DEPARTAMENTO DE ECONOMIA

PUC-RIO

TEXTO PARA DISCUSSÃO
N.º 357

CAPITAL FLOWS TO BRAZIL IN THE NINETIES: MACROECONOMIC ASPECTS AND THE EFFECTIVENESS OF CAPITAL CONTROLS

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JULHO 1996

Capital flows to Brazil in the nineties: Macroeconomic aspects and the effectiveness of capital controls

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Latest update: July 23, 1996

Abstract

The resumption of capital flows to developing countries in the nineties is intertwined in the Brazilian case with the attempts to achieve inflation stabilization. A very restrictive monetary policy has, since the last quarter of 1991, offered probably the world's highest yield to fixed income investments. The huge interest rate differential constituted the main determinant of capital inflows to Brazil. The magnitude of those flows exacerbated two main macroeconomic problems: an increase in the quasi-fiscal deficit due to the interest payments on the debt used to sterilize the inflows, and, after the Real Plan, also the overvaluation of the currency. The restrictions to capital inflows are described and analyzed, as well as the main "financial engineering" strategies used to circumvent the restrictions. Given the advanced stage of domestic financial markets—including a powerful derivatives market—the restrictions imposed have not been effective in preventing the inflows of foreign capital to invest in the high-yield-public debt. Given the small progress achieved so far in the fiscal side of the reforms, it is also doubtful that the capital inflows' restrictions have been effective in a broader sense, that of allowing the government to buy time to implement the essential structural reforms. By reducing the urgency of the politically costly structural reforms aimed at increasing domestic savings, capital inflows are believed to have detrimental incentive effects on the government's resolve to push forward the stabilization plan.

JEL Classification N°s.: F32, O54

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We would like to acknowledge the superb research assistant work done by Marcus Vinicius Valpassos. Ilan Goldfajn provided invaluable comments. The Brazilian Central Bank through its research department (DEPEC) provided us with unpublished data. All errors are ours.
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I. Introduction

The history of the resumption of capital flows to the Brazilian economy since the early nineties is intertwined with the success of the current stabilization plan, the Real Plan of July 1994. The very large volume of reserves worked and still works as the (short term) insurance policy of the exchange rate, which anchored the new currency. Nevertheless, the large volume of capital flows has prompted the government to try to fine-tune its size and composition.

Here we characterize those flows, and analyze its main determinants. Among those, we carefully review the empirical evidence on the interest rate differential between the Brazilian bond markets and abroad.

The restrictions on capital flows are reviewed and their effectiveness is analyzed. Finally, we sum up with a discussion of the macroeconomic causes and consequences of the capital flows, and the prospects for the future. The continued success of the current stabilization plan will in great portion depend on what will happen to the capital flows.

II. Empirical Description of Capital Flows to Brazil in the nineties

This Section describes the main figures regarding the capital movements to and from Brazil in the nineties. In order to provide a short historical perspective, the late years of the eighties were also included in the data. This provides a very sharp contrast between those years—when the foreign debt problem was the main constraint on the Brazilian economy—and the nineties, when the resumption of capital flows together with the foreign debt renegotiation significantly relieved the external constraint, vis-à-vis the earlier period.

II.1.Size

As many developing countries, Brazil witnessed a revival of capital inflows in the nineties. Chart 1 shows the capital account balance since 1987, displaying the remarkable reversal since 1992. Chart 2 shows the aggregate net transfers to Brazil, defined as the sum of the capital account balance, the interest payments (negative, because Brazil is a net debtor), and the short term liabilities flows (basically arrears). One can detect the same patterns from the capital account (reversal since 1992), but with a much more marked increase in 1995. This is because in 1992, US$16.6 billion of the inflows took the form of refinancing,[1] which were used to pay back the arrears (US$14,253 million of arrears were repaid in 1992). In 1995, only US$0.5 billion of arrears were repaid. Also, in 1995, there was a net inflow of US$19,667 million in short-term capital.

Therefore, the global picture is that Brazil has overcome the shortage of capital inflows since 1992. Moreover, since 1995 those flows, mainly short term, have become excessive, creating many problems for monetary and exchange rate policy, as analyzed below.

II.1.Composition

Chart 3 displays the behavior of capital movements.[2] The net figures are presented for the three main components, investments, financing, and currency loans (explained below). Those net figures, together with the total, are presented in bars referring to the first axis scale. The gross movements are presented in lines, referring to the second axis scale.

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[1] The main items refinanced were US$9.5 billion with the Club of Paris, and US$7.1 of unpaid interest to banks (through IDU bonuses) [Banco Central do Brasil, 1992].

[2] These figures come from Table IV.12, Capital Movement, of the Brazilian Central Bank Bulletin (April 1996), and are not directly comparable to those presented in the Capital Account of the Balance of Payments (Table IV.1). The main differences are that the following items are not included in Table IV.12: short term capital flows; inflows due to refinancing; and inflows and outflows of Brazilian residents (except for the item investments).

The reversal of the total net figure in 1992 is due both to foreign investments and currency loans, while the burden of the foreign debt shows up in a steadily negative figure for the item financing. Both the inflows and outflows grew substantially during the nineties, with the latter almost reaching the US$50 billion figure in 1995.

II.1.1.Investments

Chart 4 displays the behavior of net foreign investment (direct and portfolio) and reinvestment in Brazil. For the net figures, once again, 1992 is a turning point. Note, however, that there has not been a sustained growth in foreign investment after the Real stabilization plan (July 1994). This is because a low 1995 figure, which may be attributed to the effects of the Mexican crisis. In the first quarter of 1995, US$ 3,352 millions of foreign investment (mainly portfolio investment) flew out of the country (the year end figure was positive, US$ 4,670 millions).

The most striking feature of Chart 4, however, is the enormous growth in both inflows and outflows. As Charts 5 and 6 make clear, the main source of such growth was the portfolio investment which was multiplied by a factor greater than 30 between 1991 and 1994/5 (see Chart 5). Portfolio investment will be further analyzed later.

Foreign direct investment (see Chart 6) also increased since 1994, although the growth was less spectacular. This is explained in part by a change in the tax law that regulated profit remittance abroad. In 1993, the law regarding profit remittance was changed, so that profits paid regular domestic corporate income tax (48%), and dividends remitted abroad were taxed on 15%.[3] The result joint tax burden (56%) was high by international standards. Capital gains remitted abroad paid a 25% tax. Starting this year (1996), only corporate income tax (30.6%) is charged, which harmonized the Brazilian tax code with its counterparts in the Mercosul.

[3] Tax rates vary among firms; the 48% tax rate was the actual tax rate paid by a large U.S. oil firm in Brazil.

The increase in foreign direct investment will depend on the strength of the privatization process and the public-private partnerships in areas previously restricted to state-owned firms (oil, energy generation, telecommunications, etc.). Forecasts hover from US$7 to US$10 billions for 1996 and the following years. However, there have been recent claims in the financial press that fixed income investments have been disguised as direct investment, in order to avoid the "entrance" tax (7%, explained below) charged by the Brazilian government. We will further exploit this point below.

II.1.2.Financing and Currency Loans

Chart 7 shows the performance of the financing item, composed by the multilateral organizations (BIRD, IDB and IFC), bilateral organizations and suppliers and buyers' medium and long term credits.[4] The better performance of the capital account in the nineties allowed for an increase in the differential between amortizations and disbursements to Brazil, making the item Financing steadily negative in the recent years.

Currency loans, on the other hand, substantially increased as a result of the resumption of capital flows in the nineties, as shown in Chart 8. The decomposition of those disbursements, shown in Chart 9, reveals that the main instrument for this increase was the issuance of notes in the international markets, with large volumes starting in 1992. It is noteworthy how the composition of currency loans' disbursements varied greatly between the end of the eighties and the first half of the nineties. In the former period, almost all disbursements were made by banks (although they were offset by amortizations of the same magnitude, see Chart 10), while in the latter period banks played a minor role when compared to the issuance of securities (notes) directly in the international financial markets.

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[4] The suppliers and buyers' short term credits (less than 360 days) enter the short term capital account of the balance of payments.

The amortizations related to currency loans, displayed in Chart 10, show that banks kept the largest participation throughout the entire period, with notes' amortizations growing at the end due to the larger issuances since 1992.

Chart 11 summarizes the main facts regarding the composition of capital movements to and from Brazil since the late eighties. The solid line is total medium and long term capital movements (see footnote 2 for the difference between this figure and the capital account balance), with the by now familiar pattern of becoming very positive and increasing after 1991. This line is decomposed on its main factors (in columns). On the positive side, the main factors responding for the growth of medium and long term capital movements in the recent years are Foreign Portfolio Investments, Currency Loans - Notes, and Foreign Direct Investments.[5] On the negative side, the main factors are Financing (repayments to official agencies), Currency Loans - Banks (repayments to Banks), and Brazilian Investments abroad. The dotted line is the short term capital movements, which also turned positive in 1992, but reached the very high level of almost US$20 billion in 1995, thereby surpassing the medium and long term capital movements last year.

III. Main Determinants

Besides the good prospects of the Brazilian economy in the medium and long run, which have attracted both portfolio and direct investment, the main determinant of the capital inflows in the nineties has been the extremely high interest differential between Brazil and the developed economies.[6] Therefore, we start by considering the interest rate differentials between Brazil and the US.

[5] Note that the Brazilian Central Bank bulletin classifies the portfolio investments as medium and long term capital movements, not short term ones.
[6] Calvo et al. (1992a) conclude that external factors (basically low interest rates in the US) have been dominant for the capital flows to Latin American countries, up to 1992.

III.1. Interest Rate

In the last day of September 1991, the very low level of foreign reserves prompted the Brazilian Central Bank to adopt a combined strategy of devaluing the currency by 15% and raise interest rates to a steady level above international rates. After the devaluation, the exchange rate policy of daily devaluations (crawling-peg) assured investors that the government aimed at keeping a stable real exchange rate.[7] Given the large interest rate differential between the Brazilian and international rates, short term capital started pouring in the country to gain arbitrage profits.[8]

Among the several possible measures of interest rate differential (nominal, real, etc.), we follow Frankel [1991] in adopting the covered interest differential (CID) as our measure of attractiveness of domestic bond markets to foreign investors. The CID is defined as the residual once both the forward discount and the international interest rate are deducted from the domestic interest rate. That is, the CID represents the extra gain above and beyond the international interest rate a foreign investor would have by investing in the Brazilian bond market without incurring in exchange rate risk (the investor is already covered in the futures exchange market), had conditions of free capital movements prevailed (no taxes, quotas and other restrictions).

