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Capital Flow and Capital Control

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CAPITAL FLOW - SHOULD IT BE MORE CONTROLLED?

I - Introduction

Powerful forces have driven the rapid growth of international capital flows. Prominent among these are the removal of statutory restrictions on capital account transactions, which is a concomitant of economic liberalization and deregulation in both industrial and developing countries; macroeconomic stabilization and policy reform in the developing world, which have created a growing pool of commercial issuers of debt instruments; the multilateralization of trade, which has encouraged international financial transactions designed to hedge exposure to currency and commercial risk; and the growth of derivative financial instruments—such as swaps, options, and futures—which has permitted international investors to assume some risks while limiting their exposure to others.

Above all, technology has played a role. Revolutionary changes in information and communications technologies have transformed the financial services industry worldwide. Computer links enable investors to access information on asset prices at minimal cost on a real-time basis, while increased computer power enables them rapidly to calculate correlations among asset prices and between other variables. Improvements in communications technologies enable investors to follow developments affecting foreign countries and companies much more efficiently. At the same time, new technologies make it increasingly difficult for governments to control either inward or outward international capital flows when they wish to do so. All this means that the liberalization of capital markets—and, with it, likely increases in the volume and the volatility of international capital flows—is an ongoing and, to some extent, irreversible process with far-reaching implications for the policies that governments will find it feasible and desirable to follow.

It is important to recognize that financial innovation and liberalization are domestic, as well as international, phenomena. Not only have restrictions on international financial transactions been relaxed, but regulations constraining the operation of domestic financial markets have been removed as countries have moved away from policies of financial repression. Domestic and international financial liberalization have generally gone hand in hand. Both respond to many of the same incentives and pressures.

Capital mobility has important benefits. In particular, it creates valuable opportunities for portfolio diversification, risk sharing, and intertemporal trade. By holding claims on—that is, lending to—foreign countries, households and firms can protect themselves against the effects of disturbances that impinge on the home country alone. Companies can protect themselves against cost and productivity shocks in their home countries by investing in branch plants in several countries. Capital mobility can thereby enable investors to achieve higher risk-adjusted rates of return. In turn, higher rates of return can encourage increases in saving and investment that deliver faster rates of growth.

At the same time, however, in a significant number of countries, financial liberalization, both domestic and international, appears to have been associated with costly financial crises. This association may be somewhat deceptive, given that financial crises are complex events with multiple causes and have occurred in less liberalized as well as more liberalized financial systems. Still, there have been enough cases where financial liberalization, including capital account liberalization, has played a significant role in crises to raise serious questions about whether and under what conditions such liberalization—particularly capital account liberalization—will be beneficial rather than harmful.

To have an idea about the figures, for example, net private capital flows to developing countries tripled—to more than \$150 billion a year during 1995–97 from roughly \$50 billion a year during 1987–89. At the same time, the ratio of private capital flows to domestic investment in developing countries increased to 20 percent in 1996 from only 3 percent in 1990.

II - Capital flow :

a Composition of Capital Flow

Capital flows basically consist of foreign direct investment (FDI), portfolio equity and debt flows, commercial lending and official flows.

Using data from World Bank, we could realize that “medium income countries” experienced more portfolio equity inflows as a percentage of the total capital inflows in recent years than the “low income countries” did. Also, the “low income countries” relied more heavily on official (for these areas, debt was the dominant form of capital flows in the early period, but its share has declined in the 1990s). The reliance on official and officially-backed flows is most pronounced for Sub-Saharan Africa.

Why are there different forms of capital flows, and why are some forms of these flows more dominant than others in certain geographical or income groups? Most existing empirical studies on the composition of capital flows do not seem to offer a clear consensus. Typically, the studies examine the composition of capital flows from the standpoint of desirability. For example, it is often argued that FDI is a desirable form of capital flow to the host country, as it may bring in positive externalities, such as technology and management expertise. From the foreign investors point of view, FDI may be motivated by strategic considerations in addition to the usual rate of return objectives. Such nonfinancial, strategic concerns include market share and regulations. Portfolio flows, however, are known to be difficult to cope with if the recipient country does not have well-developed macroeconomic policy instruments, or if the economy has fundamental weakness, such as weak banking system (Khan and Reinhart, 1995). There is also a popular perception that portfolio flows are less stable than FDI. Turner (1991) ranks short-term bank lending as the most volatile and long-term bank flows as the least volatile, followed by FDI. Claessens, Dooley and Warner (1995), however, argue there is no statistical support for the practice of labeling various capital flows

components as “hot” or “cold”. They find the components to be highly substitutable, with no evidence that a particular component can predict the aggregate flow.

III - Causes of Capital Flows

The primary forces driving investors interest in emerging markets, which have also led to their integration in world financial markets, are the search for higher returns and risk diversification. Although these forces have always driven investors’ decisions, the responsiveness of private capital to opportunities in emerging markets started to increase in the 1990s because of both internal and external factors.

a) Internal Factors

The capital-inflow literature suggests that developments in capital-importing countries have improved private risk-return characteristics for foreign investors through two main channels. First, creditworthiness improved as a result of external debt restructuring in a wide range of countries. For example, Romania in the mid-1980s, Bulgaria and Poland by 1990 rescheduled their external debt. Moreover, heavily indebted Latin America countries such as Argentina, Costa Rica, Mexico, Uruguay and Venezuela, and Nations Like Nigeria and the Philippines, benefited from the official supported “Brady-type” initiatives.

The second channel pulling investors to emerging markets were the productivity gains arising from structural reform and the confidence in macroeconomic management after successful stabilization programs in Eastern Europe, the Association of Southeast Asian Nations (ASEAN) and Latin American countries.

Schadler et al. (1993) argue that domestic influences were the dominant causes of capital inflows to emerging markets. They noticed that changes in external factors did not coincide and even postdated the surges in some of the mentioned countries. Moreover, the variation in timing, persistence and intensity of the inflows among different countries suggests that investors might have reacted to country-specific factors. The world Bank (1997) has provided the most systematic evidence regarding the importance of domestic factors but, contrary to Schandler, et al.’s assessment, their role has been particularly relevant in recent years.

The Bank noticed several trends suggesting that flows have been driven by more than external factors. Among them, the following should be mentioned: (i) fundamentals affect the long-term rates of return to investors. Countries with the strongest fundamentals (i.e., high investment-to-GDP ration, low inflation and low real exchange rate variability) have received the largest flows as percentage of GDP whereas countries with very poor fundamentals have not attracted private flows; (ii) FDI is the largest component of private flows to emerging markets, but, although sensitive to macroeconomic fundamentals, it is not explained by global interest rates; (iii) portfolio flows are mores sensitive to interest rates. Still, they have shown an upward trend since 1992-93 despite the increase in global interest rates. Nevertheless, the role of foreign

factor cannot be ignored. As a matter of fact, many have assigned to them the predominant role in the current episode of capital flows.

b) External Factors

Calvo, Leiderman and Reinhart questioned the predominant role played by domestic policies in attracting private capital flows. They suggested that cyclical conditions in industrial countries have been the main factor driving these flows to developing countries (they recognize the important role played by domestic factors. Still, they stressed that this explanations failed to explain why inflows occurred in countries that had not undertaken reforms and why inflows only occurred in 1990 in countries where the reforms had started earlier). In particular, the decline in world real interest rates observed in the early 1990s attracted or “ pushed” investors to emerging markets in two ways. First, and together with recessions in the United States, Japan and many European countries, the decline in world interest rates made profit opportunities in emerging economies relatively more attractive. Second, it improved the creditworthiness and reduced default risk of debtor countries. The consequences of this explanation of capital surges are important. In fact, as pointed out by Calvo and his colleagues as early as in 1993, the explanation limits policy options to indirect and compensatory measures and suggests that a reversal of the push factors can lead to capital outflows, increasing macroeconomic vulnerability in emerging markets.

