



The role of fiscal and monetary policies in the Brazilian economy: Understanding recent institutional reforms and economic changes



José Roberto Afonso^{a,b,*}, Eliane Cristina Araújo^{c,d}, Bernardo Guelber Fajardo^e

^a Brazilian Institute of Economics at Getulio Vargas Foundation (FGV-IBRE), Brazil

^b Brasiliense Institute of Public Law (iDP), Brazil

^c State University of Maringá (UEM), Brazil

^d National Council for Scientific and Technological Development (CNPq), Brazil

^e Brazilian School of Public and Business Administration (EBAPE/FGV), Brazil

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ABSTRACT

Monetary and fiscal institutions have played a decisive role in the stabilisation of the Brazilian economy since the mid-1990s. In Brazil institutional reforms were predominantly made in response to a succession of internal and, particularly, external crises. Brazil's experience of designing and managing institutions to this end is likely to be of interest to other emerging and low- or middle-income economies. As such, the Brazilian experience offers many lessons to be learned, both in the sense of what could be done and what is better avoided.

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1. Introduction

The aim of this paper is to highlight the origins and evolution of fiscal and monetary institutions in Brazil and the central role this played in the containment of inflation. From this evaluation clear policy lessons can be derived which may have wider relevance to other countries in Latin America, and indeed beyond the region. The lessons center on, among other issues, the implications of institutional reform for management of public and private finances, and the implementation of monetary policies directly aimed at ensuring price stability.

More than 20 years have now elapsed since Brazil embarked on a far-reaching macroeconomic stabilisation program, the Real plan. Despite the recent slowdown of the Brazilian economy and a rise in inflationary pressure, what remains incontestable has been the long term success of the Plan in bringing about greater price stability, and thus laying the foundations for poverty alleviation and a less sharply skewed distribution of income. While the economic basis of the plan has been widely discussed in the literature, far less analysed – and of vital importance – have been the institutional reforms which underpinned the success of the counter-inflationary policy measures adopted.

The creation of the present currency (the Real) in 1994 may be considered a watershed moment. Previously Brazil's was an economy marked by hyperinflation, and which had already undergone a moratorium on foreign debt and seizure of internal savings, and which suffered from a distinct lack of fiscal discipline. Following the

* Corresponding author at: Caixa Postal 62588, Botafogo, Rio de Janeiro, RJ 22250-970, Brazil. Tel.: +55 21 2147 0135.

E-mail address: jose.afonso@fgv.br (J.R. Afonso).

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introduction of the Real, Brazil's economy ultimately settled into controlled inflation and rebalanced external and public accounts (Giambiagi, 2008). In 1999, as the exchange rate anchor of monetary policy was abandoned, a system of inflation targets was introduced. From then on, the so-called "macroeconomic tripod" became a key factor. This combined three monetary and fiscal policies: (i) a floating exchange rate; (ii) an inflation targeting system; and (iii) a primary surplus target. In parallel, the Brazilian government undertook a modernisation of its institutions. This assisted the process of fiscal adjustment through such measures as privatisation and control of sub-national government expenditure.

The first feature of the Brazilian macroeconomic 'tripod' comprises a shift from a system of semi-fixed exchange rates to a managed floating exchange rate. It is notable that, by adopting the floating exchange rate, the Central Bank of Brazil regained control of monetary policy and the exchange rate became the variable responsible for absorbing external shocks. The inflation target system was regulated by the use of a high level of interest rate (Sistema Especial de Liquidação e de Custódia – SELIC), which amplified the differential between Brazilian and foreign interest rates, attracting and contributing to the appreciation in value of the national currency. The third aspect concerns fiscal policy. After the signing of two agreements with the International Monetary Fund at the end of the 1990s, Brazil put in place a fiscal system with targets for the primary surplus, with the aim of maintaining public debt stability and giving the government credibility, thus enabling it to reduce the interest rate paid on public borrowing at a later date.

In this arrangement, fiscal and monetary policies have acted together to achieve planning goals. In this paper, we aim to highlight the origins of the most notable features of current fiscal and monetary institutions in Brazil, and to analyse their impact on the recent development of Brazilian economic policy. The paper mainly follows the evolution of these institutional arrangements chronologically. The argument is supported some monetary and fiscal statistics included in the main text itself.

This paper is organised as follows. Following this introduction we present a brief historical contextualisation of Brazil's macroeconomic institutions, tracing their evolution from the 19th century through to the Real Plan. Next, the paper explores the changes in monetary institutions that followed the Real Plan, highlighting the role of the tripod, while the subsequent section analyses the fiscal institutions, focusing on the Fiscal Responsibility Law. The concluding section, considers the challenges posed by the current slowdown in Brazil and the broader policy lessons that may be drawn.

2. Brief historical contextualisation of Brazil's macroeconomic institutions

Brazil is a huge, diverse, and complex country, and one whose society and economy was for a long time somewhat insulated from the rest of the world. As such, important developments in its fiscal and monetary institutions have tended to occur for internal reasons, and can be traced a long way back into the country's history.

Since independence in 1822, and the subsequent formation in the nineteenth century of the first the Empire and later the Republic, the political organisation of Brazil has taken the form of a federation in which the governments of the states have played a very important role. In particular this encompassed the development of basic infrastructure (the states built and controlled the first great ports, railways and banks). Political cycles, alternating between dictatorial and democratic governments, had something of a pendulum effect on the extent of federal power, as Brazil swung between periods of fiscal and financial centralisation and decentralisation. Over the course of time, municipal governments gradually

gained more and more influence in the federation (Serra & Afonso, 2007a), to the point where they now occupy the position previously enjoyed by the state governments, controlling basic social expenditure, such as those on education and health, as well as town planning.

The handling of government affairs and accounts also presents an interesting picture. An all-inclusive code of public accountability had already been introduced in 1920. Later, after a parliamentary initiative of 1950 and considerable debate, a basic budget act was published in 1964. This act arguably was revolutionary; expenditure began to be recorded on an accrual basis, a principle only adopted by governments of rich countries decades later. The act sought to integrate plan and budget, and to budget with financial and equity management, through the publication of differentiated and circumstantiated balances.

However, the value of this new and sophisticated budgeting and accounting system was eroded over time by a number of factors. Firstly, it suffered from the open exceptions by the governments of the military dictatorship, which went on to approve the budget proposal in parliament over a period of time, excluded the public debt and many budget expenses, and used state banks – even the central bank – to assume costs and reduce debts. Secondly, hyperinflation diminished the effects of the changes and of the equity positions themselves.

It is important to understand the context of the military government that came to power in Brazil in 1964, and which adopted a series of economic reforms that, in essence, laid the foundations for the institutions that have shaped the Brazilian macroeconomy up to the present day. Indeed, although designed under an exclusive political regime and for an economy largely sealed off from the outside world, it is curious how, almost half a century later, the foundations for Brazil's tax system, banking system and administrative system remain predominantly the same. A dictatorship can use exceptional means – i.e. means not ordinarily available to democratic regimes – to impose reforms that reflect a technical ideal, even if they fail to meet the expectations of most of the population. Of course, this is not to say that dictatorship is the quickest or most efficient way to modernise institutions; it is merely to record the historical fact that in 1960s Brazil military governments took the opportunity to undertake genuine structural reforms to public finances, creating new and consistent institutions that were reasonably solid and close in form to those recommended by theory based on the experiences of other countries. These changes were motivated by national decisions (at that time, Brazil did not need help from, or monitoring by, multilateral bodies), albeit decisions originating with different people and interests. During the military dictatorship the reforms were, without question, in line with plans and strategies that had been designed in advance and implemented rigorously (even by force).

The 1960s was also a time of major institutional change related to monetary policy, with reforms having already begun in 1964. In that year, the Brazilian economy recorded the highest inflation rates in history, rising 25% in the first quarter alone (in terms of geometric progression an inflation of 144% a year). In this context, the Government Economic Action Plan (Plano de Ação Estratégica do Governo – PAEG) was launched, with the aim of promoting stabilisation and a return to growth, and eliminating external restrictions on the Brazilian economy.