Theoretically, in a fully integrated international capital market, arbitrage would drive this differential to zero. This is what makes Frankel [1991] suggest the CID as the most adequate measure of capital markets' integration. He shows that positive measures of CID are related to restrictions to capital inflows, while negative measures of CID are related to restrictions to capital outflow (financial repression, using McKinnon's terminology).

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[7] The ex post result was a real appreaciation, which further increased the arbitrage gains.
[8] For a detailed description of this period, see Carneiro and Garcia [1994].

III.1.1. The Covered Interest Differential

As always, when one wants to implement a theoretical concept as the CID, there are several empirical choices that have to be made. We start by considering monthly data for the period 1991 to 1995 (see Chart 12). We use the monthly overnight interest rate as Brazilian domestic interest rate (i). To compute the forward discount, we resort to the US dollar futures market in Brazil, since no liquid forward market exists. For each month, we use the expected devaluation signaled by the futures market at the first day of that month (f).[9] The foreign interest rate is the US Treasury bill (I^*). Therefore, the CID (in % per year) is computed through equation (1) below.

$$CID = \left[\frac{(1+i)}{(1+f)\times(1+i^*)} - 1\right] \times 100 \qquad (1)$$

In Chart 12, the left-hand scale refers to both the domestic interest rate and the expected devaluation. Note that the unit is % per **month**. The right-hand scale refers to the US T-bills rate and the CID, both in % per **year**.

The message from Chart 12 is very clear; starting by the end of 1991, interest rates were raised to very high levels. This, together with the policy of keeping the real exchange rate stable (until the Real Plan), gave foreign investors a very high yield, specially when the interest rates abroad were so unattractive as in the early nineties and, less so, nowadays. The capital inflows caused by this interest rate wedge not only solved the scarcity of foreign reserves problem, but also posed the opposite problem, that of too much foreign reserves.

After the Real Plan, in July 1994, the exchange rate was allowed to float for a short while. Given the capital inflows, the Real appreciated considerably, both in real and

[9] As it is well known, in general, futures prices are not unbiased expectations of the future spot price [Hodrick, 1987, has a very comprehensive review of the unbiasedness tests for exchange forward prices until then]. However, what we need to compute the CID is exactly what is provided by the futures market, a hedge against the exchange rate risk.

in nominal terms, giving extra gains to foreign investors with a stake in the Brazilian markets. Note, however, that only the expected part of this gain shows up in Chart 12. Since in the first three months of the Real Plan—when a nominal (and real) appreciation happened—, a positive forward discount prevailed in the futures market, extra gains on top of those shown in Chart 12 existed for arbitrageurs. Except for December 1994, the CID has signaled very attractive arbitrage opportunities to foreign investors also during the Real Plan.

In the context of an equilibrium model, the CID is a measure of the **country premium**, (...) *because it captures all barriers to integration of financial markets across national boundaries: transaction costs, information costs, capital controls, tax laws that discriminate by country of residence, default risk, and risk of future capital controls* [Frankel, 1991]. Since one has more than one way to invest in fixed income in Brazil without incurring in the exchange rate risk, several different measures of the CID exist. We now consider higher frequency (daily) data on the CID since August 1994. We offer three different ways of computing the CID, and compare the systematic differences between those.

III.1.1.1. Computed with US$ futures

For the domestic interest rate data, we use the daily data forecasted by the futures market for the compound interbank rate (CDI) for the next three months. For the nominal expected devaluation, the exchange futures market data are used. The foreign interest rate used is the LIBOR (in US dollars). In Chart 13, this is the jagged solid line that is above the others most of the time.

III.1.1.2. Computed with Brazilian Bonds issued in US$

Another possible way to compute the CID is to deduct the foreign interest rate (LIBOR, in this case) from internationally issued Brazilian bonds' rates. For this

purpose, we use the most liquid Brazilian bond, the IDU.[10] The CID computed with the IDU is the smooth dotted line that is below the others for most of the time.

III.1.1.3. Computed with Brazilian Bonds indexed to US$

A third possible way to compute the CID is to deduct the foreign interest rate from the domestically issued Brazilian bonds with an index clause to the US dollar (NTN-D). These securities are indexed to the US dollar, but paid in domestic currency (R$), unlike the Brady bonds. We were only able to find the data for the rates paid on these securities at the auctions, which are regularly held every fortnight, depending on the Treasury decision. Maturities range from three to 24 months, the latter being placed fully in the Central Bank portfolio. We omitted the rates for the securities placed directly with the Central Bank, thereby considering only the placements with the public. These are the columns that show up in Chart 13.

III.1.1.4. Comparison of the three different proxys of the country risk for Brazil

Chart 13 shows the three different measures of the CID: the first uses the exchange futures market to cover for the exchange rate risk implicit in Brazilian domestic bonds and deducts the LIBOR (US$); the second takes the spread between the rate of internationally traded Brazilian foreign debt (IDU) and the LIBOR (US$); and the last take the spread between the rate of exchange-rate-linked domestic debt (NTN-D) and the LIBOR (US$).

It is noteworthy that those three ways of measuring the country risk for Brazil differ systematically. Except for the period around the exchange rate crisis of March 1995, the measure of CID constructed with the domestic futures market lies above all the

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[10] The IDU Bonds are bonds issued by The Federal Republic of Brazil under the terms of the Brady refinancing agreement. The issue size was US$ 7,200 Millions and the issue date was November 20, 1992. The maturity is January 1, 2001, and the average life is 5 years. Most of its payments are due still in the term of the current president, what makes this Brady bond more of a fixed income security than of an equity.

others. The differentials between the different measures of CID, however, have decreased substantially, and almost disappeared between the NTN-D and futures CIDs. However, the differential between the IDU and the domestically traded bonds are still very high (more than 500 basis points).

Possible explanations involve default risk, taxes, exchange rate spread risk and the effect of the term structure. The NTN-Ds are usually longer than the longest futures contract available. Therefore, the lower CID when NTN-Ds are used may be forecasting a decrease in the interest rate differential in the future, as it has indeed happened over a large portion of the period studied. If this interpretation is correct, the current equalization of the two measures of the CID (see Chart 13) may be signaling that the market no longer forecasts (or supports) further decreases in the differential between the two CIDs in the future. That is, with the current restrictions on capital inflows, interest rates may be reaching a lower threshold regarding capital inflows.

The differential between the IDU CID and the two other measures may be due to three factors. The first is the restrictions analyzed in this paper, among then the "entrance" tax on fixed income investments. The second is the fact that the latter two measures involve securities that pay in domestic currency, although the payments are indexed to the US dollar. However, not all investments can use the "free segment" exchange rate which is the rate used as the index. The other official exchange rate market, the "floating" market, has in the recent years been kept by the Central Bank very close to the "commercial" one, but this may change in the event of an exchange rate crisis. Therefore, this "exchange-rate-spread" risk may be responsible for part of the differential between the measures of CID. Again, if this hypothesis is true, one may learn about the investors' expectations on the sustainability of the exchange rate by the behavior of this spread over time. The third factor, the default risk, may signal that investors see the Brazilian government more commited to honoring the securities traded abroad (e.g., the IDU) than those traded at home (e.g., the NTN-D).

The behavior of the differential between the IDU CID and the other two measures of the CID after the "tequilazzo" is very interesting. The IDU rate increases after the Mexican crisis, denoting a larger premium required by investors to hold Brazilian bonds. The CID computed with the domestic rates, however, fall, denoting that during the aftermath of the crisis interest rates did not rise enough to keep previous status quo. Accordingly, capital started to exit the country, as show in Chart 16. Since neither the nominal nor the real interest differential changed much in that period, this evidence confirms that the CID is the best proxy for the attractiveness of domestic fixed income investments to foreign investors.

III.2. Other Determinants

Undoubtfully, many other factors besides the interest rate differential have attracted capitals to the Brazilian economy. The renegotiation of the external debt, and the success of the Real Plan in keeping a low level of inflation for already two years have already attracted many foreign investors with intentions of making more permanent investments in Brazil. This occurs despite the very bad rate attributed to Brazil by the main international rating agencies (Moodys and Standard and Poors').[11]

IV. Capital Controls

The massive capital inflows that started in the last quarter of 1991 eventually posed a macroeconomic problem to the government. To mitigate the capital inflows directed to investments in fixed income, mainly Brazilian government bonds, the government started in the second semester of 1993 to impose controls and restrictions on capital inflows.

[11] However, due to a change in methodology by the Brazilian Central Bank, we were unable to collect quarterly data on short and long term capital flows to perform econometric tests to uncover the main explanatory factors of those flows. Currently, we are trying to obtain those data from the Economics Department at the Brazilian Central Bank, and plan to incorporate the econometric tests in future versions of this paper.

We start by describing the succession of measures aimed at dealing with the excessive inflow of foreign capital, and then evaluate its effectiveness in achieving the macroeconomic goals. One interesting aspect worth noticing at the outset is that many of the measures described below simply allow for transactions that were previously restricted. After all, most of the legislation regarding the foreign sector was aimed at restricting capital outflows, while the nineties posed the exactly reverse problem. However, instead of simply eliminating the previous capital outflow restrictions, many of the measures described below just relax the previous limits, but keep them in place probably as an insurance against a return to the previous situation of recurrent exchange rate crisis.

IV.1. Description of Legislation

In 1992 the main changes in regulation were still aimed at further opening the capital account. The additional income tax on profit and dividend remittance abroad was extinct. Foreign investors were allowed to invest in derivative markets. Firms were allowed to issue abroad securities convertible in stocks. The minimum length of stay of foreign capital invested through the privatization auctions was reduced from 12 to six years. Regarding reinvestments in Brazil, foreign investors were no longer required to wait for two years before being able to sell assets purchased through the privatization process [Banco Central do Brasil, 1993].

In 1993, notwithstanding the implementation of several liberalizing measures on exchange markets, the government started a gradual process of "throwing sand on the wheels" of capital inflows to prevent further increases in domestic government debt. According the Brazilian Central Bank annual report [1994]: *The impossibility of a more drastic reduction of the rate differential between domestic and foreign interest which would naturally discourage the inflow of foreign financial savings, resulted in measures that would make it possible to attenuate the monetary impact of the foreign*

sector, without interrupting the process of integration with international financial markets.

In June 1993, the Central Bank expanded the minimum average amortization term of financial loans from 30 to 36 months. Furthermore, for purposes of the fiscal benefits related to the income tax on remittances of interest and other charges, the periods of these operations were increased from 60 to 96 months. The Central Bank also tried to induce delays in the inflow of export revenues by increasing the period for exchange contracting from 45 to 180 days after the actual shipment. In the case of export credit (advances on exchange contracts – ACCs), the maximum period between the inflow of resources and the shipment of the merchandise was decreased to 180 days (from 360). Regarding the imports, it also allowed the anticipation of the exchange contracting in relation to the maturity of the liability abroad up to 180 days (before it used to be 45 days), trying unsuccessfully to make importers pay their dues in advance.