In the early 1990s, the cyclical argument on the importance of external factors was the prevailing view. However, the persistence of private capital flows after the increase in world interest rates in 1994 and the Mexican crisis suggested that structural external forces were also at work. Two developments in the financial structure of capital-exporting countries have increased the responsiveness of private to cross-border investment opportunities. First, falling communication costs, strong competition and rising cost in domestic markets, led firms in industrial countries to produce abroad to increase their efficiency and profits. This not only triggered FDI but also changed its nature in comparison to the 1970s and early 1980s. In those years, FDI was mainly driven by resources extraction and import substitution, whereas the progressive globalization of production has led to a high proportion of current FDI being characterized as efficiency-seeking investments.

The second development in the financial structure of industrial countries that increased capital flows to emerging markets was the growing importance of institutional investors. These investors found themselves more willing and able to invest abroad because of higher long-term expect rates of return in developing counties and to wider opportunities of risk diversification.

IV - Capital Flows: Can theory and Practice justify controls?

Controversy persists on the role of capital flows in boosting development and inducing macroeconomic instability (Cardoso and Dornbusch, 1989). Capitals flows affect consumption, production, and macroeconomic managment.

a) Capital flow and consumption

The consumption-smoothing advantage offered by capital inflows arises under two circumstances: in a context of cyclical fluctuations and in a context of growth where foreign savings are used to initiate growth. In the case of cyclical disturbances to the terms of trade, output, or foreign demand, optimal consumption will fluctuate less than disposable income if there is the possibility to borrow during periods of income shortfalls with subsequent repayment when income recovers. This positive welfare of capital flows extends to disturbances that are domestic.

Consumption-smoothing can also arise in a growth context. The case of Korea between 1960 and the mid-1980s provides a striking example of a transition toward a high saving rate, financed initially by external borrowing. Between 1960 and 1969, foreign savings equal to 9 percent of GDP financed half of investment. A growing income per capita increasingly provide the resources to finance investment and by 1986-89 the savings/income ratio had reached 35 percent, the current account had turned toward surplus, and debt started to be retired.

b) Capital flow and production

Capital inflows add to an economy's productive and thus potentially increase welfare. Foreign investment may carry more than the traditional neoclassical benefits by adding to competition or improving technology. But because of existing distortions, these factors may also lower welfare.

The traditional analysis of foreign investments considers a barter economy where capital inflows (direct foreign investments) take the form of an increase of the economy's output. In the case of constant returns to scale, the foreign factor earns its marginal product, but also adds to national income, i.e. the income of domestic factors of production. This simple analysis facilitates consideration of the choice of optimal borrowing. A country facing a perfectly elastic supply of capital should borrow (rent) capital to the point where the marginal value of capital is equal to the world cost of capital. But if the supply of capital is upward-sloping, the increasing marginal cost of capital calls for restriction of capital inflows below the competitive level. This analysis offers a first rationale for the use of taxes or quantitative restrictions on foreign borrowing.

Much of the discussion about the costs and benefits of foreign capital in developing countries involves departures from the simple neoclassical model sketched above and acknowledges that controls are welfare-reducing unless they are a "second best" policy that mitigates the effects of another market failure. Dooley (1995) offers a survey of the modern literature on market distortions and second best arguments that justify intervention over international capital transactions. The survey reviews the analysis of a wide variety of market failures including sticking prices in goods and labor markets, distortionary tax policies anticipated trades reforms, and myopic private speculation. A more recent argument for government intervention in international capital markets is based on the literature on multiple equilibria. Special circumstances, such as

a fixed exchange rate regime during transition to a monetary union, may justify capital controls to prevent self-fulfilling speculative attacks. In this situation, if multiple equilibria are possible, the first-best equilibrium might be achieved through government interventions in capital markets

c) Capital flow and Macroeconomic Management

It is widely recognized that capital flows pose several problems for macroeconomic policy. The most widely cited examples concern the experiences of Latin American countries during the period 1978-82 and the mid 1990s. During these two periods, a number of countries experienced a strong real appreciation of their currencies, followed by balance of payment crises. Economists have interpreted the real appreciation in two distinct ways. Haberger (1986), for instance, highlights the sudden abundance of foreign borrowing and the resulting pressure of capital inflows on the real exchange rate. In this view, capital flows lead to real appreciation, and in that way bring about an inward transfer of resources.

The alternative explanation notices that in all cases of real appreciation in Latin American countries in the early 1980s and mid 1990s, the monetary authorities followed a conscious policy of using reduced rates of exchange depreciation (or even fixing the exchange rate to achieve disinflation, as in Chile in 1979-81) The combination of expected reduced depreciation with high domestic interest rates in relation to interest rates in the United States attracted capital inflows. The real appreciation in turn led to current deterioration. In the end, each of these experiences of the real appreciation turned out to be very costly, as illustrated by Mexico's 1994 crisis.

The situation has also been complicated by relatively high domestic rates that have induced banks to incur open foreign exchange positions by financing local currency lending with foreign currency borrowing. Even when rules limit their currency positions, banks still become indirectly exposed to the risk of devaluation. When use of the exchange rate as a nominal anchor leads to relatively high rates, combined with little immediate prospect of devaluation, enterprises are encouraged to take up foreign currency-denominated loans. In cases where the borrowers' revenues are mostly denominated in the domestic currency, the quality of the foreign currency loans can also deteriorate in the event of a domestic currency devaluation.

The desire to counteract the pressure to exchange rate appreciation in the face of large capital inflows and to limit inflows that are likely to be reversed has led to central bank intervention. Policies to reduce the impact of capital inflows include direct intervention through controls and taxes and a restrictive monetary policy in the form of sterilization. Sterilization can create significant fiscal costs in financing high levels of reserve holdings depending on the scale of the operation and the size of the interest differential vis a vis external rates in reserve centers. The instability caused by heavy inflows and the costs of sterilization seems to give governments a reason to control capital flows.

Perhaps one of the most convincing arguments in favor of the use of capital controls was advanced by Dooley (1996). He argues that large private inflows to developing countries have reflect a chain of official guarantees consisting of a commitment to an open capital account, the adoption of a fixed exchange rate (or limited flexibility), and the guarantee that the authorities will help stabilize the domestic financial system during a crisis. The financial system guarantees include a lender of last resort provision, bank deposit insurance, and interventions in equity markets to limit price declines. Given the incentives created by these guarantees, the size of the capital inflow will be related to the country's perceived net worth (the value of its net international reserves, the credit lines it can obtain from private markets, and the resources that are likely to be available from international financial institutions). If the guarantees lead inflows to a poorly supervised financial system, poor quality investments may occur. The solution to this problem lies in breaking the chain of guarantees offered to international investors. Dooley regards a threat to withdraw the guarantee of the bank deposits or the solvency of the banking system as not credible. This leaves either changing the exchange rate regime or imposing capital controls as the only options, if countries do not want domestic interest rates to be determined by international markets.

d) The costs of capital control

Controls on capital flows take the form of restrictions on the assets transactions or restrictions on payments related to the acquisition of assets. Restrictions on assets transactions include direct capital controls, such as quantitative limits or prohibitions of certain transactions by imposing minimum maturity limits. Price-based capital controls take the form of taxes or reserve requirements.