The fight against inflation had chronological priority over the other objectives of the Plan, not because monetary stability was more important than the objectives of growth and balance of payments, but because it would not be possible for the country to develop while on the brink of hyperinflation. The possibility of economic recovery, then, lay in inflation control, elimination of price distortions accumulated in the past, and in modernising capital markets, leading to increased savings (Simonsen, 1970).

Following this logic, maintaining or increasing the Brazilian economy's capacity for savings was associated with the battle against inflation. Inflation had two main causes: (1) government spending, which was higher than the withdrawal of purchasing power of the private sector in the form of taxes on public loans; and (2) the disjuncture between the tendency to consume, resulting from the wage policy, and the tendency to invest, associated with the policy of expanding credit for companies. These inflationary pressures were compounded by monetary expansions (Lara-Resende, 1989). In light of this diagnosis of the causes of Brazilian inflation, anti-inflationary policy was based on three pillars: (1) containing government deficits of non-priority expenditure and rationalising the tax system; (2) limiting the rise in real wages to increases in productivity and acceleration of development; and (3) controlling credit policy to prevent the excesses of cost-push inflation and, at the same time, being realistic in order to adapt to it.

Another diagnosis of Brazil's economy offered by the PAEG was institutional strangulation, i.e. the presence of an institutional framework unfavourable to economic development, as revealed by the low real return of long-term financial assets (which discouraged public and private investment financing); the financial system's weakness; disorganised taxation; the propensity to public deficits; and employment legislation that discouraged job creation.

In order to overcome these barriers to development, three areas of institutional disarray – finance, taxation and the external sector – were identified as needing reform as a prerequisite for both stabilisation and economic growth. In terms of monetary institutions, the financial reform implemented by the PAEG stands out. Its objective was to create mechanisms of long-term financing which avoided the inflationary financing of the public sector, and to allow the private sector to take back industrial investment so as to improve economic growth. These objectives led to the adoption of important measures such as the creation of index linking, under which public debt was issued in National Treasury Re-adjustable Bonds (*Obrigações Reajustáveis do Tesouro Nacional – ORNT*) and private securities came under the capital markets law. This guaranteed a real positive rate of return, protecting savers against inflation and encouraging saving. Compulsory saving mechanisms were also developed, and investment and financial banks, the Central Bank of Brazil (BCB) and the National Monetary Council (*Conselho Monetário Nacional – CMN*) were all created.

These measures restructured the national financial system and led to a resurgence in the market for public bonds. However, it introduced problems that later would lead to a great impasse in attempts to control the country's inflation, namely the index linking which adapted the economic system to high inflation and led to past inflation being projected into the future. This had the effect that Brazil's status as an inflationary economy was acknowledged and tacitly accepted, allowing inflation-linking rules to be introduced and leading Brazilians to coexist peacefully with inflation. This index linking permeated all reforms, with the introduction of rules for exchange rate and salary corrections, financial asset protection and tax system adjustment.

As a result, both the structuring of the financial system, with the introduction of index linking and the formation of a market for public bonds, and the strategy of financing via indebtedness adopted by the state resulted in conditions that allowed inflation to take a seemingly automatic trajectory. In other words, that which seemed to give life to the economic system by allowing 'peaceful' co-existence with inflation in fact gave rise to a process that ended up immobilising it.

The formation of a new Brazilian tax system in the mid-sixties also followed historic steps to change the currency and credit. Based on research carried out by a technical commission formed before the 1964 coup, the new military government imposed approval of

a new and genuinely revolutionary tax system in 1965. Brazil was a pioneer in introducing value added tax (VAT); indeed, it was the first continent-sized and federally-organised country to adopt this tax on a national scale. However, Brazil today finds itself still paying for its original sin, while no other country has ever applied VAT in the same way. Brazilian VAT is determined under a physical credit system (to date Brazil ignores universal financial credit), restricted to the circulation of goods (initially it was not imposed on fuel and electricity) and, most seriously, delegated to state level. Another form of VAT, limited to industrialised products, was implemented at the same time at federal level: the Tax on Industrialized Products (*Imposto sobre Produto Industrializado – IPI*).

The new system also consolidated income tax following the more modern standards of the rest of the world, and created a system of vertical distribution of tax receipts in favour of regional governments, which was logical and straightforward. Based on indirect taxes, the system quickly responded well to the so-called economic miracle (based on increased consumption of durables) between the end of the 1960s and the mid-1970s. During this period, crucially, the tax burden grew in phases when the economic cycle was expanding. Federal centralisation was also efficient, at least in trying to direct regional expenditure and encourage investment, particularly in economic infrastructure.

After the mid-1970s oil crisis, the economy and tax burden stagnated and the government tried to compensate for losses by other federal bodies by encouraging borrowing, including from abroad. As fiscal functionality fell, political pressure mounted for gradual decentralisation; state governors became directly elected again, while the President of the Republic continued to be chosen indirectly. In this context, a huge and growing tax system reform movement was less concerned with changing taxes than with decentralising income, whether by increasing those collected directly by regional governments (which interested the governments of the wealthiest regions the most), or by redeeming and raising the percentage of federal funds intended for participation funds (which was favoured by governments of the poorer regions). A similar process of reform also took place in public administration itself, including self-imposed reforms and bold changes: devolution (with many municipalities, foundations and funds), and decentralisation (with the two aforementioned spheres of regional governments).

Although inflation was relatively high in the period before the 1970s, it was largely kept under control thanks to gradualist inflation-control measures such as fiscal austerity, monetary, credit and salary contraction, and realignment of monitored prices. The oil shocks of the 1970s (1973 and 1979) inaugurated a fresh outbreak of inflation in Brazil, with growing indexing mechanisms allowing the Brazilian population to live with increasingly high rates of inflation. A wide variety of assets were indexed, including savings accounts, public debt, rental contracts and, from 1979, wages contracts as well. This indexing process reduced the uncertainties of agents with regards to the future economic environment, and lessened the pressures on internal interest rates.

Inflation began to accelerate more sharply from the beginning of the 1980s. The decade was marked by the threat of an exchange rate crisis due to the second oil shock, the rise in international interest rates and the greater difficulty of obtaining outside resources. Given these conditions, Brazil was forced to seek external adjustment through a standard internal demand-control policy. Fig. 1 shows the monthly inflation rates from the end of 1970s to the mid-1990s.

A combination of factors – including internal recession, a drop in real wages, exchange rate devaluation, drops in oil prices and interest rates, and the recovery of the United States economy – helped to meet external account targets in 1983 (Carneiro & Modiano, 1989).

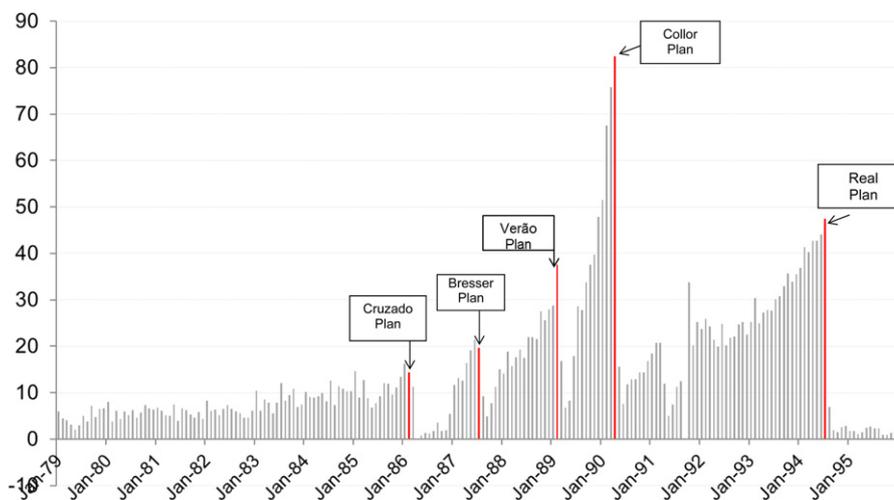


Fig. 1. Inflation in Brazil – monthly change of IPCA – 1979–1995.

Source: IBGE (2015).

In this respect, the external adjustment of the Brazilian economy between 1981 and 1984 was highly successful in generating large commercial surpluses and rebalancing the balance of payments. However, the internal imbalances and, notably, the high inflation rates were treated with excessive tolerance and/or passive complacency.