Banking regulation was also changed to prevent dollar denominated liabilities and allow for larger amounts of dollar denominated assets; the selling positions defined on the basis of each bank's net worth (dollar liabilities) were reduced by 50%, while buying positions (dollar assets) were increased from US$2 to US$10 million (excesses must be deposited at the Central Bank).

Since 1987, portfolio investment was fostered by the creation of specific channels that gave foreign investors exemption from domestic income tax on capital gains. The most widely used channel to invest in Brazilian stock and derivative markets is the so-called Annex IV—Securities Portfolios for Institutional Investors—, created in May 1991 (see Chart 14). Only foreign institutional investors may invest in those Portfolios. Examples of institutional investors that qualify for the use of the Annex IV are Pension Funds, Portfolios belonging to Financial Institutions, Insurance

Companies, and Foreign Investment Funds. Despite the regulation, wealthy investors are known to have "individual funds" under Annex IV.

Given the tax exemptions of the investments under Annex IV, financial engineering was widely used to channels those funds to the high-interest-paying government debt. In August 1993, the National Monetary Council (CMN) forbade funds channeled through Annexes I to IV from being invested in fixed yield bonds, including exchange NTN (a dollar linked Treasury bond) and commodity investment funds (which actually worked as fixed-income-like funds). Charts 14 and 15, and Table 1 show the effect of this regulation. In August 1993 there were US$ 1,720 million of Annex IV funds invested in fixed-income-like securities and funds when those investments were forbidden. By September 1993 this figure had already dropped to zero. However, the alternative found by the market to circumvent the regulation and keep investing in fixed income was to invest in debentures. The figures for this investment item rose from US$ 275 million in August to US$ 1,284 in September, US$ 2,183 in October, and US$ 3,011 in November. In Chart 15 is clear how the item "debentures" replace the item "others" (mainly the fixed-income-like securities and funds). In November, the CMN moved to close this loophole by also forbidding investments in debentures (only the already purchased could be kept until maturity). It also created a channel specific for fixed income investments, the Foreign Capital Fixed Yield Funds, which levied a 5% "entrance" tax (IOF) on the initial exchange rate transaction. Currency financial loans also started paying a 3% "entrance" tax (IOF).

The new round in the game between regulators and investment banks involved investments through derivative markets, which are fairly well developed in Brazil. By December a new Central Bank measure was enacted now forbidding a broader range

of fixed-income-like securities, including investment strategies involving derivatives that lead to predetermined returns, e.g., a box.[12]

The evaluation made then by the Brazilian Central Bank of those measures was that they (...) *placed obstacles in the path of foreign capital entering the country with the exclusive purpose of seeking the earnings made possible by interest rate levels. At the same time, the structure that favors the inflow of resources to the stock market was preserved* [Banco Central do Brasil, 1994].

In January 1994, a new restriction was enacted, now targeting one government security (NTN-National Treasury Notes) which could be purchased by Annex IV funds under a broad interpretation of a Decree that listed the NTN as a privatization currency. Note in Table 1 how the volume of privatization currencies increases fivefold after August 1993. In March, the "entrance" tax levied on the Foreign Capital Fixed Yield Funds was extended to all portfolio investments, although the tax rate was initially set to 0% for Annex IV funds. This was meant as (...) *clear signal as to the possibility of taxing these operations* [Banco Central do Brasil, 1995]. The mechanism of automatic prior authorization of foreign loans was suspended, and renewal or extension of previous loans were also subject to the minimum terms of 36 or 96 months, which prevailed for new loans.

On the eve of the Real stabilization plan—June 30, 1994—several further restricting measures were taken: *a) prohibition of transformation of advances on exchange contracts (ACC) into anticipated* (sic) *export payments (short-term), when such result in the postponement of the regulatory period for shipment of the merchandise; b) increase of the minimum period of amortization of anticipated export payment operations registered at the Central Bank from 360 to 720 days; c) 90 day suspension*

[12] A box strategy consists of trading four options, two calls and two puts, so that the payment at the maturity date is fixed Since the payment is fixed at the maturity date, an arbitrage argument leads to the conclusion that the return on the whole strategy must equal the riskless rate of return. In the Brazilian case, this is the rate on the interbank funds market (CDI).

of inflows of foreign resources to be used in future capital increases and bridge investments for later conversion of debt into investments and, following that, indefinite suspension of such operations; and d) 90 day suspension of the taking of foreign loans by public sector entities [Banco Central do Brasil, 1995].

With the Real plan of July 1994, the Central Bank let the exchange float. Given the prevailing conditions at the time, with emphasis in the very high interest rate, that move lead to the nominal (and real) appreciation of the real. Since capital flows subsisted, the Central Bank tried new measures, as the increase in the banks' buying position in the free rate market from US$10 to US$50 millions, before they had to deposit any excess at the Central Bank.

In August, 1994, a new round of measures at liberalizing exchange outflows were undertaken: *a) the possibility of contracting exchange for future liquidation in operations of a financial nature, an alternative previously permitted only in commercial operations; b) dispensation from the import license for the contracting of import exchange operations; c) permission for anticipated liquidation of foreign liabilities related to financial loans and financing registered at the Central Bank up to August 31, 1994, independently of the resources having completed the minimum period of permanence in the country; and d) free negotiation among the parties of the percentage of the value of imports to be financed in operations with terms of more than 360 days, thus permitting a larger volume of on sight payments that were previously limited to a maximum of 20%* [Banco Central do Brasil, 1995].

In the attempt to stimulate demand for foreign currency, the value of transfers that the banks were permitted to carry out without the Central Bank authorization for purposes of investment abroad by private nonfinancial legal entities was raised from US$ 1 million to US$5 million. Legal entities were also allowed to purchase real estate abroad, something previously restricted to individuals.

In September 1994, investment funds abroad were allowed for Brazilian investors. Those funds must carry at least 60% of (internationally issued) Brazilian government securities. Also in September, the continuous appreciation of the real lead the Central Bank to intervene in the exchange rate markets in late September, ending the short period of free floatation of the exchange rate.

By late October, 1994, further restraints on capital inflows were enacted: *a) reduction in the maximum period for the contracting of exchange prior to shipment and, consequently, of ACC operations, which dropped from 180 to 150 days in the case of exporters with a total value of contracted operations equal to or less than US$10 millions in the last 12 months (small scale); for medium and large scale exporters, the maximum period was reduced from 180 to 90 days; a maximum period of 30 days was set for products considered essential to internal supply; b) the earmarking of exchange contracting operations to registration of exports, without permitting alteration of the merchandise to be exported. The purpose of this measure was to make it difficult to practice negotiation of export performance* [Banco Central do Brasil, 1995]. Several other restrictions tried to prevent the increase in the outstanding credit to Brazilian exports, a well-known channel to avoid capital controls on inflows, including a 15% reserve requirement on ACCs to be deposited in the Central Bank. A 30% reserve requirement was imposed on contracts involving assumption of the importer's obligations. The aim was to discourage importers from resorting to this financing mechanism offered by banks through withdrawals against credit lines abroad. On November, the rate was increased to 60%.

To further discourage capital inflows, the "entrance" tax was raised in most portfolio investments and loans: a) from 3% to 7%, in the case of loans; b) from 5% to 9%, in the case of investments in Foreign Capital Fixed Yield Funds; and c) from zero to 1%, in the case of Annex IV investments. The minimum period for domestic loans under the Resolution # 63 (dollar liabilities) was raised from 90 to 540 days, and stricter requirements were put in place. Annex IV funds could no longer invest in money

market funds (FAFs) or fixed-income privatization currencies. Pension funds were allowed to invest up to 10% of their reserves in investment funds abroad. Privatization Funds-Foreign Capital were forbidden of investing in domestic debt. A massive liberalization of exchange transactions was undertaken. This was the status when the Mexican crisis hit in December 1994.

The (rather mild) effects of the Mexican crisis required the government to undo a few of the previous measures aimed at increasing the demand for foreign currency. The term of 180 days for the closing of exchange prior to shipment (ACC) was reestablished, while the reserve requirement was suspended.

The worsening of the trade balance and a clumsy intervention of the Central Bank in the exchange markets by early March prompted a near exchange rate crisis, which required a sharp increase in domestic interest rates, along with several other measures that undid the previous restrictions, namely: a) reduction of the "entrance" tax rate from 7% to 0% on foreign loans; from 9% to 5% on investments in Foreign Capital Fixed Yield Funds; and from 1% to 0% on Annex IV investments; b) reduction of the minimum average term from 36 to 24 months for new financial loans and from 36 months to six months in the case of renewals or extensions of previous loans; and c) reduction of domestic relending under Resolution # 63 minimum period from 540 to 90 days. The banks' buying before they had to deposit any excess at the Central Bank was reduced from US$50 to US$5 millions.

At the end of March 1995, the Brazilian real had undergone a 5.2% nominal devaluation, and a new exchange band regime had been implemented, with frequent Central Bank interventions. This new regime aimed at (...) *permitting a gradual devaluation of the "real" against the dollar, without however providing the market any signals as to the speed or intensity of these devaluations* [Banco Central do Brasil, 1996].

As markets were convinced that the exchange rate regime was credible, massive capital inflows resumed as of July 1995. A new round of restrictions on capital inflows then took place in August, 1995: a) foreign loans "entrance" tax was raised from 0% to 5%; Foreign Capital Fixed Yield Funds, from 5% to 7%; b) a 7% tax (IOF) on short term financial transactions between institutions in the country and abroad in the floating rate segment (which was being used to circumvent the restrictions); c) derivatives markets in Brazil were forbidden to foreign investors. Moral suasion was also a widely used method used by the Central Bank with the aim of controlling the inflows.

In September 1995, the "entrance" tax (IOF) on currency loans was changed to provide an incentive to longer loans. A decreasing scale of taxes was adopted, inversely related to the loan maturity: 5% (two years or less), 4% (three years), 2% (four years), 1% (five years), zero% (6 years or more).

In February 1996, the last "package" of measures was enacted aimed at further restricting short term capital inflows. For investments under Annexes I to IV, it forbade investments on TDA, OFND and Siderbrás debentures (securities that provided fixed income results not previously excluded). The minimum average term for currency financial loans was put back to 36 months (new, renewals or extensions). The funds under Res. # 63 while waiting in a domestic bank to be lent cannot be invested in NTN-D (exchange-rate-linked domestic debt). A 5% "entrance" tax (IOF) was imposed on investments in Privatization Funds. Foreign investors (individuals or legal entities) were allowed to invest in Real State Funds and Emerging Firms Investment Mutual Funds, with a tax (10% or 5% for regular registered funds) on all withdrawals for periods shorter than one year.