Recent experiments with controls on capital outflows and inflows have covered a wide variety of instruments. In response to the mid-1990s capital outflows, Venezuela introduced comprehensive exchange controls to limit current and capital account transactions. Romania responded to its balance of payments crisis of early 1996 by effectively closing foreign exchange markets. South Africa postponed the elimination of remaining exchange controls on residents' capital outflows following a run on the rand in early 1996. In response to Mexico's peso crisis in late 1994, Brazil prohibited prepayment of foreign loans and relaxed certain capital inflow controls.

Examples of direct controls by countries that experienced recent surges in capital inflows include, among others, Brazil's prohibition of some nonresident transactions (inflows to futures and options markets) in 1995, and Chile's one-year minimum maintenance period for nonresident capital inflows. These countries also used price-based controls. For instance, Brazil raised the financial transaction tax to discourage inflows in the 1990s. Chile introduced a stamp duty in mid-1990 and extended the tax base to all foreign loans.

Financial regulatory measures and prudential measure can also affect capital movements. China, India, Korea, and Thailand differentiate their reserve requirements between resident and nonresident deposits in a way can influence capital movements in

some cases. Prudential regulations applied for the purposes of controlling bank's open net foreign currency position may include a capital control element. Brazil, responding to capital outflow surges in 1995, raised bank's short position limit and lowered their long position limit.

Alongside arguments that justify the use of capital controls, a strong traditional argues that government intervention does not accomplish its stated objectives. There is the question whether the costs and distortions generated by controls outweigh potential benefits. These costs include the possibility of retaliation by other countries, evasion, administrative costs, and the inability to quantify the needed tax on capital flow. There is also the risk that controls established to mitigate a temporary distortion may generate interests of their own outline their purpose.

e) Does practice justify controls?

Whether controls are welfare-improving or welfare-reducing is an empirical question. The empirical evidence on the effectiveness of controls has concentrated on the effects on interest differentials (Dooley 1995). Essentially, capital controls permit a breach between international and domestic interest rates even when expected devaluation and risk premium are factored in. Dooley surveys the empirical evidence on industrialized and developing economies and concludes that controls have influenced yield differentials across countries although there is no evidence that controls have helped governments achieve policy objectives, such as avoiding real appreciation, or that have enhanced welfare suggested by theory.

Data on capital control is scarce and few empirical papers introduce them directly. Most papers use the International Monetary Fund's Exchange Arrangements and Restrictions as the source of capital control data. The exceptions are Johnston and Ryan (1994) and Grilli and Milesi-Ferretti (1995) that use panel data for industrialized and developing countries. Both papers find that the data do not support the hypothesis that control programs affect economic variables, such as the volume and composition of private flows, changes in international reserves, or the level of the exchange rate. Grille and Milesi-Ferreti also find that capital controls are associated with higher inflation and lower real interest rates.

Chile is generally cited as an example of the effective use of capital controls, but Soto and Valdes-Prieto (1996) find mixed results. The econometric evidence between 1987 and 1995 shows that capital controls were not evaded in Chile where substantial levels of tax revenue were levied on capital markets participants. As a matter of fact, the ability to collect tax revenue on capital flows increase over time as the Chilean authorities closed loopholes and the selective capital controls have discouraged significantly particular classes of short-term credits. The results show that the taxed short-term flows were smoothly substituted by other short-term flows without measurable changes in total short-terms credits. The taxes were borne by participants who were unable to substitute flows. The authors also find that selective capital controls have failed too achieve other objectives of the Chilean monetary authorities, such as

delaying real exchange rate appreciation or improving the mixture of foreign financing between long-and short-term credits.

In the case of Colombia, Cardenas and Barrera (1997) find a relative inability of controls to reduce the level of capital inflows, but suggest that non-remunerated deposits have been successful in inducing a recomposition of foreign liabilities in favor of long-term maturities.

Reinhart and Smith's (1996) findings are consistent with the results mentioned above. After analyzing stylized facts of several recent episodes in Asia, Easter Europe, and Latin America they agree that capital controls had little effect on consumption, the current account, or the real exchange rate, but in most cases the measure were capable of either reducing the overall volume of inflows, or in some cases even altering their maturity profile over the short run.

In summary, the evidence seems to be capital controls can provide temporary breathing room for dealing with balance of payments difficulties and help to reverse capital outflows if combined with policy tightening involving higher interest rates. Controls can also serve to discourage potential destabilizing short-term capital flows and reduce a country's vulnerability to shifts in market sentiment. But, it seems ineffective in preventing sustained outflows of savings or avoiding a crises induced by inconsistent macroeconomic policies. Enforcing capital controls over extended periods can reveal itself as a hopeless task in a world of highly integrated international capital markets.

V - The Brazilian Experience: Determinants of Capital Flows and the effects of the control

After the oil chock of 1973, Brazil's reliance on commercial loans to finance both public investment and the more expensive oil led the country to the debt crisis of the early 1980s. Following a trend common to other emerging markets, private capital inflows to Brazil disappeared in the 1980s and increased dramatically after 1991. By 1993, the fall of international interest rates had eased the external debt burden and led to an agreement with creditor banks that was concluded in April 1994 with a exchange of instruments that covered over \$50 billion in debt stocks and arrears.

Monthly, private net capital flows averaging \$39 million between 1988 and 1991 increased 25 times, turned into an average monthly net flow of \$970 million between 1992 and 1995. Since 1992, net foreign capital flows to Brazil have been sufficient to finance small current account deficits while contributing to an increase in foreign reserves (Cardoso, 1997). During this period, the capital consisted primarily of short-term resources tied to portfolio investments and other short-term investments. In 1995, for example, net capital flows amounted to more than \$29 billion, of which \$20 billion was short-run capital: \$2,3 billion was equity and special investments funds, and approximately \$18 billion consisted of short-run capital not classified under a specific category. (see table 1)

TABLE 1: BRAZIL: Composition of Capital Flows, 1991-95
(In millions of U.S. dollars)

PERIOD	1991	1992	1993	1994	1995	1996	1997	1998
(a) Net direct investment	-408	1,268	-481	852	2,376	4,663	16,017	20,884
(b) Reinvested profits	365	175	100	83	200	531	151	124
(c) Equity securities and other funds	578	1,704	6,651	7,280	2,294	6,039	5,300	-1,851
(d) Debt securities and loans	2,368	5,761	5,866	3,713	9,113	18,098	20,852	28,373
(e) International organizations and government agencies	-4,131	-3,425	-2,909	-1,908	-2,227	-929	1,075	1,795
(f) Short-term capital and others	-2,901	1,033	-1,623	-2,054	17,544	5,752	-17,516	-29,093
(g) = (a)+(b)+(c)+(d)+(e)+(f) = Financial account in the IFS	-4,129	6,516	7,604	7,965	29,310	34,154	25,882	20,232
(h) Arreas, other short-term liabilities and exceptional financing	-19	18,755	2,511	6,329	510	-286	0	0
(g) + (h) = (i) Capital Account in Boletim do Banco Central	4,148	25,271	10,115	14,294	29,280	33,868	25,882	20,232

Sources: Central Bank of Brazil, Boletim do Banco Central do Brasil, International Financial Statistics, International Monetary Fund, And Fund Staff Calculations.