In short, the external crisis of the 1980s compromised the standard of financing that had been maintained in the Brazilian economy since the reforms of 1964, and unleashed the process of accelerated inflation. The collapse of external financing made it necessary to establish trade surpluses, making the need for public sector financing even greater in order to cover external liabilities. At that time, very particular relationships were established between exchange rate, fiscal and monetary policies. This was because the need to finance the balance of payments led to policies of exchange rate devaluations, which in turn extended the financial burdens of liabilities designated in dollars, leading to an escalation of the fiscal crisis. This situation also imposed limits on the control of monetary policy, since without obtaining the resources required in the payment of the external liabilities, the public sector depended on the placement of bonds and the growth of the monetary base. In turn, placing the personal property debt depended on the reliability and liquidity of public bonds, and also on the value of the interest required in appreciation of private capital (Lopreato, 2002).

Under these conditions, inflation was taken not only at the value of the public deficit, but also on the conditions of fixed exchange and interest rates, which limited other prices in the economy and imposed an inflation ceiling. That being the case, breaking the link between fiscal, monetary and exchange rate policies depended on abandoning the active exchange rate and interest policies, which would only be made possible by means of alternative conditions to enable the financing of the balance of payments and the restructuring of external public liabilities.

In view of these circumstances, and the deep economic crisis that the country experienced throughout the period, the 1980s are often considered to be a ‘lost decade’ for the Brazilian economy. GDP stagnated or fell (1981: –4.3%; 1982: 0.8% and 1983: –2.9%). Inflation, even amidst an output slump, had already accelerated significantly, reaching 100% per year in 1980, and rising further following the sharp exchange rate devaluation of 1983. It reached 224% per year in 1984 (following the General Price Index ou Índice Geral de Preços – IGP). By this point, it had become clear that the Brazilian economy’s most salient problem was inflation, and it is in this context that debates about the causes of Brazilian

inflation arose among economists (Arida, 1982, 1986; Arida & Lara-Resende, 1985a, 1985b; Bresser-Pereira, 1981; Bresser-Pereira & Nakano, 1984a, 1984b; Lara-Resende, 1980, 1985; Lopes, 1976, 1986; Modiano, 1983; Rangel, 1974; Simonsen, 1970).

Having witnessed the ineffectiveness of the fiscal and monetary measures adopted to curb inflation – even when restrictive fiscal and monetary policies were implemented, inflation continued to accelerate – the theory that indexing the economy was an essential part of the problem of Brazilian inflation was gaining ground. This “inertial inflation” was a powerful mechanism for automatic retro-alignment of price increases in the economy, inasmuch as it enabled agents to incorporate past inflation into new contracts. This grew from inflation’s inertial nature itself, as, in an indexed economy, the inflationary trend was based on the previous period’s inflation, which was made worse by fluctuations from supply or demand shocks that were incorporated into the inflationary trend (Lopes, 1986). As seen in Fig. 1, the second half of the 1980s and the first half of the 1990s were marked by failed attempts to combat inflation: the Cruzado Plan in 1986, Bresser Plan in 1987, Verão Plan in 1988 and Collor Plan in 1990.

Indeed, this period was characterised by grand experiments and theories regarding how to control inflation. These, along with their flaws, provided lessons which assisted in drafting the Real Plan, a landmark that ended the almost decade-long cycle of failed attempts to combat inflation in Brazil. It is worth noting that the 1980s also represented the decline of a growth model that had been in place in the Brazilian economy for almost 50 years, sometimes called the Import Substitution Plano Plano de Substituição de Importações – PSI), based on a commitment to state-led growth.¹ This growth model had led to the “final stage” of industrialisation in Brazil, encompassing all sectors of industry in the country (although there was no internalisation of technical progress or development of an industry able to face international competition). The crisis

¹ Castro (2011, p. 133) summarises the main features of the Import Substitution Model adopted in Brazil: (1) direct involvement by the state in providing economic infrastructure and in priority sectors; (2) high protection to national industry by means of tariff and non-tariff barriers, and (3) the supply of credit by the state for new investment projects. In addition to this, the author highlights three key roles of the state in this model: that of stimulating industrialisation by means of credit concession, exchange rate policy, tariff and non-tariff measures; that of the employer, aimed at removing the strangulation points of the economy; and that of the manager of scant exchange resources, preventing exchange rate crises resulting from a higher demand for foreign currency.

of the 1980s, therefore, was not merely economic; it represented, in the form of the state fiscal-financial catastrophe, a crisis for the whole paradigm of development in place up to that moment.

3. The Real Plan and its main institutions

It is against this background of a changed model of economic development that a programme of structural reform was adopted in Brazil in the 1990s, comprising government reform, new trade and financial policy with a clear liberalising inclination, downsizing of the state apparatus, tax reform and a privatisation programme with extensive involvement from the financial system. This amounted to a process of structural change in the Brazilian economy, based on two main aspects in particular: reform of the state, and commercial and financial liberalisation.

With regard to the first aspect, the development model adopted by Brazil in the 1990s comprised major institutional changes amounting to a readjustment of the role of the state in the economy, which became very different from the role of the state during the ISI era. In the new model, the guarantee of government credibility became a requirement of the international market, since in an environment characterised by free movement of capital between countries, fiscal austerity policies become major indications of an economy's payment capacity. Meanwhile, the second aspect of structural change – the sweeping liberalisation that saw the opening up of the economy commercially and financially – served, together with privatisation, to guarantee the Brazilian government a supply of liquidity. This, along with the return of liquidity in the international arena, made abandoning exchange rate devaluation viable as economic policy, and was the essence of the price stabilisation policy in Brazil (as will be discussed later on).

This sets the scene for the Real Plan, a price stabilisation strategy implemented in Brazil in three distinct phases between May 1993 and January 1999. These phases can be summarised as follows: (1) short-term fiscal adjustment; (2) the de-indexing of the economy, and (3) the introduction of an exchange rate anchor (Modenesi, 2005).

In the first phase, involving endorsing fiscal adjustment, the objective was to equalise budget imbalances in Brazil in the coming years, and thereby forestall inflationary pressures. The adjustment had three main features: reducing expenditure, increasing revenue, and reducing federal government transfers. The first and second features were included in the Immediate Action Programme (Programa de Ação Imediata, PAI), launched in May 1992, with the aim of reducing public spending, increasing tax-collection, combating tax evasion, redefining relations between Federal, States and the Municipal Governments, and strengthening the process of decentralisation. The third feature was based on the approval in February 1994 of the Emergency Social Fund (Fundo Social de Emergência – FSE), which was to be funded by 15% of all taxes collected in order that the federal government would not need to infringe the spending obligations established by the constitution of 1988. The importance of this fund – the reason for the label 'emergency' – lay in the fact that there were insufficient resources to finance social spending, meaning a risk of inflationary financing.

Authors making the case for fiscal adjustment tended to argue that inflation caused erosion of the budget and masked the public deficit (Bacha, 1994). With revenue indexed but expenditure not there was a erosion of government expenditure. Along with the management of the National Treasury, which sped up the release of budgetary items and corroded the real value of expenditure, this led to a reverse Tanzi effect in Brazil. This was because the increase in inflation, rather than reducing government income, reduced its real expenditure and its deficit, meaning that the interruption of the inflationary process would lead to fiscal deterioration,

therefore making fiscal adjustment a precondition for price stabilisation.

However, other authors argued that the link between public deficit and inflation could be refuted empirically as the good results of public accounts from 1990 to 1993 (which displayed a primary surplus in every year) did not inhibit inflationary acceleration (Lopreato, 2002). Furthermore, the fiscal adjustment proposed by the Real Plan was not effective, with primary results of 0.24% of GNP in 1995; 0.9% in 1996; –0.88 in 1997 and 0.01% in 1998. However, the absence of this adjustment did not stop a fall in inflation in this period. The fact that the public deficit was not at the root of the inflationary process does not mean to say that the Brazilian fiscal situation was not problematic, or even that outside investors' lowered expectations were not partly a result of this (Castro, 2011).