The next Section evaluates the effectiveness of those controls.

IV.2. Evaluation of the Effectiveness of Capital Controls

As shown in the previous Section, in the three-year period that started in June 1993, there were 15 changes in the regulations regarding capital flows. That is almost one intervention for each couple of months. Nevertheless, capital kept flowing steadily into Brazil, except for a short period around the Mexican crisis. Chart 16 displays the continuous accumulation of foreign reserves at the Central Bank, which reached almost US$60 billion by April 1996, (around 10% of GDP or 1.2 years of imports) twice as much as what is considered to be a reasonable level.

Effectiveness may have several meanings.[13] Here we are concerned with a counterfactual experiment: what would have been the capital inflows had Brazil imposed no restrictions in capital inflows and had all other factor stayed constant? An econometric framework could be constructed to offer an answer to this question. However, this is not attempted here because of lack of suitable higher frequency data. We claim, however, that the annual data presented on Charts 16 and 17, which displays the performance of financial exchange transactions, represent a convincing argument that ways are being found by the financial markets to circumvent the restrictions. Appendix 1 contains a Table with the summary of the capital flows restrictions, as well as the most used "financial engineering" strategies to circumvent them. We have already referred to a few of those strategies in the previous Section. In 1996, there has been a massive increase in direct investment (US$3.5 billion for the period January-April). The financial press has attributed a great portion of this increase to fixed-income investments disguised into direct investments to avoid the restriction on capital inflows.

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[13] Surveying the academic literature on capital controls, Dooley [1995] writes: *Empirical work on the "effectiveness" of capital controls has suffered from the lack of a widely accepted definition of what constitutes an effective control program. At one end of the spectrum, evidence of effectiveness has been defined as the ability to detect over extended time periods different average behavior of selected economic variables for countries with and without capital controls programs. At the other extreme, effectiveness has been defined as the ability to maintain an inconsistent macroeconomic policy regime forever.*

Therefore, it seems that neither the restrictions imposed on capital inflows nor the restrictions relaxed on capital outflows have been powerful enough to prevent massive net capital inflows. Labán and Larraín (199?) develop a model to show that the liberalization of capital outflows (...) *may not be the appropriate policy to defend the real exchange rate in the presence of massive capital inflows because it is likely to strengthen those very capital inflows*. The Brazilian case seems to corroborate their theoretical result.

Nevertheless, the government claim seems to be that the combination of very high interest rates with those restrictions actually bought the plan enough time to sustain the "exchange rate anchor" until the fiscal and other reforms are implemented. This brings us to a new meaning of effectiveness, i.e., the possibility of achieving a "good" equilibrium that otherwise would not have prevailed in a multiple equilibrium model. Despite our previous argument against the success of the restrictions in preventing the capital flows, this might indeed be a possibility, although one would like to have a formal political economy model and convincing data that the needed fiscal reforms are being implemented. For now, we waive our hands on the formal model, but present in the next Section arguments that cast a few doubts on this optimistic line of reasoning.

V. A few Macroeconomic Consequences of the Recent Capital Flows

The exchange-rate-anchor strategy followed by the Real Plan would not have been possible had the Central Bank not accumulated the foreign reserves before the plan (see Chart 16). The foreign reserves were and still are the insurance policy of the stabilization plan until the necessary fiscal reforms are undertaken. However, this strategy, which the government claims not to be inconsistent because it is only temporary, has many adverse effects. From those, we highlight the most important ones, which are the overvaluation of the currency, with the detrimental effects on the current account of the balance of payments, and the quasi-fiscal burden caused by the massive sterilization at very high interest rates.

V.1. Real Exchange Rate Appreciation

The usual real appreciation that accompanies stabilization plans was exacerbated in the Brazilian case by the massive capital inflows that occurred both before and after the Real Plan. As in all exchange-rate-anchored stabilization plans, there has been an endless discussion in Brazil about the size of the overvaluation of the currency. Given the well known disparity between the price of tradable and non-tradable goods in the early stages of the stabilization's (see Bruno, 1993), the measures of the degree of overvaluation vary greatly depending on whether a domestic CPI or WPI is used as a proxy for domestic inflation (or unit labor cost, apparently the most suitable measure).

Since to measure the degree of overvaluation is not the subject of this paper, we will only note that most analysts point out that a current account deficit of no less than 3% of GDP will arise for 1996 and future years, if the current real exchange rate is maintained. This is clearly a risky strategy in a world of volatile capital flows. On the other hand, if further progress is not attained on the fiscal side, a devaluation of the real would not save the stabilization plan. Of course, if fiscal deficits of the magnitude

of last year's persist (nominal deficit of 7.4% of GDP), no nominal anchor will prevail in the long run.

V.2. Increase in the quasi fiscal deficit and in the domestic debt because of massive sterilization

The other macroeconomic consequence we highlight is the quasi-fiscal burden of the massive sterilization prompted by the capital inflows. Since the foreign reserves held at the Central Bank are invested at the international rates, the (ex ante) cost of those reserves is approximately the (very high) CID. This burden appears on the fiscal accounts as interest rate payments. Interest rate payments, however, were responsible only for one fourth of the massive negative fiscal shift that occurred last year (the operational fiscal balance moved from a 1.3% of GDP surplus in 1994 to a 5.0% deficit in 1995). The other three fourths occurred because of the worsening position of the accounts that enter the primary surplus, which fell from 5.2% of GDP in 1994 to only 0.4% in 1995.

Furthermore, the burden of the interest rate payments can no longer be blamed only on the capital inflows, since the fiscal situation has worsened considerably since the start of the stabilization plan. Chart 18 shows the growth in the domestic net federal debt.[14] Until mid-1995, all the growth in the debt since January 1991 could be fully explained by two factors: the unfreezing of the blocked bank accounts performed by the Collor administration,[15] and the accumulation of foreign reserves. Note how this changes dramatically after July 1995. In less than a year, a gap of almost US$50 billion opened between the net federal debt and the sum of the other two series. This is the consequence of the deterioration of the fiscal accounts, although some outlays

[14] This is the "Dívida Mobiliária Federal" minus the securities traded with the states and municipalities (LBC-Es).
[15] That is, compulsory savings were transformed into voluntary savings.

may not show up immediately in the fiscal accounts, as loans to troubled financial institutions.[16]

[16] In a recent appraisal of the Real Plan during its second birthday festivities, Bacha [1996] presented the following Table.

PUBLIC SECTOR NET DEBT AS % OF GDP: BRAZIL

Item	Dec-94	Dec-95	Apr-96
(1) Federal Government Net Debt	12.3	14.1	14.3
Gross Debt	31.4	35.2	36.6
Domestic Debt	18.1	23.3	25.5
In Treasury Securities	11.2	16.3	19.6
Foreign Debt	13.3	11.9	11.1
Credit	19.1	21.1	22.3
Domestic Credit	11.9	13.2	14
Given by the Central Bank	5.3	6.9	7.5
Foreign Reserves	7.2	7.9	8.3
(2) States and Municipalities Net Debt	9.5	11.1	11.6
(3) State-owned Companies Net Debt	6.7	7	6.8
Public Sector Net Debt (1+2+3)	28.5	32.2	32.8
GDP (R$ billions)	537.3	656.3	689.8

Bacha concludes that from the 840 basis points (bp) increase in the net federal debt in securities from December 94 and April 96, only 200 bp were attributable to the fiscal deficit during that period (this is the increase in the net federal debt). The remaining 640 bp are equally split between the decrease in other less expensive types of debt (monetary base and foreign debt), and the purchase of assets by the federal government in the form of loans to public and private domestic financial institutions (220 bp) and foreign reserves (110 bp).

VI. Conclusion

Capital flows have resumed to the Brazilian economy in the early nineties. As many other developing economies, Brazil profited from the favorable external factors (see Calvo and al. [1992]). The liberalization of exchange flows and the renegotiation of the foreign debt allowed the Brazilian economy to place itself as one of the main recipients of foreign capital flows. With the success of the current Real Plan, this trend has become even stronger.

Nevertheless, the main determinant of foreign capital flows has been the huge interest rate differential between the domestic and the international interest rates. This differential, which is maintained to guarantee the domestic consistency of the stabilization plan until further fiscal reforms are enacted, has attracted massive flows of short term speculative capital.

We use the covered interest differential (CID) as the preferred measure of the attractiveness of Brazilian bonds to foreign investors. The CID represents the extra gain that an investor would have by investing in the Brazilian bond market instead of investing in fixed income abroad, **already discounting the exchange rate risk**. The huge interest rate differential has been the main factor responsible for the massive capital flows to Brazil in the nineties.

We surveyed and analyzed the restrictions to those short term capital inflows. The main conclusion is that those restrictions have not been able to prevent foreign capital from profiting of arbitrage opportunities with Brazilian bonds.

Capital flows have exacerbated the substantial real appreciation of the domestic currency since the Real Plan of July 1994. This has harmed the current account balance, bringing doubts as to the long term sustainability of the exchange-rate anchor. Given the very high level of foreign reserves (US$60 billions by April 1996), the government claims to have enough buffers to confront a reversal of capital flows.

This remains to be seen, but the only sure thing is that the current situation is not sustainable if further progress is not made on the fiscal side.

Because of the sterilization undertaken, the inflows of foreign capital have also provoked an increase in the domestic debt and in the quasi-fiscal deficit. This further complicates the fiscal situation. Furthermore, even if the fiscal situation improves, giving room to the Central Bank to ease monetary policy, the process of getting rid of the "excessive" reserves will prove to be a very tricky one, if sudden moves in the exchange rate are to be avoided.

In summary, since the end of 1991, with only a few minor interruptions, Brazil has received massive foreign capital inflows. Those flows were not predominantly caused by bright investment opportunities in fixed capital or even in the stock market, but by an enormous interest rate differential that was generated both by very high domestic rates in Brazil and by low domestic rates abroad in the major part of the last five years. Those flows prompted, among other consequences, a major accumulation of foreign reserves. Those reserves worked as an insurance policy of the Real Plan, permitting the Brazilian government to keep an exchange rate anchor for very long.

However, the easy (but costly) access to foreign savings has a detrimental incentive effect on the government as to its determination to push forward the economic reforms needed to balance the budget, open the economy, reform the tax and pension systems, privatize state-owned companies and banks, allow free entry in sectors previously restricted to government enterprises (oil, telecommunications, and infra-structure), reform the public sector, among others. All those reforms, and above all the fiscal restriction needed to balance the budget, are very costly in political terms.