Table 1 shows the composition of capital flows. It illustrates the decline share of medium and long-term capital flows (lines "d" and "e") and the growing importance of short term capital (lines "c" and "f") in total private capital flows. Table 1 also shows that the share of net direct investment (including reinvested profits, lines "a" and "b") in total private capital flows oscillated between 1991 and 1998. Net direct investments, as a share of private capital flows, declined from 22 percent in 1991 to negative 5 percent in 1992, increasing to 11 percent in 1993, falling to 9 percent in 1994, increasing to 15 percent in 1995, 1996 to 62 percent , 1997 increased to 103 percent.

At the end of 1994, Mexico's financial crisis led to an immediate cutback in capital flows to emerging markets. During the fourth quarter of 1994 and the first quarter of 1995, the net flows of capital to Brazil was insufficient to finance the current account deficit, and the central bank lost reserves of about \$9,8 billion. When the crisis erupted, the initial reaction of investors suggested that the Mexican financial crisis would compromise all emerging markets, as stocks prices plunged, particularly in Argentina and Brazil; currencies weakened in developing countries from Thailand to Bulgaria, and foreign portfolio investment disappeared. The IMF joined the United States in a rescue operation under which the United States committed \$20 billion from its Exchange Stabilization Funds and the IMF pledged \$17,8 billion to support Mexican reforms. This infusion of capital successfully insulated financial markets from the crisis and soon capital also returned to Brazil. At the end of 1994 net capital flows were close to \$30 billion and 1995 net flows again exceed \$29 billion. In 1996, a boom in merges and acquisitions led to an increase in foreign direct investment, which amounted to \$8 billion while the sum of equity investment and short-term capital fell from \$20 billion to approximately 17 billion.

In 1996, short-term capital registered a net outflow of US\$ 17.5 billion, as compared to a net inflow of US\$ 5.8 billion due, for the most part, to net remittances of US\$ 21.3 billion in operations among financial institution in the country and abroad.

In 1997, the balance of payments was characterized by a high level of long-term foreign capital absorption, concentrated in direct investments due to the privatization program. Fluctuations in international reserves became more accentuated in October with the outbreak of the Asian crisis. The balance of payments closed 1997 with a deficit of US\$ 7.8 billion and was strongly affected by the crises

In 1997, net inflows of foreign capital totaled US\$ 26.1 billion or less than the 1996 total. This figure includes a rise of 80% in payments of amortizations on long-term foreign liabilities and the strong reversal of short-term net capital flows, as a result of the international crises.

For the years 1997 and 1998, we observe a strong decline in the volume of "short term capital and others". In 1997 Brazil had -\$17,516 and at the end of 1998, the balance of payments showed a even worst result as - \$29,093 as a result of the Russian crises that had spreaded also within the country.

a) Determinants of Capital Flows

Calvo, Leiderman and Reinhart (1996), divide the factors that encourage or inhibit capital flows into external and internal factors. The most important external factor is world interest rates. Short-term interest rates in the United States declined steadily in the early 1990s and the recession in the United States and Japan made profit opportunities in developing countries mores attractive. Agenor and others (1997) find that variance decompositions indicated that world interest rate shocks explain a large component of medium-term fluctuations in capital inflows in Brazil.

On the internal side, factors that attract capital flows include sound monetary and fiscal policies and market-oriented reforms, such as trade and capital market liberalization. Inflation liberalization reduces risks and stimulates capital inflows. Yet, Fernandez-Arias and Montiel (1995) conclude that formal evidence indicates that falling interest rates in advanced economies have played a dominant role in driving capital to developing countries and that flows were not restricted to countries with reform records.

Finally, there are contagious effects. Capital flows to a couple of countries in a region generate externalities to neighboring countries and an external crisis in one country may spread to others.

b) Capital controls

The National Monetary Council is responsible for formulating the overall foreign exchange policy. Regulations on capital outflows and capital inflows differ. Brazilian banks are permitted to sell foreign exchange to Brazilian investors in the Common

Market of the South, or Mercosur countries but, outward capital transfers not included in public regulations need prior authorization from the Central Bank.

Portfolio investment by foreign investors is restricted to two classes of fixed-income funds, and foreign investments in the Brazilian capital markets may be made through one of the five alternatives established under National Monetary Council Resolution 1289. Special regulations govern borrowing abroad. Payments for current invisibles not covered by current regulations require approval from the central bank's exchange department. Remittances abroad of income from foreign direct investment and remittances in respect of royalties and technical assistance require prior registration of the foreign capital concerned, including reinvestment, and the contracts for patents and trademarks with the department of foreign capital of the central bank.

Capital inflows in the form of financial loans require prior approval from the central bank. Proceeds of foreign borrowing are subject to a financial transaction tax with rates that range from 5 percent for loans with maturity under 3 years to zero percent for loans with maturity over 6 years. Otherwise, inward transfers are unrestricted, although use of the proceeds for the acquisition of certain domestic assets are restricted. Remittances of interest on loans and credits and of related amortization payment are permitted freely in accordance with the terms stipulated in the respective contract and recorded in the certificate of registration. Purchasers of foreign exchange for some current invisibles are subject to the financial transaction tax of 25 percent.

In the 1980s, following the debt crisis, controls on capital outflows were the norm. With the capital surge of the early 1990s, controls on outflows were lifted and controls on inflows were increased before the Mexican financial crisis and then reduced after the crisis induced an increase in capital outflows. Controls are divided into two types: restrictions on inflows and restrictions on out flows.

The changes in legislation listed in Appendix I are used to build indicators of restrictions on inflows and outflows and composite indicators as well. The first indicator is a measure of restrictions on inflows and defined as ΔRI . A change in legislation that is directed at reducing capital inflows, such as an increase in the financial tax on capital inflows, receives a value equal to 1 and a change in legislation that is directed at increasing capital inflows such as a reduction of the financial tax on capital inflows, receives a value of -1. Each month the changes in legislation affecting capital inflows are added to obtain the total value of changes in legislation affecting inflows in that month, ΔRI .

Between January 1983 and December 1995, monthly ΔRI varied between -3 and 3. The average number of changes in restrictions on capital inflows per month during the whole 1983 - 1995 period was -0,051, characterizing a trend of liberalization of restrictions on capital inflows.

The second indicator measures changes in restrictions on capital outflows ΔRO . Any change in legislation that is aimed at reducing capital outflows, such as introducing new restrictions on payments of debt amortization by public enterprises, receive a value of 1. Any change in legislation that liberalizes capital outflows, such as an agreement of the elimination of arrears, receive a value of -1. By adding up the changes in restriction

on capital outflows in a month we obtain ΔRO . Between January 1983 and December 1995, monthly ΔRO varied between 1 and -3. The average number of changes in restrictions on capital outflows per month during the whole 1983-1995 period was -0,045, characterizing a trend of liberalization of restrictions on capital outflows.