The second stage of the Real Plan sought to eliminate inflationary inertia and align the economy's relative prices. As discussed in the previous section, the indexing system on the one hand eased the effects of inflation on the economy, making it possible for economic agents to coexist for a long time with high inflation rates in Brazil, but on the other hand made it more difficult to stop inflation, because of the great weight of its inertial nature. Stopping inflation therefore became a fight against inertial inflation, which had to be prevented as a precondition for monetary policy to be effective again. A further preoccupation in the second stage of the Plan was the realignment of prices. A wide array of relative prices existed as a result of differences in the periods when they were readjusted. This meant that in the event of a sudden drop in inflation, problems would arise linked to the distribution conflict involved in the transfer of income from agents whose contracts were phased out to agents whose contracts were readjusted. Stopping the process of inflation therefore needed to happen in a neutral way, with alignment of all prices and incomes on the same date and by means of an indexer which would be the same for all.

The Real Value Unit (Unidade Real de Valor – URV) was set up in March 1994 in order to align relative prices and co-ordinate inflationary expectations. It consisted of an account unit indexed by the average of three inflation indexes.² In addition to this, the market – in order to increase its credibility in relation to the URV – went on to have one-to-one parity with the dollar. The URV was launched on 1st March, 1994 against the backdrop of all these factors, and remained in place until 30th June of the same year, when it was jettisoned in order to convert to the new currency – the Real – on 1st July. On that date, as summarised by Modenesi (2005), the redenomination of the monetary stock, the changing of all the currency in circulation in the country and the conversion of contracts still drawn in terms of cruzeiros reais were made at a rate of 1 Real = 2750.00 Cruzeiros Reais, which was the URV value at 30th June, 1994.

At the same time as the URV was created, the Central Bank of Brazil took action on the exchange market, selling all dollars at the URV/dollar parity of one-to-one, creating an asymmetrical exchange band in Brazil with a ceiling of 1. In order to do this, the Central Bank held US\$ 40 billion in international reserves. It is important to stress that the exchange rate was not fixed, but both the National Monetary Council and the Central Bank had very strict instructions regarding the need to maintain the exchange rate's upper limit.

² Such indexes were: (i) the General Market Price Index (Índice Geral de Preços de Mercado – IGP-M) of the Getúlio Vargas Foundation (FGV); (ii) the Extensive Consumer Price Index (Índice de Preços ao Consumidor Amplo – ICPA) of the Brazilian Geography and Statistics Institute (IBGE); and (iii) the Consumer Price Index (Índice de Preços ao Consumidor – IPC) from Economic Research Institute Foundation (FIEPE)

Table 1
Selected indicators in the period 1994–98.

Indicator	1994	1995	1996	1997	1998
Growth of GNP (% p.a.)	5.3	4.4	2.2	3.4	0.0
Gross Fixed Capital Formation (% GNP)	20.7	18.3	16.9	17.4	17.0
Inflation (% p.a.)	2075.827	66,008	15,757	6,926	3,196
Current Account Balance	-0.308	-2.388	-2.734	-3.477	-3.944
International reserves (US\$ millions)	38,806	51,840	60,110	52,173	44,546
Interest rate	-	53.09	27.41	24.78	28.79
Real exchange rate/dollar	0.64	0.92	1.01	1.08	1.16
Primary surplus	5.2	0.2	-0.1	0.9	0.0
Liquid public sector debt (% GNP)	30.0	28.0	30.7	31.8	38.9

Source: IPEADATA (2014), IMF (2014) and BCB (2014).

The third phase of the Real Plan encompassed the period July 1994 to January 1999. It saw firstly the adoption of a system of monetary targets and later the replacement of this with a system of exchange rate targets.

As the new currency began to circulate, Brazil chose to adopt a system of monetary targets comprising the following measures: (1) adopting targets for the monetary base, which could only be changed by 20% and by the CMN; (2) weighting the monetary base in international reserves; (3) setting up a fixed parity between the Real and the US dollar, and (4) changing the CMN with regards to its composition and the transfer of its authority to issue currency to the national congress.

However, this new policy did not have the expected results. This was because for the system of monetary targets to be successful the currency had to be circulating at a stable speed, but with the inflationary process interrupted the Brazilian currency recovered its traditional functions of value reserve, means of exchange and account unit, which led to an increase in demand for Real stock. This involved severing the relationship between monetary stocks and price levels, creating difficulties for the Central Bank when it came to determining the amount of currency supply compatible with price stability, and caused the system of monetary targets to fail in Brazil.

With the system of monetary targets abandoned, the system of exchange rate targets took its place – a system which could be said to constitute the essence of the process of price stabilisation in Brazil. The use of exchange as an anchor for monetary policy was possible due to the economic liberalisation entailed in the structural reforms of the 1990s and the measures used to overvalue the exchange rate. This set of policies meant that Brazilian imports were relatively cheaper than domestic production, which meant an increase in external competition and collective demand shifting in favour of imported products. This in turn exerted less pressure on internal prices and restricted the domestic production sector's ability to shape prices and co-ordinate inflationary expectations.

The revalued exchange rate policy altered the framework (mentioned above) of relationships between exchange, fiscal and monetary policies in place during the previous period. This policy made it possible to reduce uncertainty over the behaviour of basic prices in the economy, as economic agents could now form expectations based on a predictable exchange rate. Besides the exchange anchor, monetary and fiscal policies were also used to reduce exchange rate uncertainties. Guarantees had to be offered to attract capital to finance possible balance of payments imbalances, which would in turn ensure that there were no unmet expectations for capital investors which could result in capital flight and problems in the price stability strategy being adopted. As well as high interest rates, the reforms of the 1990s – i.e. privatisation and trade and financial liberalisation – helped to attract outside capital to Brazil (Lopreato, 2002).

Most of this capital was seeking a return from public bonds, with interest rates set to meet foreign economic agents' expectations,

and guaranteed by the Brazilian government. This meant that public finance had to accommodate the costs of the exchange and interest policies and prevent situations that could risk capital flight. With regard to monetary policy, high interest rates throughout the period 1994–8 served as another anchor on prices, and at some points were more important than the exchange anchor itself, which, by virtue of its changed nature by the end of that period, lost its capacity to act as a price anchor (Castro, 2011). As such, the system of exchange rate targets was highly successful in reversing the process of severe and chronic inflation that had devastated the Brazilian economy. However, after going through the financial turbulence caused by the Mexican crisis in 1995, the Asian crisis in 1997, and the Russian crisis in 1998, Brazil abandoned its fixed exchange rate system due to speculative attacks that reduced foreign reserves. The system of exchange rate targets was replaced by the system of inflation targets, marking the beginning of a new phase in the stabilisation process in Brazil, and the end of the Real Plan (Modenesi, 2005).

To summarise the outcome of this period, then, it is notable that the macroeconomic system at the time, characterised by high interest rates, an overvalued currency and a rising trend in public debt, was efficient in controlling prices, despite the adverse effects on the real economy in terms of reduced economic growth, deficit in the balance of payments and growth of public debt.

To illustrate macroeconomic behaviour during the Real Plan years, Table 1 (below) traces selected indicators for the period 1994–98.

As these indicators suggest, the Real Plan was a highly successful experiment in stabilisation for the Brazilian economy. In the period following 1994 inflation fell significantly and stayed at this level.

However, this price stability was achieved through relatively high interest rates and an overvalued exchange rate. With regard to the interest rate, while high level rates served to attract outside capital and to finance the balance of payments – helping with the strategy of sustaining high exchange rates – they also increased the proportion of public debt indexed to them, causing this variable's trajectory to increase at the same time. The overvalued exchange rate, meanwhile, brought problems for the balance of payments in current account transactions, as demonstrated by successive growing deficits, which also contributed to the declining trend of foreign reserves from 1996.

One further result of the price stability policy was weak economic growth. During the 1990s, the performance of GDP was somewhat irregular; in the early years of the decade – a period of high inflation – GDP showed negative growth (4.3% in 1990; 1.0% in 1991 and -0.5% in 1992), increasing again with the introduction of the Real Plan and after the currency stabilised. The return of growth, however, was only at decreased rates, reflecting the difficulties of resuming investment on poorly maintained bases. As the next section will mention, it was only from the mid-2000s that GDP grew more significantly.