The capital flows to Brazil represent, therefore, a blessing and a curse. They are a blessing because without them the Real Plan would not have subsisted so far. They are a curse because, as the recent political economy literature has documented, structural reforms are usually a result of crises, not good times. By making available

foreign savings, the capital flows reduce the sense of urgency of the structural reforms, thereby jeopardizing the ultimate success of the stabilization plan.

To pursue the structural reforms despite the unfavorable short term political trade-off is, therefore, the main challenge to the current administration. As shown in the Mexican case of December 1994, investors may change their minds extremely fast as to the likelihood of success of the stabilization policy once the structural reforms are not being carried on. Another important stylized fact of the Mexican experience is that there were nationals, not foreigners, those whom first decided to leave Mexican investments (see, among others, Frankel and Schmukler [1996]). The capital flows that have served so far as a backbone of the stabilization plan may very well turn into a very hard punishment if the notoriously volatile investors' confidence is threatened.

VII. References

E. L. Bacha, "Plano Real: Uma Segunda Avaliação", mimeo, Instituto de Economia da UFRJ (1996).

Banco Central do Brasil , "Relatório do Banco Central do Brasil: 1992", Brasília, (1993).

Banco Central do Brasil , "Relatório do Banco Central do Brasil: 1993", Brasília, (1994).

Banco Central do Brasil , "Relatório do Banco Central do Brasil: 1994", Brasília, (1995).

Banco Central do Brasil , "Relatório do Banco Central do Brasil: 1995", Brasília, (1996).

M. Bruno, *Crisis, Stabilization and Economic Reform: Therapy by Consensus*, Claredon Press, Oxford (1993).

G.A. Calvo, L. Leiderman and C.M. Reinhart, "Capital Inflows and Real Exchange Appreciation in Latin America:The Role of External Factors", IMF Working Paper WP/92/62 (1992).

G.A. Calvo, L. Leiderman and C.M. Reinhart, "The Capital Inflows Problem: Concepts and Issues", *Contemporary Economic Policy*, XII, July (1994).

D. Carneiro and M. Garcia, "Flujos de Capital y Control Monetario bajo Sustitución Doméstica de Dinero: La Reciente Experiencia Brasileña" in R. Steiner, ed., *Afluencia de Capitales y Estabilización en América Latina*, Fedesarollo, Bogotá, Colombia (1994).

M. Dooley, "A Survey of Academic Literature on Controls over International Capital Transactions", NBER Working Paper # 5352, Cambridge, MA (1995).

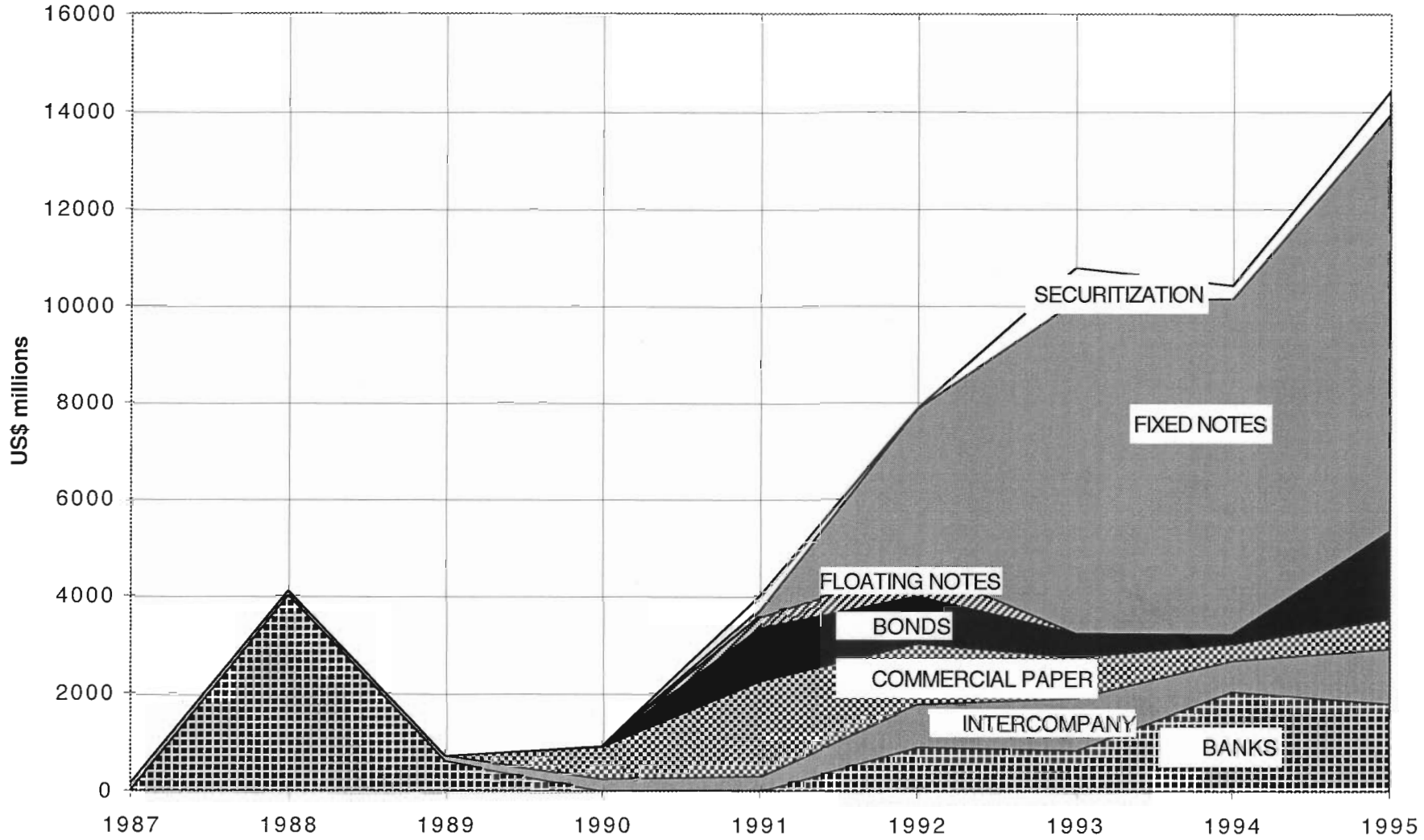
J. Frankel, "Quantifying International Capital Mobility in the 1980s" in B. Bernheim and J. Shoven, eds., *National Saving and Economic Performance*, National Bureau of Economic Research, The University of Chicago Press, Chicago (1991).

J. Frankel and S. Schmukler, "Country Fund Discounts and the Mexican Crisis of December 1994: Did Local Residents Turn Pessimistic Before International Investors?", Paper presented at the NBER Summer Meetings, Cambridge (1996).

R. Hodrick, *The Empirical Evidence on the Efficiency of Forward and Futures Foreign Exchange Markets*, Harwood Academic Publishers, New York, NY (1987).

R. Labán and F. Larraín, "Can a Liberalization of Capital Outflows Increase Net Capital Inflows?", Documento de Trabajo N° 155, Instituto de Economia, Santiago (199?).

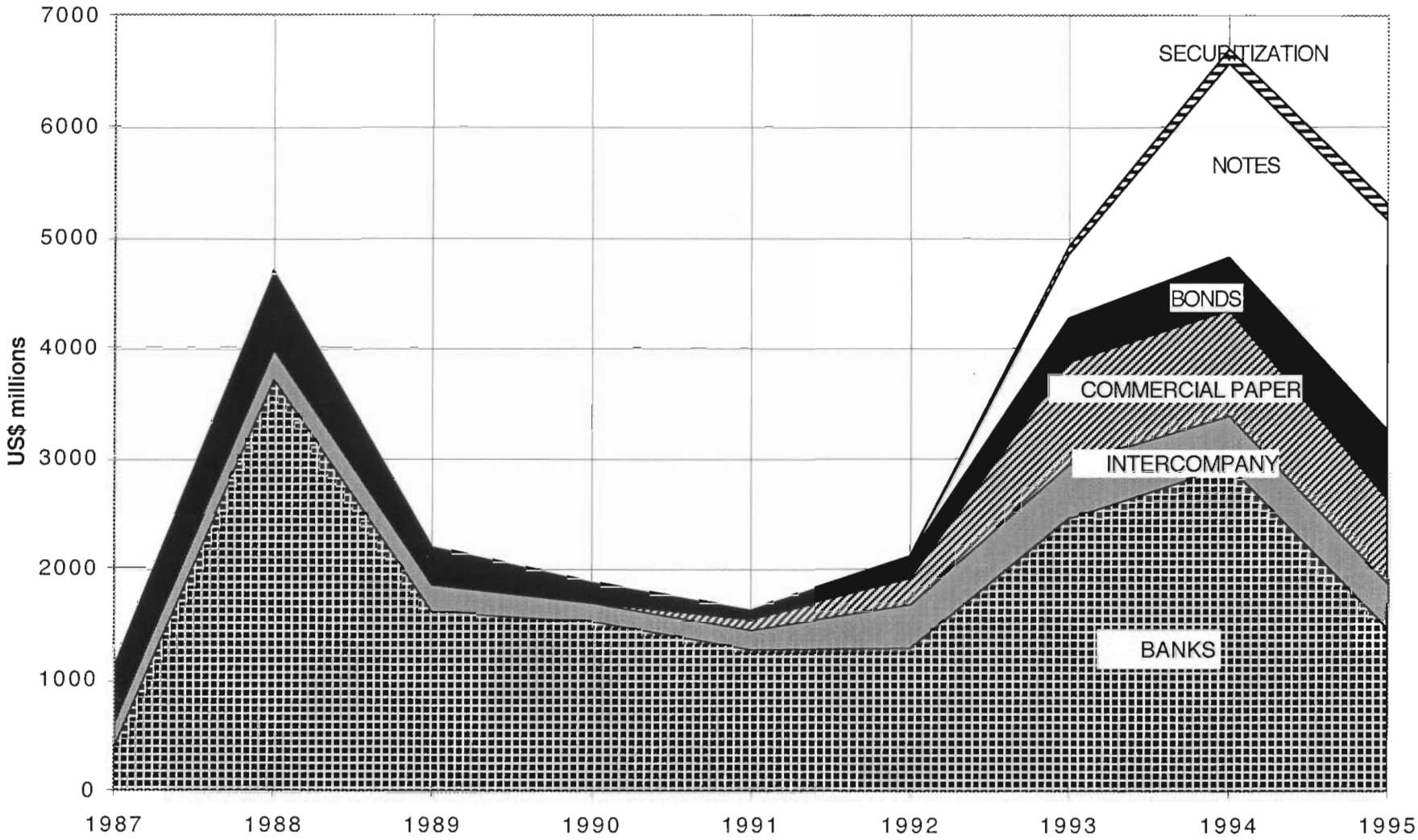
Chart 9
CURRENCY LOANS DISBURSEMENTS DECOMPOSITION