Restrictions on inflows potentially reduce capital inflows and thus potentially reduce net capital inflows. In the calculation of an overall measure of restriction on net flows, changes in restrictions on capital inflows, ΔRI , are thus recorded as a positive restriction on net flows. Restrictions on capital outflows, however, have two potential effects on net flows. First, they reduce officially registered outflows and thus potentially increase total net flows. But foreign investors will perceive restrictions on outflows as a threat to remitting abroad the returns of their investments. This policy, thus, can reduce inflows. The effect on net flows of restrictions on outflows will thus depend on the relative strength of the responses of outflows and inflows.

Capital controls are endogenous. The policy reaction reflects the effect of capital flows on the creation or withdrawal of new controls. With large capital inflows governments tend to impose controls to avoid real exchange rate appreciation, money expansion from accumulating reserves, or increasing debt from sterilization policies and to react to excessive inflows by taxing some forms of capital inflows and imposing other forms of restrictions. On the other hand, controls on capital outflows are imposed in moments of distress, when there is a shortage of external financing, and authorities respond to a decline in net flows by restricting outflows and creating incentives to inflows. Thus, restrictions on net inflows respond positively to net capital inflows.

IV - Chile's experience with capital control

In the early 1990s, Chile experienced a surge in capital inflows that created a conflict between the authorities' internal and external objectives: the problem was how to maintain a tight monetary policy without hindering Chilean export competitiveness. In 1991, the central bank attempted to resolve this dilemma by imposing a one-year unremunerated reserve requirement (URR) on foreign loans, which was primarily designed to discourage short-term borrowing without affecting long-term foreign investments. The fixed holding period of the reserve requirement implied that the financial burden diminished with the maturity of the investment. Between 1991 and 1997 the rate of the URR was increased and its coverage extended in several steps to cover most of the forms of foreign financing except foreign direct investment. Currently, there is a one-year minimum holding period on capital inflows (applying to all inflows above US\$ 10,000 except for short-term borrowing and holdings of American Depository Receipts (ADRs). Bonds issued abroad by Chilean companies must have an average maturity of at least four years. In addition, there is a 10 percent unremunerated reserve requirement, also with a one-year holding period, for all external liabilities that do not result in an increase in the stock of capital. In practice, this means that loans, fixed-income securities, and most equity investments are subject to the URR, and only FDI and primary issuances of ADRs are exempted from the reserve requirement. However, primary issues of ADRs are also subject to two minimum rating requirements (BB), granted by internationally recognized credit rating agencies.

The Chilean experience has been viewed by many as a means of controlling the composition of foreign borrowing without hindering the volume of capital inflows to the country. However, the empirical evidence regarding the effectiveness of the Chilean controls in reducing short-term external debt is somewhat ambiguous. For example, while it is difficult to be conclusive in the absence of a counterfactual, national data for Chile’s external debt suggest that the introduction of capital controls affected the maturity composition of net capital inflows only after 1995 when the controls were strengthened. (Figure 1) However, data from the BIS describe a somewhat different picture. Table 1 reports the claims of all banks with head offices in the BIS reporting area for 1997 for 24 emerging markets. The BIS figures for short-term external borrowing substantially exceed those reported in Chilean sources and suggest the existence of a large amount of foreign currency loans issued by Chilean affiliates of foreign banks, outstanding import credits (both types of loans are not included in official short-term external debt data), or significant misreporting of external liabilities. Moreover, the maturity structure of foreign bank borrowing appears quite different from what is implied by the national data. At the end of 1997, loans with maturity up to one year represented 49 percent of total foreign currency loans, whereas the Chilean debt data for the equivalent component of the total external debt is 11 percent.

Figure 1 - Chile's Short-Term External Debt.
(In percent)
 (Source: International Monetary Fund, World Economic Outlook)

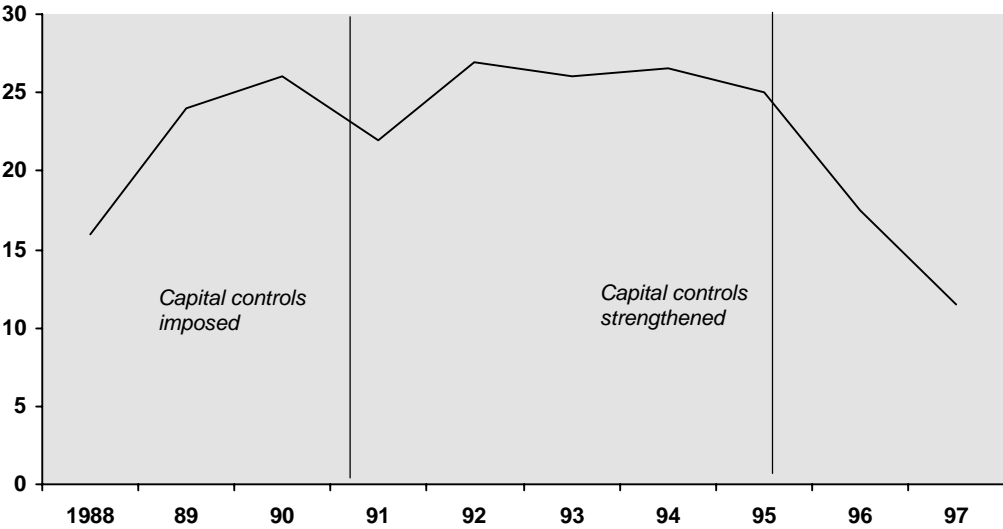


Table 1 - Bank Boring by maturity for selected Emerging Markets, End-December 1997.
(In millions of US dollars)
(Source: Bank for International Settlement, 1998)

Country	Total	Up to one Year	Percent of Short Term
Hungary	11,217	3,834	34,2
Poland	9,505	3,622	38,1
Venezuela	12,242	4,701	38,4
Colombia	18,480	7,394	40,0
Israel	6,132	2,545	41,5
Mexico	61,974	27,556	44,6
Russia	72,173	32,406	44,9
Slovak Republic	4,782	2,225	46,5
Chile	21,179	10,551	49,8
Czech Republic	10,780	5,388	50,0
Malaysia	27,528	14,613	53,1
Turkey	29,207	16,439	56,3
Argentina	60,413	34,529	57,2
Philippines	19,732	11,924	60,4
Indonesia	58,388	35,383	60,6
Korea	94,180	59,444	63,1
Brazil	76,292	48,922	64,1
Thailand	58,835	38,772	65,9
South Africa	21,000	14,020	66,8
Peru	9,897	6,855	69,3
Uruguay	5,033	3,568	70,9
Hong Kong SAR	211,968	167,954	79,2
Taiwan Province of China	26,173	21,402	81,8
Singapore	194,820	178,951	91,9

A brief survey of the literature on the effectiveness of the Chilean Controls

There is a large empirical literature addressing the issue of the effectiveness of capital controls. An extensive review, Dooley (1996) observed that the general conclusion is that controls allow countries to temporarily maintain a wedge between domestic and international yields. However, it appears that this effect is eroded over the time as the private sector develops new techniques to avoid the restrictions.

Empirical studies typically test for the effectiveness of capital controls by examining the evolution of offshore/onshore interest rate differentials and whether covered interest rate parity is violated. Since Chile did not have either a well-developed forward exchange market, or an offshore deposit market for Chilean pesos, empirical work on Chile has relied on alternative procedures to test effectiveness. As will be discussed, the empirical evidence regarding the ability of the Chilean controls to drive a sustained “wedge” between domestic and external monetary conditions is mixed. However, there is another dimension to the effectiveness of Chilean-type capital controls, namely their ability to limit the accumulation of short-term external debt by financial and nonfinancial entities. Unfortunately, there is little empirical evidence regarding whether Chilean controls have been effective in this dimension.