4. Institutional reform and monetary policy

The Brazilian exchange rate crisis in January 1999 resulted in a major devaluation of the Real against the US dollar, seeing it fall from a rate of 1.20 in December 1998 to 1.98 in January 1999. Initially, the policy adopted by the Brazilian government was to suddenly increase the basic interest rate in an attempt to counter the fall in the exchange rate and avoid a return to inflation. After the stabilisation of the exchange rate in the middle of 1999, the government announced that it would adopt an inflation target system. Opting for a floating exchange rate system meant that the exchange rate had to be replaced as the anchor of monetary policy and another variable adopted instead to coordinate market expectations and control inflation in this new context (Barbosa Filho, 2006).

This period was marked by a three-fold change in the macroeconomic system in force up until then: the monetary system of exchange rate targets was replaced by an inflation target system, the system of semi-fixed exchange rates gave way to a managed floating exchange rate, and the fiscal system began to pursue primary surplus targets. This change became known as the Brazilian macroeconomic tripod. Each aspect is discussed in turn below.

Firstly, the system of inflation targets adopted in 1999 in Brazil can be summarised as follows: (1) inflation targets are represented by annual changes in a general price index; (2) targets and their respective tolerance intervals are fixed by the CMN based on a proposal from the Ministry of Finance; (3) targets and their related tolerance intervals are fixed for two years; (4) the Central Bank of Brazil is responsible for carrying out the policies necessary to meet these targets; (5) a target is considered to have been met when the accumulated variation of inflation, measured by the price index adopted for the January to December period of each calendar year, is within its respective tolerance interval; (6) when a target is not met, the Chairman of the Central Bank must publish, by means of an open letter to the Minister of Finance, a detailed description of the causes of the failure, the steps to ensure that inflation returns to the set levels, and the period in which the steps are expected to produce results; (7) the Central Bank of Brazil must publish, by the last day of each calendar quarter, an inflation report covering the performance of the inflation targets systems, the outcomes of monetary policy decisions taken, and an inflation forecast (Bogdansky, Tombini, & Werlang, 2000).

Table 2 shows the history of inflation targets in Brazil, showing the exact target, the tolerance interval for inflation fluctuation, and the real rate of inflation as measured by the IPCA. The instrument of monetary policy chosen by the Monetary Policy Committee (Comitê de Política Monetária – COPOM) to meet inflation targets was the short-term interest rate known as the SELIC rate. SELIC is the rate used as a benchmark for interest in the Brazilian economy; it sets the boundaries of the reserve exchanges between financial institutions and is considered by the market to be the main indicator of the government's monetary policy. This rate safeguards all the issued bonds of the Central Bank of Brazil, the National Treasury, and various states and municipalities, as well as inter-financial deposits held by many banks with a commercial portfolio, commercial banks and savings banks.

Under the system of inflation targets, inflation is fundamentally controlled by fixing the basic interest rate at a level that is compatible with the inflationary target set by the CMN. Copom is made up of the management of the Central Bank and meets every 45 days to set the interest rate it considers appropriate in order to meet the inflation target.

An important feature of the Inflation Target system is its high level of transparency; besides the Inflation Reports, the minutes of Copom meetings are also published, as well as press releases and different studies on the management and direction of

monetary policy in Brazil. The aim of these mechanisms is to give credibility to the monetary authority's actions and interventions in the country's economy. When adopting the inflation targets system, the CMN decided to use the Extensive Consumer Price Index (IPCA) as a benchmark for monetary policy.³ It is noteworthy that Brazil uses the “full” index of the IPCA unlike other countries, which use either a purged index of prices with a high sensitivity to supply shocks such as in food and energy, or prices fixed by the government.

Under this new framework, other macroeconomic policies were subordinate to price control via monetary policy, responding passively to its decisions. Thus, the interest rate (SELIC) became the main instrument used by the monetary authority to ensure that the IPCA will remain in the fluctuation band established by the CMN, as stated by the BCB itself: “The interest rate constitutes the most important monetary policy instrument available to the Central Bank” (Inflation Report, v 1, No 1, June 1999, p.87). In this sense understanding the transmission mechanisms of monetary policy is critical because they represent the channels through which monetary policy decisions taken by the Central Bank become incentives for desired behaviour of private agents. The effectiveness of monetary policy depends directly on the way in which the monetary authority decisions impact, after all, on consumers and investors.⁴

Moving on to the performance of the Brazilian economy under the inflation target system, it is notable that the Central Bank of Brazil has met the inflation targets put forward (except for in 2001, 2002 and 2003), indicating that the system can be considered highly successful in controlling price levels. The fact that the country had experienced a long period of chronic high inflation contributes to this outcome being seen as a major success for the Brazilian economy, although the associated costs of this price stabilisation policy must also be assessed.

In the period 1999–2013 inflation was outside the set tolerance interval for only four years, namely 2001, 2002, 2003 and 2015. In the former three years, several external and domestic shocks – such as the energy crisis, the effects of the 11th September 2001 terrorist attacks, the Argentinian crisis, and the crisis of confidence in relation to the presidential elections in 2002 – affected the Brazilian economy, with a significant impact on inflation. The mandatory open letters of the Chairman of the BCB during these years point to exchange rate devaluation as the main reason the targets were not met. In 2001, 38% of the increase in the inflation rate was explained by currency devaluation, while in 2002 the exchange rate's contribution to inflation was 46%. The high inflation of 2003 was explained by inflationary inertia, resulting from the pressure on prices occurring in the previous year.

For the year 2014, the acceleration of the consumer price index showed essentially the realignment of regulated prices and the increase in services prices. It is noteworthy that the federal government had controlled the fuel and energy prices to avoid the impact on general inflation indices. Therefore, in 2015, inflation moved away from the inflation target because of the cost inflation,

³ Every month the IPCA selects the prices from a basket of goods and services identified in the Family Budget Research Study (POF), taking as its target population families whose monthly earnings are equivalent to between 1 and 40 minimum wages, living in the urban areas of Belém, Fortaleza, Recife, Salvador, Belo Horizonte, Rio de Janeiro, São Paulo and Porto Alegre, Brasília and Goiânia.

⁴ There are basically five channels through which monetary policy can affect the change in the general price level: (i) the term structure of interest rates; (ii) the exchange rate; (iii) expectations; (iv) the credit; and (v) the price of the assets. Therefore, variations in the Selic rate affect the five variables mentioned, influencing investment decisions, consumption and net exports, which in turn affect aggregate demand and, finally, the general price level.

Table 2
History of Inflation Targets in Brazil (1999–2013).

Year	Regulation	Goal (%)	Band (p.p.)	Lower and Upper Limits (%)	Effective Inflation (IPCA % p.a.)
1999	Decision 2615	8	2	6–10	8.94
2000	Decision 2615	6	2	4–8	5.97
2001	Decision 2615	4	2	2–6	7.67
2002	Decision 2744	3.5	2	1.5–5.5	12.53
2003 ^a	Decision 2842	3.25	2	1.25–5.25	9.30
	Decision 2972	4	2.5	1.5–6.5	
2004 ^a	Decision 2842	3.75	2.5	1.25–6.25	7.60
	Decision 3108	5.5	2.5	3–8	
2005	Decision 3108	4.5	2.5	2–7	5.69
2006	Decision 3210	4.5	2	2.5–6.5	3.14
2007	Decision 3291	4.5	2	2.5–6.5	4.46
2008	Decision 3378	4.5	2	2.5–6.5	5.90
2009	Decision 3463	4.5	2	2.5–6.5	4.31
2010	Decision 3584	4.5	2	2.5–6.5	5.91
2011	Decision 3748	4.5	2	2.5–6.5	6.50
2012	Decision 3880	4.5	2	2.5–6.5	5.84
2013	Decision 3991	4.5	2	2.5–6.5	5.91
2014	Decision 4095	4.5	2	2.5–6.5	6.41
2015	Decision 4237	4.5	2	2.5–6.5	10.67

Source: Central Bank of Brazil.