Source: Brazilian Central Bank Bulletin (Several Issues)

7/16/96

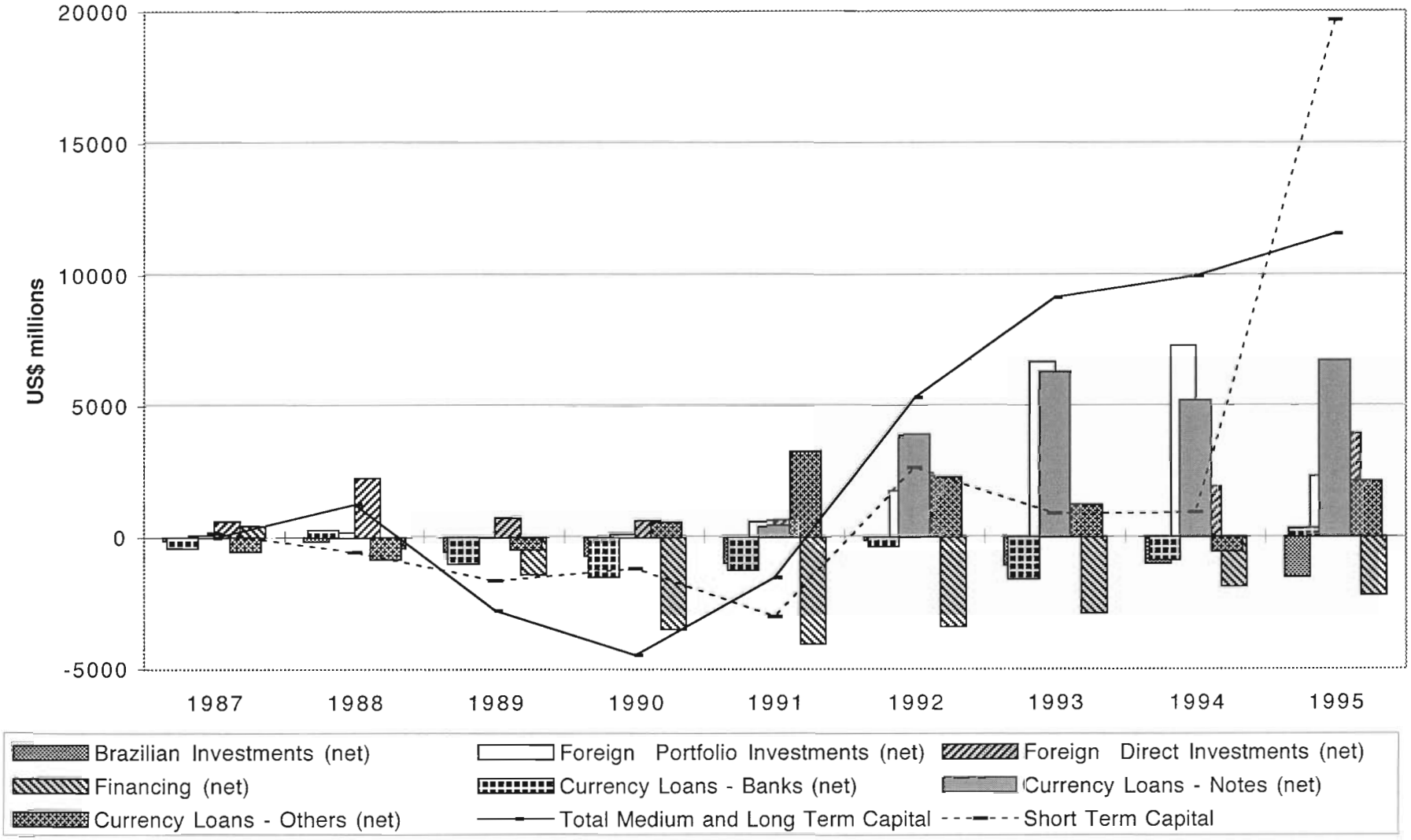
Chart 10
CURRENCY LOANS AMORTIZATIONS DECOMPOSITION



Source: Brazilian Central Bank Bulletin (Several Issues)

7/16/96

Chart 11
CAPITAL MOVEMENTS MAIN COMPONENTS



Source: Brazilian Central Bank Bulletin (several issues)

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Chart 12
COVERED INTEREST DIFFERENTIAL FOR BRAZIL