Quirk and Evans (1995) observe that net short-term private capital inflows recorded in the balance of payments decreased in 1991 with the introduction of capital controls. However, they also observe that “net errors and omissions” and the estimated trade misinvoicing also increased sharply in the same year. One possible interpretation of that evidence is that the change in “errors and omissions” represents an increase in unrecorded short-term flows reflecting an attempt by the private sector to circumvent the capital restrictions.

Using the tax revenues generated by the URR as a proxy for the effectiveness of the restrictions (and including errors and omissions from the balance of payments in their definition of short-term capital inflows) Valdés-Prieto and Soto (1997) find that the URR did not have a significant effect on short-term borrowing before 1995, when the implicit tax increased from 3,6 percent to 6,7 percent after the Central Bank changed the regulations and required investors to hold their reserves in U.S. dollars. However, the paper does provide evidence that the URR was effective in the period 1995-96. Nevertheless, the authors present data (but not formal tests) suggesting that other forms of short-term borrowing increased over that period as the private sector substituted exempt short-term flows - not always classified as short-term credit in the Chilean statistics - for taxed short-term flows, as the authorities gradually changed the tax design over time in an attempt to counteract new methods of evasion.

Edward (1998) tests Chile’s capital controls effectiveness indirectly. To make up for the lack of offshore interest rate and forward exchange rate data, he focuses on how the evolution of the real exchange rate and interest rate differential was influenced by capital controls. This hypothesis was that under the assumption of “effectiveness” the introduction of capital controls will significantly affect the relationship between domestic and foreign interest rates and the time-series characteristics of the real exchange rate. His empirical results suggests that the impact of capital restrictions on the behavior of

the real exchange rate has been very limited and short-lived. The paper also provides some evidence suggesting that the degree of persistence of interest rate differentials increased somewhat after the introduction of capital controls.

Cardoso and Laurens (1998) find that the introduction of capital controls had only temporary effects on the composition of external financing, which is consistent with the view that the private sector will attempt to circumvent any restriction to capital movements, and that over time it will succeed. They regress a direct measure of net private capital inflows on an index of capital account restrictions and a vector of control variables, including real interest rate differentials, domestic GDP, and seasonal dummies. Their result suggest that capital controls were effective in the six months following their introduction, but ceased to be effective afterward. However, their analysis does not control for the possibility of simultaneous causality in the regression. In particular, it seems difficult to establish the direction of causality between interest rate differential and capital inflows.

A conclusion for the Chilean experience

In Chile, strong and well-designed prudential regulations complement capital account restrictions in protecting the financial system from capital flow swings. Banks cannot lend domestically in foreign exchange, with the exception of the foreign-trade-related credits. Moreover, there is a limit on the open foreign exchange position set at 20 percent of banks' capital and reserves, and there are other limitations on maturity mismatches (Eyzaguirre and Lefort, 1998). Some observers have argued that the combination of these prudential measures and capital account restrictions has accomplished two objectives. First, it has limited the foreign exchange exposure of both bank and nonbank entities. Second, in the event of sudden capital outflows, the limitation on maturity mismatches would allow the central bank to defend the exchange rate parity by raising the interest rate, without damaging banks' profitability.

The importance of the Chilean prudential framework is stressed in Zahler (1993), who argues that financial liberalization and capital account opening should be accompanied and preceded by a comprehensive reform of supervisory regulations. He suggests that the lack of adequate banking legislation in the major cause of the failure of most Latin American liberalization processes. Implicit insurance of banks' liabilities and the absence of supervision led the banking system to excessive risk taking that later resulted in a general crisis. Along the same lines, Edwards (1998) suggests that Chile owes its stability not to capital controls but to banking regulations. He argues that during the 1970s and early 1980s Chile also imposed an URR on capital inflows that did not prevent a major banking and currency crisis in 1982. He stresses that the major difference with the current situation is the existence of sound banking regulations that were substantially improved with a major reform in 1986.

V - Conclusion

Over the last two decades, many countries have actively liberalized both their domestic financial systems and their capital account. At the same time, they have also experienced severe disruptions and outright crises in their banking systems, and foreign exchange markets. As a response to these developments, many have argued in favor of strengthening prudential regulation and supervision of financial systems, and, more recently, in favor of controlling those capital flows that are deemed to be a more unstable nature. These actions are believed to improve the soundness of existing financial systems and to shield, to a greater extent than recently experienced, countries from a turnaround in (global) market sentiments, thereby reducing financial fragility and enhancing economic performance.

Despite the importance of these issues, very little empirical investigation exists of the links among capital account liberalization, prudential regulation and supervision, financial crises and economic development, mainly because of the lack of comparable measures to describe regulatory practices for a range of countries.

There are some correlations that emerge from this paper. Financial fragility seems exacerbated by lenient prudential practices. Policy inconsistencies, institutional shortcomings, lack of sound macroeconomic policies, big internal and external debts, stimulates at any time, an abrupt reversal in capital flows.

In sum, capital controls may work for a small select number of countries and also during a short period of time, but most developing countries have found them as a quick route to sharp reduction in lending from international capital markets. Therefore, any type of protections should be no more than a temporary measure that provides time to create the proper policy framework to these countries, in order to enable them to face all kinds of shocks when dealing in the international market.

APPENDIX I

CHANGES IN TAXES AND RESTRICTIONS ON CAPITAL FLOWS AND ON PAYMENT OF INVISIBLES

(Including Changes in Legislation Affecting Other Payments Abroad Used to Circumvent Legislation on Capital Flows) Brazil, 1983-1995

1983

- ◆ 11-Jan: Government granted a 20 percent income tax reduction on transaction in the form of leasing with maturity over eight years and exempted leasing fees from the financial transactions tax (IOF);
- ◆ 11-Jan: Government lowered to three months the minimum period for which non residents capital should be invested in Brazil to receive fiscal benefits;
- ◆ 13-Jan: Government raised from \$1,000 to \$20,000 the maximum amount of securities exchanges without intervention of authorized brokerage houses;
- ◆ 11-Mar: Government reduced foreign exchange allowance for tourists travel abroad from \$ 2,000 to \$1,000. The monthly limit of \$300 for personal remittances remained restricted for Brazilians temporarily resident abroad to pursue approved educational programs or medical treatment;
- ◆ 29-Jul: Foreign exchange surrender requirements and a related foreign exchange allocation system were established. Transfers abroad for payments of Brazilian commercial bank obligations would follow priorities established by the central bank;
- ◆ 14-Set: Government reduced foreign exchange allowance for tourist travel from \$1,000 to \$500 and from \$300 to \$100 for travel to Latin America;
- ◆ 20-Dec: Government made supplementary tax on remittances of profits and dividends applicable to all distributed profits and remittances but exempted reinvested profits;
- ◆ 28_Dec: Government required that the cruzeiro value of 95 percent of principal and interest payments due on medium-and long-term debt eligible for the Paris Club rescheduling to be deposited in special foreign denominated deposits;