^a The Open Letter of 21/1/2003 set out adjusted goals of 8.5% for 2003 and 5.5% for 2004.

as a result of the increase in electricity tariffs and fuel prices and the rise in the price of the dollar against the real.

In all the other years the inflation targets were met, and the high interest rates were the instrument used to meet them. Meanwhile, currency appreciation was not simply an unwanted by-product of the monetary policy, but rather the essence of that price-control strategy, as became clear in the years when the inflation targets were not met.⁵ Among the consequences of the price control policy, it is notable that high interest rates were pointed to as one of the main reasons for low Brazilian GDP growth, specifically in comparison with other emerging countries. Real production grew by around 2.77%, while in China and India it grew at 9.42% and 7.13% per year between 1999 and 2015.

The exchange rate also showed a rising trend, because the differential between domestic and foreign interest rates contributed to a substantial inflow of foreign capital and a consequent rise in Brazil's currency. Despite the benefits for price control, this revaluation

⁵ For a more detailed analysis of the inflation targeting regime performance, it is interesting to decompose Brazilian inflation in its various components. The decomposition by the Central Bank of Brazil (BC) divides the IPCA in market prices composed of tradable and non-tradable goods and regulated prices. Tradables are strongly influenced by the external sector and the exchange rate, since the non-tradable are oriented and produced for domestic market, an important example is the services sectors. Regulated prices are directly related to public administration, for example, tariffs, fuel prices and energy. The regulated prices exert strong influence from 1999 to 2006, but since then the biggest influence was of market prices, specifically the non-tradable. Besides the division of the Central Bank, the Brazilian Institute of Geography and Statistics (IBGE) also divide IPCA in 9 groups: Food and Beverages, Housing, Household items, Clothing, Transportation, Health and Personal Care, Personal Expenses, Education and Communication. A guide for the weights of each group is the Household Budget Survey (POF), which measures the typical household consumption of the population with income up to forty minimum wages. The communication groups, Food & Beverage, Housing and Transportation are those who remain in highest level for the first half of the reporting period (1999–2006). In the second, the main responsible for inflation are Food & Beverage, Personal Expenses and Clothing (2007–2013). The adjustments of the first half of the period occurred mainly because of rising fuel prices, the adjustment of public tariffs and the higher price of agricultural products. In 2007, when the trend reversed, that is, when market prices began to influence more inflation than regulated prices, the group that strongly influenced the IPCA was Foods and Beverages, like industrial and agricultural prices, highlighting the presence of unfavorable seasonal factors to agricultural products and also to the service sector, mismatching supply and demand. Also noteworthy in this period, the increase in prices of services associated with the exchange rate depreciation, in addition to Personal Expenses and Education.

discouraged exports and encouraged imports, implying current account deficits. This helped limit growth and made financing the balance of payments reliant on attracting short-term, speculative capital.

In relation to the public accounts, despite the successive positive primary outcomes, net borrowing grew due to interest costs. The return on Letra Financeira do Tesouro Nacional (LFTs) was linked to SELIC, at high levels. To explain Brazil's high interest rate, some authors like [Modenesi and Modenesi \(2012\)](#) point to the reduced efficiency of monetary policy, the multiple changes to interest rates, the fragility of the public accounts and jurisdictional uncertainty. Another possible explanation, presented in [Barbosa-Filho \(2006\)](#) is the lack of independence of the central bank which, in order to be credible, needs to offer high returns to investors; however, there is a theoretical weakness behind this thesis, as it can compromise coordination between fiscal and monetary policies.

In the regime of inflation targeting, adopted by Brazil since 1999, the Brazilian interest rate (SELIC) is the main instrument used by the Central Bank to control inflation. Thus the price control is based on increases in this rate, which through the transmission channels of monetary policy affect aggregate demand, international prices and thus inflation. Therefore, this scheme follows the hypothesis that inflation is typically a demand phenomenon, which must be combated by the use of contractive monetary policy, in particular, increases in the interest rate. Thus, the system neglects other causes of inflation, especially those related to the supply side of the economy such as wage and profit push inflation; imported price-hike inflation; inflation arising from supply shocks; tax inflation and the existence of some degree of inertia in the inflation rate. However, the Brazilian experience of price control under the inflation targeting regime shows that inflation does not always derive from demand shocks, so that the use of interest rates, in most cases, does not attack the real cause inflation, but only its symptoms.

In addition, the rise in interest rates to contain prices increases in the economy may result in harmful effects, such as income stagnation, increasing public deficit, appreciation of the exchange rate and increase in employment gap, causing the economy to remain in a permanent state of stop and go ([Sicsú, 2002](#)).

Such findings suggest the key elements of policy recommendations based on the Brazilian experience in inflation targeting. The first is that the price control should not be solely based on interest rate increases and the second is that an institutional system

ensuring a degree of flexibility to the model can lead to better results in terms of economic growth.

As regards the first recommendation, that is, the need for alternative policies to control inflation, we can use the decomposition of Brazilian inflation and its different determinants to highlight that one of the main factors that contributed to prices increasing in Brazil during the inflation targeting regime was the change in the exchange rate. In this connection, [Oreiro, Paula, and Squeff \(2009\)](#) note that emerging economies are generally more vulnerable to the effects of fluctuations in exchange rates than developed economies. This is because, according to the authors, the volatility of the exchange rate is higher in those countries due to the fact that foreign exchange markets are smaller and less liquid, making these economies more vulnerable. The same authors also point out that these changes in exchange rate, most common in this group of countries, can influence the exchange rate pass-through and so the prices of tradable final goods and imported intermediate goods, and also inflation expectations.

To mitigate inflationary pressures from the external sector, in addition to changes in interest rates that are the essence of monetary policy in Brazil, [Sicsú \(2003\)](#) argues that industrial policy to encourage investment in the export sector becomes of priority. This is because, in replacing imports, the effect of inflation is reduced. Another effective measure would be in the context of monetary policy, in which the central bank could increase the reserve requirements on bank deposits to contain pressures in the foreign exchange market. Still concerning policy alternatives to increase the interest rate to affect the level of the exchange rate and inflation, [Oreiro et al. \(2009\)](#) suggest that capital controls be used to mitigate the high exchange rate volatility in developing countries associated with the high mobility of capital flows and its severe impact on inflation and on output and employment in these economies.

Another important point to note about the determinants of inflation in Brazil between 1999 and 2015 is the existing indexation mechanisms that guide the price adjustment in various sectors of the economy. Among these are the following, according to [Modenesi and Ferrari-Filho \(2011\)](#); rents (indexed to the IGP-M), the electricity rates (partly linked to the IGP-M) and telephony (indexed to a sector index, IST, also composed of the IGP-M) and the minimum wage (which was indexed to the IPCA and GDP growth). For the authors, these are key prices in the economy, or widely used inputs that contribute to enlarge the inertial component of inflation. In this sense, the authors recommend as a policy suggestion to deal with inflationary pressures arising from the inertial component of inflation, the elimination of these remaining vestiges of indexation.

Another important group of prices that exerted significant inflationary pressures in Brazilian price level in the period considered were commodities and food prices. Conventional monetary policy has little or no impact on the control of these prices, and the use of alternative measures became even more important for achieving price stability levels. Inflation in commodity prices has specific characteristics and its control can be achieved through a number of targeted policies to neutralise the problem. [Davidson \(1994\)](#) highlights the importance of creating mechanisms for protection or buffer stocks. This is especially important because these products are the basis for several others and thus can have significant impacts on a range of measures of inflation.

In this regard, [Modenesi and Ferrari-Filho \(2011\)](#) argue that the commodities market is strongly impacted by the process of financial globalisation. Thus, the market does not necessarily respond to the structural elements, or economic fundamentals of the relationship between supply and demand, and its pricing occurs through highly speculative dynamics. This is because, they argue, commodities have become true financial assets.

Therefore, it is important to adopt policies that inhibit speculation in commodity markets, contributing to the stability of the international monetary system and reducing consequently the exchange rate volatility and inflationary pressures as a whole. Alternatives identified by the same authors include, countercyclical fiscal policy, in order to neutralise or minimise the shocks arising in food prices, also having an effect of reducing volatility in these markets, in addition to adopting an agricultural policy that aimed at the stabilisation in the food prices, regulating stocks for strategic products in the industry. [Oreiro et al. \(2009\)](#) also highlight additional instruments such as credit controls and/or income policies as elements to be adopted in order to optimise the use of economic policy instruments, minimising the negative effects on output growth rate.