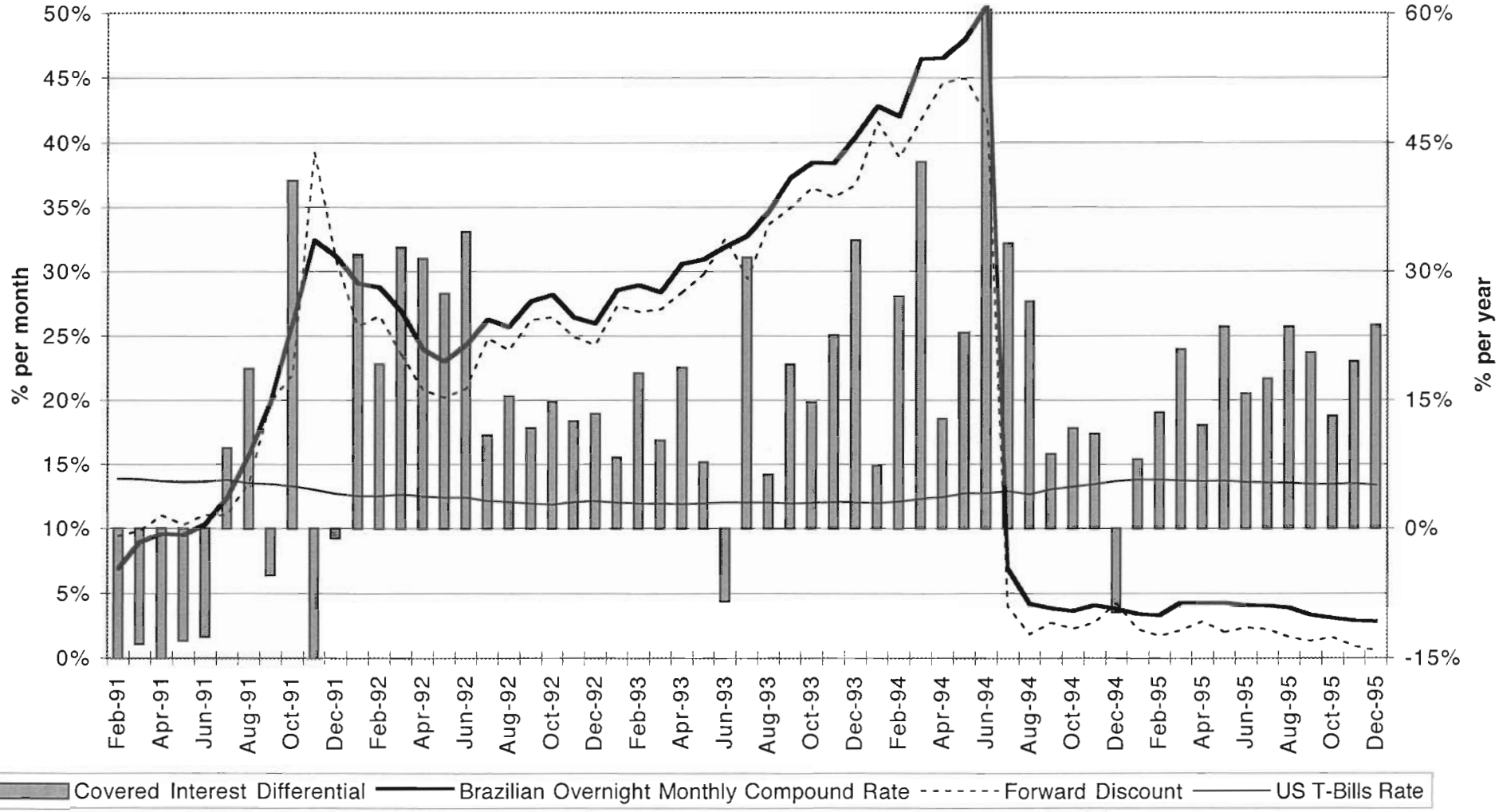


Chart 13
DIFFERENT MEASURES OF COUNTRY RISK FOR BRAZIL

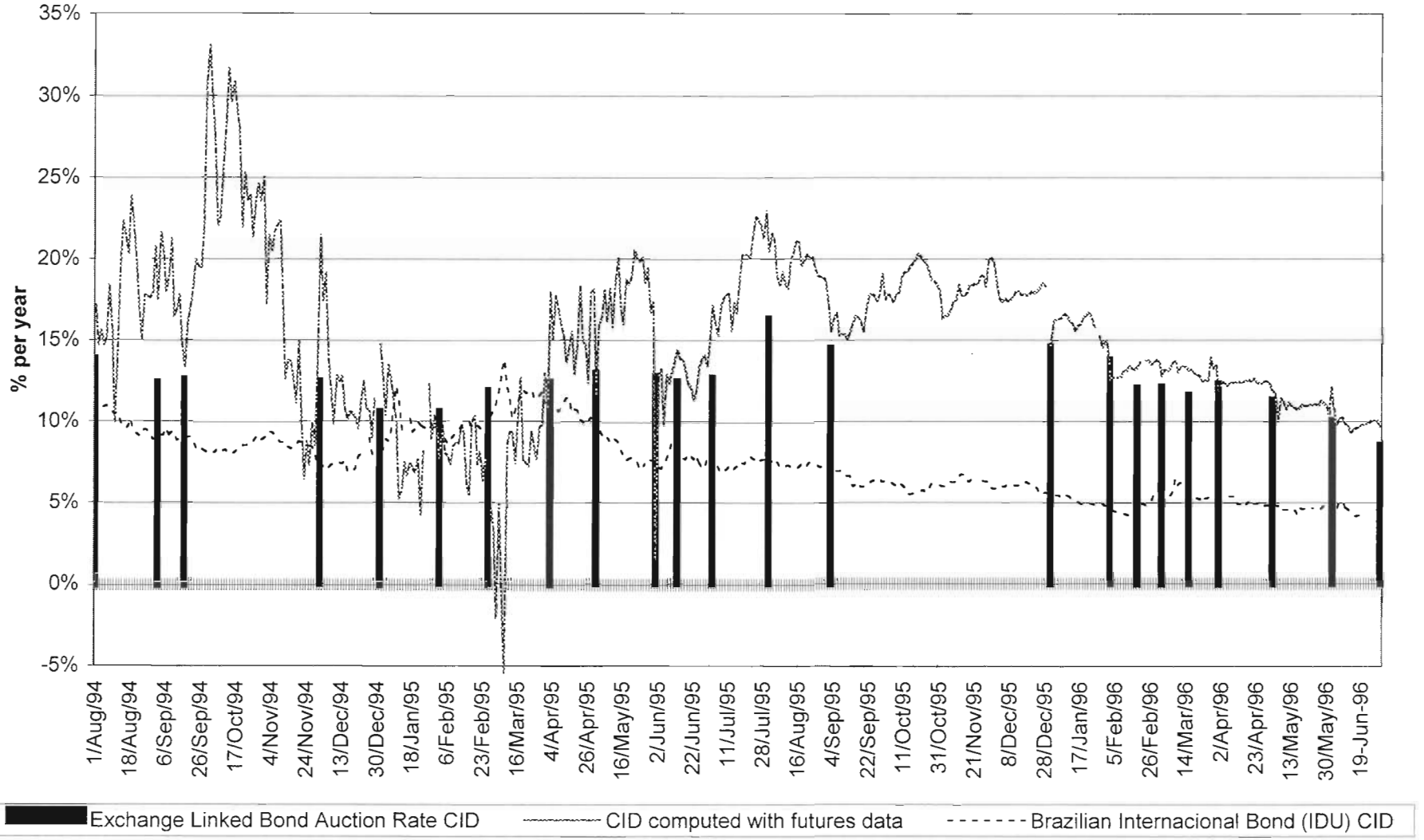


Chart 14
FOREIGN PORTFOLIO INVESTMENT - ANNEX IV

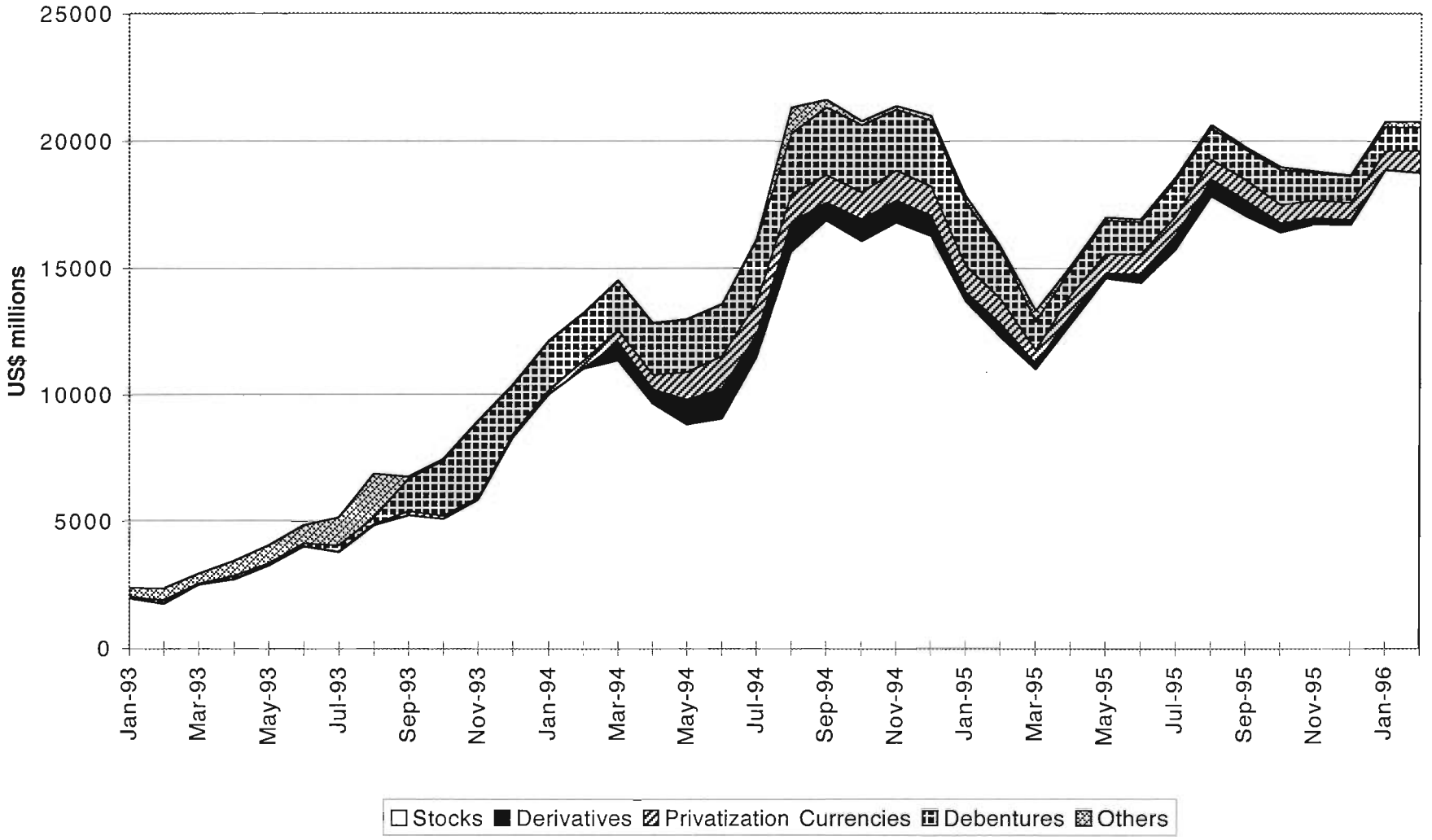


Chart 15
FOREIGN PORTFOLIO INVESTMENT - ANNEX IV - % SHARES

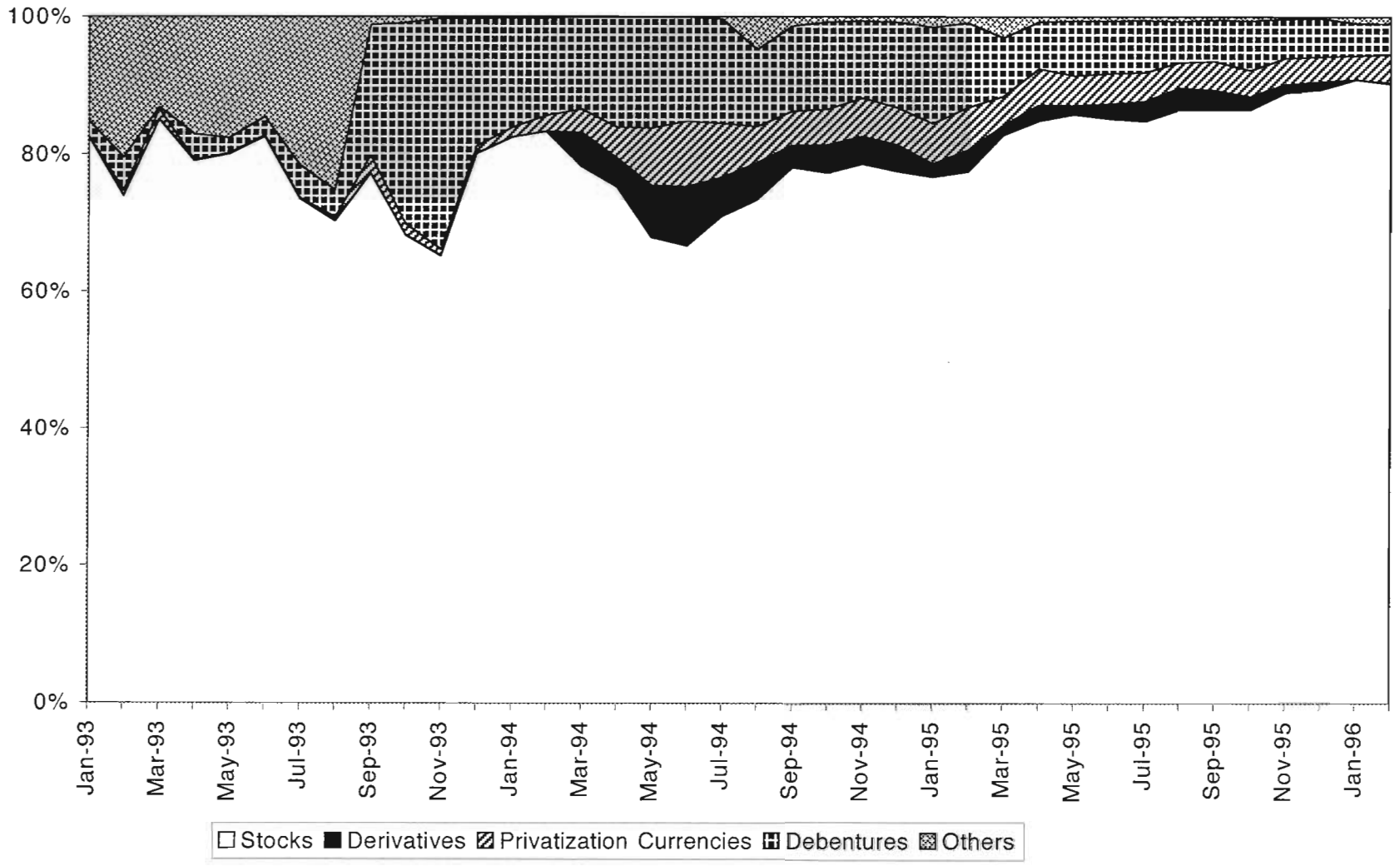


Chart 16
BRAZILIAN FOREIGN RESERVES

