowing not included in the table, such as import financing, leasing contracts and flows from multilateral agencies. (4) After September 1995 rates are averages, as they depended on the maturity of each loan. (5) taxes due might be larger than taxable inflow multiplied by the rate given taxation, not reported in the table, of similar transaction made through CC5 accounts.

SOURCE: Banco Central do Brasil, Personal Archive.

Table 1 provides a history of the IOF usage for that purpose as it covers all changes occurring between November of 1993 - when the first presidential decree was issued creating the possibility of taxing certain foreign exchange transactions at certain rates, and delegating to the Finance Minister limited powers to change the tax rate - until the month of June of 1996. This specific cutoff date is arbitrary; the active use of the IOF continued more or less unchanged at a restrictive stance until the Asian crisis when most restrictions were removed and tax rates changed to zero. Early in 1998, however, after what was seen as a very successful response to the Asian crisis – a combination of a fiscal package with monetary tightening – capital inflows regained momentum very rapidly, international reserves reached their all time high, and, as a consequence, administrative restrictions to inflows were reinstated and the IOF tax on certain types of inflows was reestablished very quickly. A few months later, with the Russian & LTCM crisis, such restrictions were removed, and were not to be seen again[9]. Table 1 does not cover the whole period in which the IOF and other restrictions to inflows were deployed – November 1993 to mid 1998 – but its coverage and numbers provide important indications as to the impacts of the IOF on capital inflows.

During the period covered by Table 1 the total amount collected was slightly over a billion dollars, including what is reported in the table and, in addition: (i) the revenues produced by the IOF on inflows directed to the stock exchange, which were taxed with a rate of 1% between November of 1994 and March 1995, with estimated revenues of US$ 88 million; and (ii) the revenues produced by the 7% IOF on CC5 based inflows in force from September 1995 to the last month covered by the table, with total revenues of US$ 24 million.

[9] The pro-cyclical character of restrictions to capital inflows should be seen as an obvious thing, at least in the minds of those, amongst whom I am included, who created and managed these instruments through time: for what *other* possible reason would the authorities possibly introduce such restrictions? Yet, for those interested in econometric technique to set proof of first hand accounts of declared intentions, please refer to Cardoso & Goldfajn (1997).

Table 1 shows that the Fixed Income Funds lost their popularity after the 9% IOF tax, the same happening to Privatization Funds after the 5% IOF tax early in 1996.In any event, the largest part of the *taxable inflows* was in the foreign borrowing column; it was on this region that most of the Central Bank's action – through the IOF and through minimum tenors – was conducted. Table 2 below helps completing the picture of the impact of restrictions to capital inflows into Brazil during these years.

Table 2

Foreign borrowing from Brazilian residents, registered loans: number of issues, volume, average maturity, spreads and costs, from1992-I to 1999-I (quarterly flows, US$ Million)

year	Q	number of issues	value ($MM)	average tenor	average spread	total cost all in (%)
1992	I	49	1.551	2,6		12,02
	II	84	1.763	3,0	568	11,32
	III	38	1.130	3,7	532	10,27
	IV	31	1.127	3,7	614	11,38
1993	I	47	1.879	3,5	704	11,68
	II	81	3.977	3,6	713	11,67
	III	65	2.749	4,8	609	10,7
	IV	74	3.544	4,4	534	9,92
1994	I	79	5.019	4,0	497	10,17
	II	57	1.587	6,0	453	10,9
	III	39	1.813	5,1	526	12,05
	IV	55	3.153	4,8	490	11,87
1995	I	42	1.496	5,1	436	11,82
	II	57	3.325	4,4	527	11,27
	III	91	5.866	4,1	529	11,26
	IV	68	3.630	6,2	517	10,92
1996	I	66	4.688	6,6	462	10,52
	II	113	6.488	7,0	465	11,11
	III	77	3.735	7,2	465	11,28
	IV	110	6.657	7,7	407	10,22
1997	I	71	3.712	8,1	352	9,77
	II	79	9.433	12,4	436	11,02
	III	95	6.865	8,5	386	10,09
	IV	82	5.852	7,4	407	9,94
1998	I	120	12.076	7,1	464	10,12
	II	104	11.121	9,0	571	11,24
	III	96	16.939	8,1	532	10,53
	IV	77	3.094	6,2	779	12,45
1999	I	98	4.165	4,2	604	10,87

SOURCE: Boletim do Banco Central do Brasil, Personal Archive.

The numbers in Table 2 cover the most part of the capital account, so that if there is any field of play as regards the impact of restrictions, whether taxes of minimum tenors, it is here. The period covered starts when the concern with “excessive” capital flows started and goes up to the first quarter of 1999. It is very clearly visible that the number of issues and volumes grew constantly, the some seasonal variation and also with declines entirely within what would be expected in mid 1994 (critical months of the Real Plan), early 1995 (Tequilla Crisis, very short lived) and 1997-IV (the Asian crisis). The impact of the Russian & LTCM crisis is way much larger than all the other crises, as we all know.

The one interesting aspect of this table in connection to the topic of this note refers to the average maturity and the spreads. The trend towards lower spreads only highlights the importance of the fact that tenors are extended more or less constantly through time[10]. One should note that IOF taxes pictured in Table 1 combines with direct impositions as to minimum tenors, for instance, in order to affect the outcomes reported in Table 2. There seems to be no doubt that, as one looks into the evolution of these flows that the "quality" (tenors and spreads) improved through time, just as aimed by the regulatory restrictions, whether tax or administrative. In order to argue the "ineffectiveness" of regulatory policies towards improving the quality of capital inflows one has to seek alternative explanations for the developments shown in Table 2. The course of economic reforms and the success of the Real Plan are surely very relevant explanations to the improved access to international capital markets, but most likely with a little help from regulatory restrictions to short term inflows.

[10] CG rightly remark that since withholding tax on interest on foreign loans depended on the maturity, and that there were restrictions as to minimum maturities, there were several cases of "puts" and "calls" designed to "shorten" the maturity, if necessary. These options were reported to the Central Bank and were denied if their exercise would conflict with minimum tenors required, but accepted otherwise. In these cases, the withholding tax was charged as if the loan was shorter.

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