Concerning broader policy recommendations in the light of Brazil's experience with the flexible inflation targeting regime, three characteristics should be highlighted, namely: (i) the goal of targeting system; (ii) the choice of the index (i.e. if the goal is a full index or a core inflation index) and (iii) the period for the convergence of inflation to target.

Regarding the purpose of the inflation targeting regime it was observed that some variables such as economic growth and public debt were hampered by inflation control policy. Thus, a recommendation to other countries considering adopting a system of inflation targets would be a "double mandate system" whereby Monetary Authorities must pursue two objectives of monetary policy; that is: output stabilisation and inflation control.

Another feature of the Brazilian inflation targeting regime is its adoption of a full index at the expense of other measures such as core inflation. Core inflation measures exclude seasonal factors as agricultural pressures resulting from climatic problems. The purpose of this measure of inflation is to use monetary policy just to address permanent price pressures without raising the interest rate due to factors that are resolved by seasonal fluctuations or are not sensitive to changes in interest rates as regulated prices.

Finally, any inflation targeting model adopted should be pay careful attention to the period of convergence of inflation to its target. In Brazil this period is one year. International experience shows that many countries have increased convergence times, for example, a year and a half, two years or without specific time limits for the convergence to the target. This measure is important in view of the lag effects of monetary policy on the economy. According to estimates by the Central Bank of Brazil, monetary policy takes between 6 and 9 months to affect the economy. This makes choosing a longer period for the convergence of inflation to target very important.

5. Institutional reform and fiscal policy

Brazil's return to democracy in the mid-eighties led to a new cycle of institutional reforms. One milestone in the political process was the Constitution of October 1988, which set out a tax reform aimed at strengthening the revenue raising powers of regional governments, particularly those of the less developed regions. At the same time the reform curtailed somewhat the revenue raising powers of the federal government, setting the scene for subsequent fiscal conflict between the central and sub-national government. The conflict between different levels of government (states, municipalities and the federal government) is still present today in debates on the tax system and possible new reforms.

By the mid-eighties there was a consensus among analysts that lack of fiscal discipline was a striking and permanent feature of the country both in federal, regional and local governments. In fact, this was not only a problem for Brazil. For [Grossman \(1988\)](#) this problem is inherent to the weakness of democratic politics as a process

for making economic decisions. Pissarides (1980) and Buchanan (1986) argue that governments pursue expansionary fiscal and monetary policies aiming to achieve popularity ratings that enable them to perpetuate themselves in power. Kydland and Prescott (1977) and Dorn (1987) suggest the adoption of pre-announced quantitative targets for the money supply, the public deficits generation restriction and the imposition of limitations on taxation and government borrowing. Buchanan (1986) goes further and argues for the incorporation of these goals in the Constitution itself.

In federative states, such debate acquires new elements, since the establishment of such rules must respect the autonomy principle of each constituent of government (Tavares, Manoel, Afonso, & Peres, 1999; Ter-Minassian, 1997).⁶ In this regard, the historical trend towards fiscal indiscipline began to change in the mid-1980s, when a long cycle of in-depth reforms of fiscal institutions began, lasting until the end of the century (Giambiagi, 2008; Jaloretto, 2009). An important institutional innovation was the creation of the Secretary of the National Treasury (Secretaria do Tesouro Nacional – STN) under the Ministry of Finance in 1986: the starting point of this shift. The Federal government decided to withdraw all government functions that were previously exercised by the Central Bank and state banks, in particular the Bank of Brazil.⁷ Another striking feature of that year was the creation of the single National Treasury account – centralising all accounts, making them available and depositing them in the central bank itself – and the transfer of all debt management, which previously was carried out by the central bank, which went on to operate purely for the purposes of complying with monetary policy (Silva, Carvalho, & Medeiros, 2009).

The Federal Constitution of 1988 also brought great advances towards fiscal stabilisation, reforming the budget and modernising the system with three new legal requirements: a multiannual plan, budgetary guidelines and an annual budget. In the area of financial regulations, it made it constitutional to prohibit the central bank from financing governments, and opened the way for a national law to later be drawn up on fiscal responsibility, which also applied to regional governments.

The second half of the 1990s saw a number of legal changes (including through constitutional amendments) which, firstly, did not form part of, or result from, an organised plan (they were individual and mutually exclusive measures) and, secondly, which followed a course parallel to the circumstances at the time (they were not formulated because of a primary deficit). In general, it is inevitable that changes to fiscal instruments end up having practical and political effects but again, this can only be seen in the medium and long term. By the end of the decade Congress had voted for tax reform,⁸ approved reforms restricting social security, and accepted administrative reforms. One policy initiative was of

⁶ Ter-Minassian (1997) distinguish four main approaches in the design of tax rules covering all federal levels. The first approach is based on the reliance on market discipline to determine the states of the debt limit. The second comprises the cooperative approach to debt control, which limits the result of negotiation between the federal government and subnational governments. The third concerns the control of subnational borrowing bases with specific rules in the constitution or by law. And finally, the fourth approach refers to the direct control of the central government over subnational borrowing. It should be noted that some countries may use techniques that cover more than one of these approaches. The work of Tavares et al. (1999) was developed by the economist team which prepared the basis of the FRL. The work is quite elucidative to better comprehend such Brazilian innovation.

⁷ The deficit was a constant factor that was difficult to measure correctly, because the Brazilian government has always been heavily de-concentrated and decentralised, and in particular because the monetary authorities and even public banks issued debt and carried out spending in the name of the Treasury – both at a national and state level (they were all owners of commercial and even development banks)

⁸ On polemics and failures of recurrent tax reform plans, see Varsano (2003) and Mendes (2013).

particular importance: the constitutional amendment required the Executive to send a plan for regulating the article dealing with the general provision of public finances. This later became well-known as the Fiscal Responsibility Law – FRL.⁹

Among other changes at the end of the last century, one could mention the privatisation of strategic sectors of the economy; the renegotiation or rolling on of regional governments' debts which were assumed by the National Treasury; legislation regulating the state tax on goods (ICMS), which provided compensation transfers from central government to regional government; and the creation of a simplified system for collecting tax from small enterprises (known as the *Simples* regime); and, lastly, the issuing of an act which set up a new, responsible fiscal system. These changes were crucial in creating a better future for public finances, and for the economy itself (Além & Giambiagi, 2001; Oliveira, 2009).

The banking system was also restructured; federal banks were cleaned up and reinforced, and almost all state banks were privatised. Sanitation companies, energy distributors and transport companies, including subways, passed into private management, with governments often motivated or forced to carry out this privatisation in exchange for the federalisation of their debts. Another legal change in the immediate post-Real period involved the creation of a simplified taxation system, known as *Simples*, for micro and small businesses. The initiative was led by the federal government, which recognised the enormous bureaucratic complexity of the Brazilian system. It was a crucial means of formalising employment and enterprises and accounted for an overwhelming proportion of new taxpayers who registered with the general social security scheme.

Still, it is important to mention that until the creation of the Real, in the middle of 1994, there was very little political propensity towards greater austerity in the public accounts. The Real Plan was accompanied by two fiscal measures: firstly, the creation of a tax on financial transactions (aiming to enhance revenues) and, second, the setting aside of a fifth of the revenue from taxes or contributions to be freely allocated in the budget, regardless of the original obligation. This paved the way for assigning a larger portion of tax revenue to cover interest on debt.

If on the one hand worse fiscal results were recorded in the first years of the Real than those prior to the creation of the currency, with even the public sector recording a primary deficit,¹⁰ on the other hand, some crucial institutional changes were made at the time to improve the long-term state of public finances. By 1999, in the wake of the Asian and Ruble crises, Brazil came under significant pressure from foreign investors, concerned at the sustainability of fiscal policy and a widening current account gap. The government's reaction was to radically change directions, opting for an inflation targeting system. In creating this system, Brazil was the first emerging economy to have this instrument accepted in the aid program of the International Monetary Fund (IMF), which previously had stuck to monitoring the imbalance of balances, and preferred countries to adopt a currency stabilisation fund (currency board).