1984

- ◆ 19-Mar: The system of comprehensive foreign exchange controls was abolished
- ◆ 21-Aug: Government allowed investments banks to deal in foreign exchange, provided they met specified standards;
- ◆ 12-Set: Government restricted the timing of release of voluntary deposits at the central bank in respect of foreign loan obligations to the dates of the maturity of payment of principal, interest, and commissions;
- ◆ 13-Dec: Government raised the sales of foreign exchange for travel abroad to \$1,000 and for trips to Latin America or initial stopover to \$500;

1985

- ◆ 28-Jun: Government reduced from 40 percent to zero the rebate on the tax payment by remitter of interest on loans, commissions and expenses related to foreign transactions;
- ◆ 15-Aug: Government defined conditions under which foreign exchange sales to small business are exempt from financial transactions tax;
- ◆ 7-Out: Ministries and government agencies prohibited from leasing real estate abroad;
- ◆ 31-Dec: Central Bank raised the limit to supply foreign exchange to authorized banks to cover their oversold position from 90 percent to 100 percent of the sold position on the same day

1986

- ◆ 23-Jul: Government introduced a temporary financial tax of 25 percent on the sale of foreign exchange for travel purposes to remain in effect until dec.31,1987

1987

- ◆ 20-Fev: Government required interest payments to nonresident commercial banks to be deposited at the central bank;
- ◆ 11-Mar: Central bank offered special short-term line of credit in foreign currency for domestic commercial banks;
- ◆ 20-Mar: Government introduced new regulations on foreign capital companies and funds;
- ◆ 20-Mar: Government required interest payment on official loans to be deposited in the central bank;
- ◆ 28-May: Government required amortization payments on official loans to be deposited at the central bank;
- ◆ 17-Nov: Government created framework for debt-equity swaps

1988

- ◆ 18-Jan: Central bank required payments in gold instead of cruzados for Brazilian investments abroad;
- ◆ 1-Fev: Government introduced new regulations on debt equity conversion;
- ◆ 30-Jun: Government required prepayment of principal or interest on external obligations be done through the banking systems and communicated to central bank within two days;
- ◆ 28-Jul: Government introduced new regulation governing the participation of foreign capital in mutual funds;
- ◆ 1-Sep: Government introduce special tax treatment for profits earned from mutual funds owned by foreign residents;
- ◆ 9-Sep: Government reduced foreign exchange available for travel to Latin America to \$250;

- ◆ 21-Sep: Government lifted moratorium on interest payment on debt owned to foreign commercial banks;
- ◆ 28-Sep: Government increased foreign exchange available for travel to Latin America to \$500
- ◆ 30-Nov: Government allowed investment abroad by Brazilian enterprises in an amount equal to direct investment received excluding investment from debt equity conversion;
- ◆ 1-Dec: Government increased limit on foreign exchange allowances for travel to \$4,000.

1989

- ◆ 9-Jan: Government limited repurchase of foreign exchange by a foreign traveler to \$100;
- ◆ 20-Apr: Government permitted transfers abroad of proceeds from sales of property and inheritance up to \$300,000 with documentation;
- ◆ 1-Jul: Central bank imposed retention of interest payments accrued on debt owed to nonresident commercial banks;
- ◆ 3-Jul: Same for remittance of profits and dividends;
- ◆ 5-Out: Dividends of foreign companies also to be retained by the Central Bank for 60 days before remitted abroad;

1990

- ◆ 10-Jan: Government increased the period of retention by the Central Bank of dividends permitted to be remitted abroad from 60 to 120 days;
- ◆ 16-Mar: Government introduced foreign exchange interbank market for transactions related to profit and dividend remittances, capital repatriation, debt service payments and approved foreign investments;
- ◆ 26-Jun: Government announced that remittances of profits, dividends, royalties and repatriation of capital would be freed gradually;
- ◆ 31-Jul: Government allowed some financial institutions to obtain resources from abroad by issuing commercial papers;

1991

- ◆ 1-Jan: Government allowed private sector and nonfinancial public sector to obtain foreign exchange to service their debts;
- ◆ 24-Jan: Government defined criteria for rebate of accumulated losses of foreign capital enterprises;
- ◆ 8-Fev: Government announced criteria for conversion of debt into equity for private sector debt with maturities beginning in 1991;
- ◆ 2-Mar: Government authorized conversion of external debt instruments of the federal public sector for use in the privatization program;
- ◆ 27-Mar: Government reduced minimum term for exemption of income tax on external loans from 10 to 5 years;

- ◆ 1-Apr: Government reached preliminary agreement with nonresident creditor banks for the elimination of arrears;
- ◆ 5-Apr: Government allowed debt service payments of public enterprises;
- ◆ 18-Apr: Government allowed remittance of profits and dividends on investments still in the process of registration at the Central Bank;
- ◆ 31-May: Government liberalized the stock market to foreign institutional investors by exempting profits from income tax, imposing no capital gains tax and a 15 percent tax on income remitted abroad;
- ◆ 1-Jun: Government allowed exporters to issue medium-term debt instruments secured with future export receipts;
- ◆ 6-Jun: Government authorized the issuance of debentures convertible into stocks in domestic enterprises;
- ◆ 16-Jul: Government introduced facility for externally-funded nonprofit organizations to undertake debt-for-nature swaps;
- ◆ 23-Jul: Government exempted remittance abroad of late interest payments from specific authorization;
- ◆ 31-Jul: Government issued rules for borrowing external resources through AED/IDR mechanism;
- ◆ 25-Sep: Government permitted borrowing abroad for financing of agricultural development;
- ◆ 30-Dec: Government abolished the supplementary income tax relate to remittances of profits abroad.

1992

- ◆ 1-Jan: Government modified foreign capital law, setting maximum withholding tax rate for remittances of profits and dividends abroad at 25 percent, lower if lower in home countries and announced the ceiling would be reduced to 15 percent in 1-Jan 1993;
- ◆ 9-Jan: Government liberalized the participation by foreigners in privatization, reducing the period from 12 to 6 years that investments through foreign debt instruments are required to remain in Brazil;
- ◆ 9-Jan: Government abolished minimum holding period of 2 years before assets acquired in privatization could be sold to invest in other assets;
- ◆ 12-Mar: Government increased minimum average maturity of foreign funding obtained through issuance of securities eligible for tax exemption from 23 months to 30 months;
- ◆ 1-Fev: Government reduced maximum period for pre-export financing that may be obtained against exchange contracts unofficially from one year to 180 days. A tax of 3 percent was levied on ACCs not supported by shipments;
- ◆ 1-Apr: Government reduced limit on authorized banks' sold position in the foreign exchange market by relating it to the net position of each bank;
- ◆ 23-Apr: Government imposed minimum maturity of 30 months for companies to arrange foreign funding through the issuance of foreign debt instruments;
- ◆ 23-Apr: Government made the average minimum period of amortization equal to 6-months for borrowers to benefit from tax exemptions;