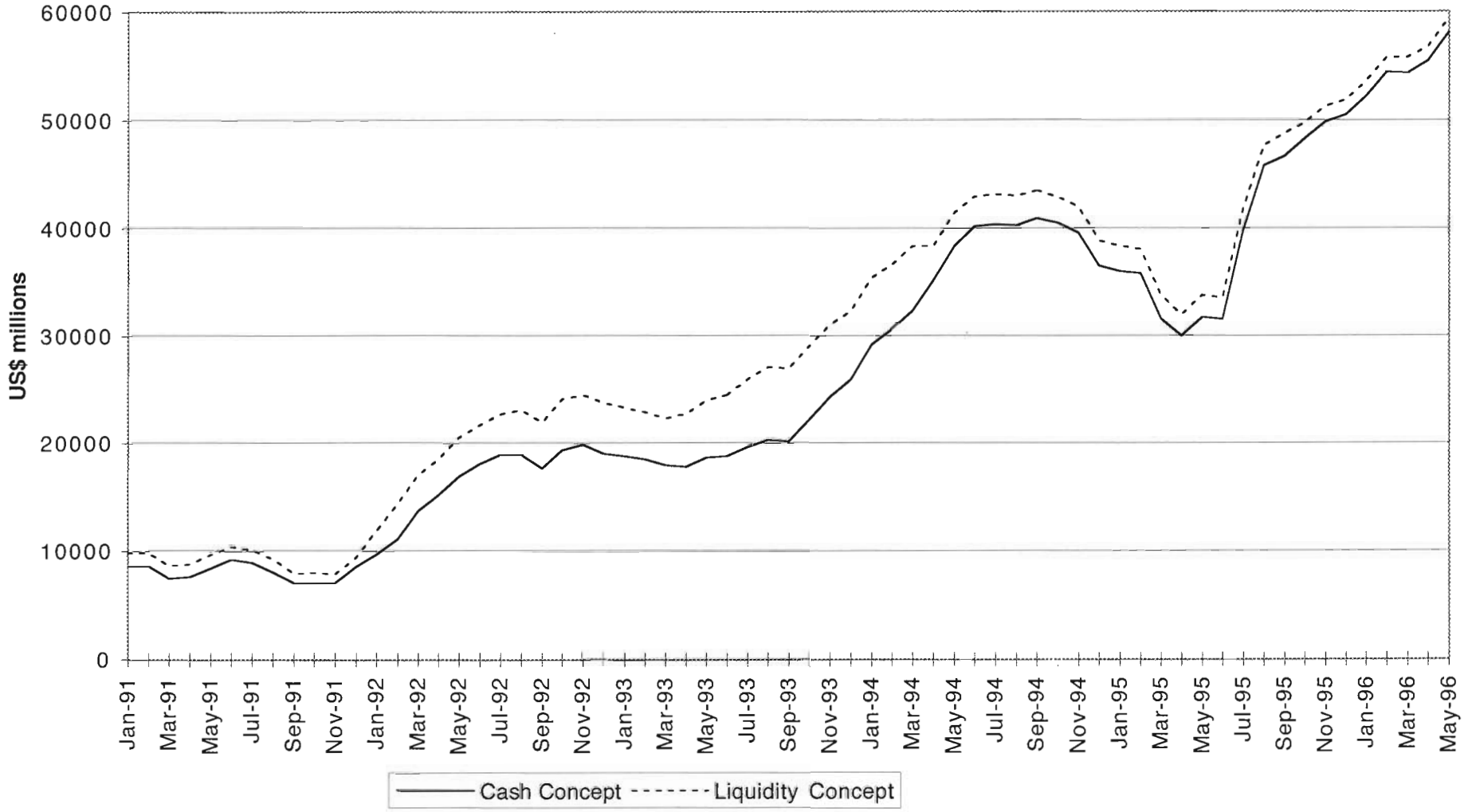
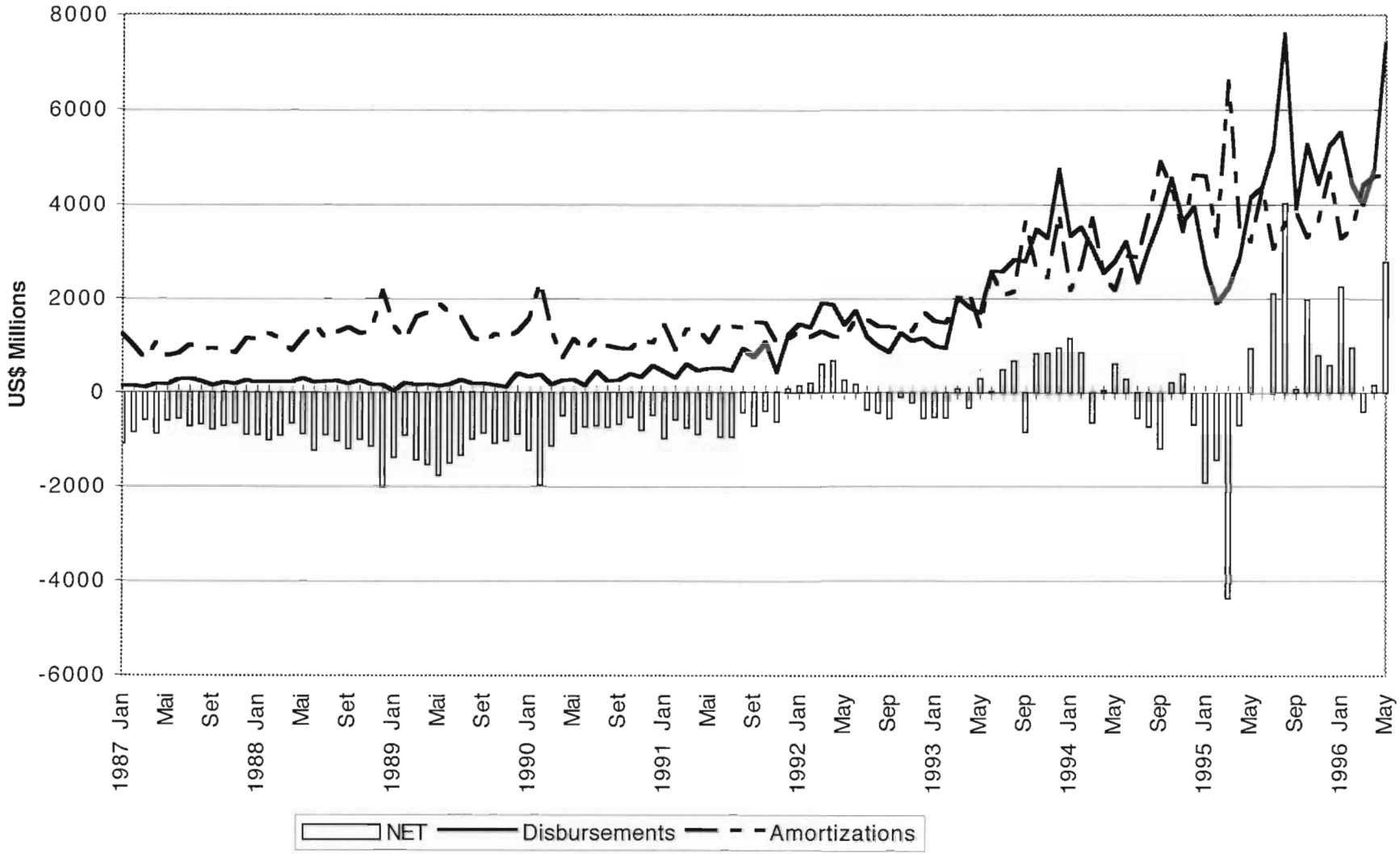
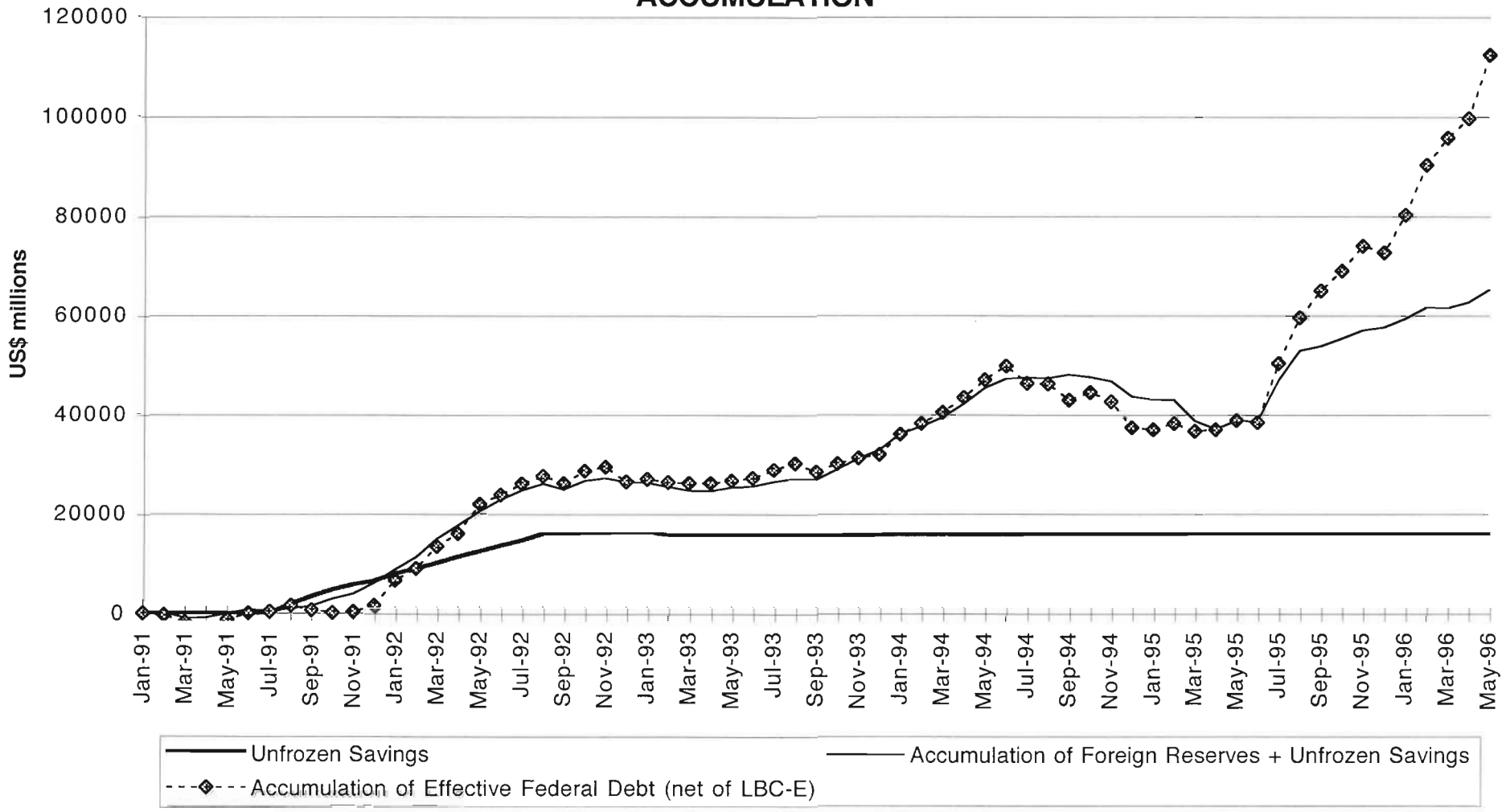


Chart 17
FINANCIAL EXCHANGE CONTRACTS TRANSACTIONS



7/23/96

Chart 18
DOMESTIC NET EFFECTIVE FEDERAL DEBT AND FOREIGN RESERVES ACCUMULATION



Source: Brazilian Central Bank

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