- 30-Apr: Government authorized resident companies to hedge against in international interest rates;
- 18-May: Government authorized depository institutions to issue receipts abroad with backing in securities held in specific custody in Brazil;
- 30-Jun: Government authorized foreign investors represented by funds and institutional investors to operate in options and futures markets;
- 16-Jul: Government authorized corporations established in Brazil to issue and place abroad securities that can be converted into equities;
- 30-Sep: Government allowed Brazilian nationals to buy foreign exchange to pay for medical treatment abroad in the floating market;
- 30-Sep: Government authorized leasing contracts for a minimum term of 2 years, with total tax exemption if term is at least 5 years;
- 1-Oct: Government allowed issue and placement of securities that can be converted into stocks by companies and institutions headquartered in Brazil;
- 14-Oct: Government allowed Brazilian nationals to buy foreign exchange to pay for sport events abroad in the floating market;
- 14-Oct: Government allowed nonfinancial Brazilian residents to invest abroad up to \$ 1 million, but only with authorization of the Central Bank if investment is in the excess of \$ 1 million;
- 21-Oct: Government allowed Brazilian nationals to buy foreign exchange to pay for exhibits abroad in the floating market;
- 29-Oct: Government extended minimum maturity of external debt other than bonds, notes and commercial paper under Resolution 63 from 1 year to 30 months;

1993

- 16-Jun: Government extended minimum term for external borrowing from 30 to 36 months;
- 28-Jun: Government raised minimum term of external borrowing eligible for exemption on the income tax on interest to 96 months from 60 months;
- 21-Jul: Government reduced limit on authorized banks' short position in the foreign exchange market by 50 percent;
- 21-Jul: Government raised limit on authorized long position to \$ 10 million from \$ 2 million;
- 30-Jul: Government authorized firms to make hedging operations related to variations in exchange rates, interest rates and commodity prices;
- 4-Aug: Government authorized financial institutions to trade gold among themselves;
- 19-Aug: Government forbade foreign capital registered under Articles I and IV to be applied to fixed income instruments;
- 7-Oct: Government allowed Brazilians to obtain foreign exchange for purchases abroad of real estate, advertisement, etc;
- 20-Nov: Government imposed 3 percent IOF tax on proceeds from foreign borrowing;
- 20-Nov: Government restricted portfolio investment by foreign investors in fixed income instruments to a single class of fixed income funds and to a 5 percent IOF tax;

- ◆ 25-Nov: Government forbade foreign registered under Articles I and IV to be applied to investments in bedentures;
- ◆ 17-Dec: Government restricted the portfolio of the Fundo de Renda Fixa-Capital Estrangeiro by excluding transactions in derivative markets yielding fixed or predetermined returns

1994

- ◆ 13-Jan: Government authorized some institutions to conduct swap operations involving gold, exchange rate and price indices over-the-counter;
- ◆ 19-Jan: Government introduced new restrictions on the constitution and operation of foreign institutional investors;
- ◆ 28-Fev: Government introduced legislation that permits taxing issues of bonds abroad and foreign investment in fixed income funds up to 25 percent from the current 3 and 5 percent if considered necessary;
- ◆ 2-Mar: Government stopped automatic authorization for issuing bonds, commercial paper and other fixed-income assets abroad;
- ◆ 2-Mar: Government allowed payments in cash of foreign currency deposits from excess buyer positions;
- ◆ 2-Mar: Government introduced requirement of documents to transfer national currency abroad;
- ◆ 15-Apr: Brazil completed arrangements to reschedule its external debts to commercial bank creditors;
- ◆ 15-Jun: Government issued regulations of foreign investments companies; suspended for 90 days loans to the public sector, suspended for 90 days flows for future investment, increased banks' short position from \$10 million to \$50 million;
- ◆ 21-Jun: Government reduced the financial transaction tax for purchases of foreign exchange for payment of contracts transfers of technology to zero from 25 percent;
- ◆ 1-Jul: Government extended minimum period for external prefinancing of exports to 2 years;
- ◆ 31-Aug: Government permitted prepayment of foreign borrowing and import financing;
- ◆ 31-Aug: Government eliminated 20 percent limit for import financing down payments;
- ◆ 22-Sep: Government allowed creation of investments funds abroad, requiring 60 percent of securities negotiable abroad to consist of Brazilian securities;
- ◆ 5-Oct: Government prohibited inflows in the form of advanced for future capital increases and bridge investment in anticipation of future conversions of debts into investment;
- ◆ 19-Oct: Government eliminated limit on foreign exchange allowance for travel abroad;
- ◆ 19-Oct: Government reduced period allowed for anticipatory exports settlements and suspended inflows through anticipated payments of exports;
- ◆ 19-Oct: Government imposed a 15 percent reserve requirement without interest remuneration on anticipatory settlement of credit operations;
- ◆ 19-Oct: Government increased financial transactions tax on foreign investment in fixed-income instruments to 9 from 5 percent;

- ◆ 19-Oct: Government introduces new financial transaction tax on foreign investment in stocks at the rate of 1 percent;
- ◆ 19-Oct: Government increases financial transaction tax on foreign borrowing to 7 percent from 3 percent;

1995

- ◆ 11-Jan: Government eliminated reserve requirement of 15 percent on advances for export contracts;
- ◆ 11-Jan: Government reinstated anticipated payment for export operation with a minimum term of 360 days;
- ◆ 11-Jan: Government lengthened maximum period for advances for export contracts;
- ◆ 9-Mar: Government lowered minimum period for the renewal and extension of foreign credit operations to 6 months from 36 and lowered limits of the long position of banks and dealers in foreign exchange to \$1 million from \$10 million;
- ◆ 9-Mar: Government reduced IOF to zero from 7 percent of foreign loans, from 9 percent to 5 percent on investments in fixed-income funds, and from 1 percent to zero percent on investment in stocks;
- ◆ 9-Mar: Government lowered minimum average term for contracting financial loans from 36 to 24 months and lowered minimum term for re-lending operations related to resolution 63 to 90 days from 540 days;
- ◆ 9-Mar: Government revoked permission granted for anticipated payment of financial loans and import financing;
- ◆ 16-Mar: Government allowed financial institutions of the national system of rural credit to contract foreign resources exempted from the financial tax of 5 percent, and reduced the minimum contract period to 180 days from 3 years;
- ◆ 20-Apr: Government limited anticipated payment for imports to 20 percent of the value of the merchandise;
- ◆ 27-Apr: Government authorized anticipated payment for exports by foreign individuals, corporations and financial institutions;
- ◆ 27-Apr: Government increased limits on the short position of banks in foreign exchange by 50 percent;
- ◆ 30-Jun: Government allowed financial institutions to contract with a minimum maturity of 720 days for the financing of constructions and acquisition of real estate ventures;
- ◆ 11-Aug: Government extended a 7 percent financial (IOF) for interbank operations in foreign exchange;
- ◆ 11-Aug: Government raised IOF for financial loans to 5 percent from zero;
- ◆ 11-Aug: Government raised IOF for 7 percent from 5 percent for investments on fixed income funds;
- ◆ 11-Aug: Government prohibited foreign investors from channeling resources into operations in the futures and option markets;
- ◆ 15-Aug: Government cuts the IOF rate for foreign resources for the agricultural sector to zero;
- ◆ 15-Sep: Government established differentiated IOF rates for financial loans with different maturities;

- ◆ 28-Sep: Government reduced the discount rate on conversion of federal public sector entities foreign debt into investments in the privatization program to zero from 25 percent.

1996

- ◆ 1-Jan: Profits and dividends remitted abroad exempted from income tax and profits on direct investment reduced to 15 percent from 25 percent;
- ◆ 1-Jan: Maximum tax rate applicable to interest remitted abroad reduced to 15 percent from 25 percent;

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