Fiscal adjustment came next, and was carried out on two fronts. Firstly, an ambitious program of fiscal adjustment was designed, under pressure from the IMF, which combined a major increase in taxes with general cuts to expenditure (although this drastically

⁹ Therefore, the FRL was administered nationally and at the initiative of parliament, and not at the instigation of the International Monetary Fund, as the political opposition alleged at the time. Rather, the Fund itself came to issue an unfavourable analysis of the draft plan (or on condition that other reforms were carried out beforehand).

¹⁰ For a critical analysis of the development of the public accounts in the immediate post-Real period, see Giambiagi and Ronci (2004), Giambiagi (2008), Jaloretto (2009) and, for more recent years, Almeida (2013).

reduced investments). The results were published and strictly monitored in order to meet the targets of increasing primary surplus and stabilising the public sector's net debt. On the second front, the federal government sought to adopt measures to avoid fiscal imbalances recurring, with an increase in taxes and cuts to spending. Although it did not make much progress with taxation and social security reforms, the government prioritised the publication of a new general code for public finances which was supported by Congress; indeed, it was Congress that took the initiative to ask the Executive to send a bill to regulate this code which, despite being stipulated in the 1988 Constitution, had never been debated.

In less than a year, in 2000, a bill to create a responsible fiscal system passed through Congress and was approved by a quorum sufficient to change even the Constitution (Afonso, 2010). The act is very broad (it has over 100 articles)¹¹ and, as a supplementary act which sets general, constitutional regulations, applies to all administrative bodies in the three spheres of government.

The Brazilian Fiscal Responsibility Law (FRL), the first of its type to be adopted by an emerging economy, includes both principles (such as the balance of the budget in the long term) and specific limits, as well as an emphasis on transparency. It only specifies one restriction, to comply with an express constitutional decision, which applies to spending on the salary payroll: the maximum should be 50% of current revenue for central government and 60% for other governments, with sub-restrictions for powers and bodies, as well as a prudential limit (which, if exceeded, prohibits wage increases and hiring). Another oft-cited limit for public debt is regulated by the FRL, which covers on what basis it will be applied, how, and how it will be adjusted. The public debt ceiling itself was fixed at a later date by the Senate, initiated by the President, but without the powers of veto.

Nowadays the targets for fiscal results, and their component parts (revenue and expenditure, as well as debt and equity), are fixed annually in an act drawn up by each government – the yearly Budgetary Directives Act (LDO) which also contains an estimate for the next two years. Throughout the year, periodic checks are made to see whether the revenue effectively being collected matches the one initially drafted, and if there is a mismatch a budget sequestration (linear or differentiated, if regulated in the LDO) is automatically put into effect. It is noteworthy that there are no national or aggregate goals, as each level of government sets and pursues its own targets.

The FRL itself includes some get-out clauses, such as exemption from complying with limits in the event of disaster, low growth or recession, drastic changes of economic policy or if there is a request from the Senate Executive. But, being a supplementary act (it requires a special quorum and cannot be changed by presidential act), is also applies to regional governments and, traditionally, is very stable (it cannot be amended by an exclusive act of the Federal Executive). Furthermore, one pillar of the FRL was to forbid the central government taking on debts from other governments or loaning to them directly – a classic problem in a country which has already experienced successive internal and external moratoria of regional governments which have ended up being assumed by the central government.

The FRL was also accompanied by another act which criminalised breach of the most basic rules, stipulating both loss of political mandates and even prison. Since it was so all-encompassing and multifaceted, mixing a code of conduct with rules, the Brazilian FRL won worldwide recognition as a highly modernising piece of legislation (Ter-Minassian, 2010; World Bank, 2008).

In this general overview of events, the introduction of the FRL can be seen as the act which consolidated or concluded the process of institutional changes. In the midst of this, the budgetary process was reformulated, revenue, accounting and finance administration was modernised, most public companies and banks were privatised, and regional debts were renegotiated by the central government, among other things. If after the FRL few advances were made in changes to fiscal legislation, the same is not true for the field of management, where efforts continued to be made to modernise fiscal administration in its very diverse activities. This is the case, for example, for the national government and most of the regional governments adopting an integrated system of budget management, accounting, finance and equity (known as SIAFI), and also the use of electronic fiscal notes in taxation (the issue involves an on-line record in treasury checks), reducing costs for taxpayers and making the work of tax-collection organisations easier and more efficient.

Brazilian fiscal management is particular to a democracy and a relatively autonomous federation. Each unit of government, national or regional, prepares, estimates and approves its own budget and, at the end of the financial year, its statement of accounts. Each government has the authority to legislate, charge and collect its taxes, and also to regularly receive and dispose of revenue distribution guaranteed constitutionally. Each government can freely hire officials and determine their wages, buy goods and services, and also contract labour and, lastly, each government can decide freely to contract debts. In this context, the fiscal system does not follow a basic direction formulated from the centre; goals are set and pursued freely, without standardisation.

It is up to the federal government to try to exercise some control by means of discretionary recourses, namely voluntary transfers and loans, in collaboration with state banks or multilateral organisations, with National Treasury guarantee. In practice, since most regional governments still owe a lot to the Treasury itself on account of the different financing schemes implemented before the FRL was brought out, the key variable in national fiscal management is the service of renegotiated debt. In this case, default is not permitted (the Treasury can block and withdraw cash directly from the individual coffers of a debtor government which does not pay on time), and the volume of payments is so high that it ensures, in and of itself, that the regional governments will make a substantial primary surplus (the regional governments paid the Union the equivalent of 0.78% of GDP in return for these operations in 2013). In practice, the regional primary surplus only gets worse if the central government grants these governments the ability to contract new credit operations. Another aspect of this situation is the growing criticism, particularly from political scientists, that the country paradoxically is experiencing a new wave of political centralisation, as regional governments' room for manoeuvre in fiscal terms is very limited (Ismael, 2013).

After such several institutional and fiscal reforms, by 2011 Brazil could reap the rewards of a then spectacularly favourable external setting, with the strongest commodities price boom of the post-World War period. This allowed Brazil to generate the best growth rates of recent decades, albeit driven mostly by consumption and by expanding internal credit.

In some ways, we can recognise that this more favourable economic setting was an important factor in the government's then lack of interest in maintaining the momentum of legislative changes, despite enjoying a substantial parliamentary majority and widespread popular support; it simply did not seem necessary. As such, while the last decade and a half has not seen any changes which could be labelled structural reforms, the period has seen the display of the best performances yet in traditional fiscal indicators. In particular, the targets for generating a significant primary surplus

¹¹ Supplementary Act no. 101 of 4/5/2000; complete text available at: <http://bit.ly/l3pznnq>.

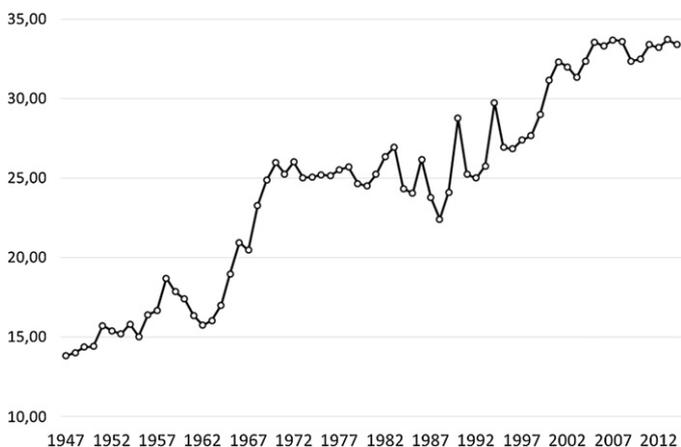


Fig. 2. Overall post-war gross tax burden: 1947–2013 (in % of GDP). Source: Secretariat of the Federal Revenue of Brazil.

in the public sector and reducing net borrowing were successively met (IMF, 2013; OECD, 2001).

The good performance of fiscal indicators, however, was accompanied by changes in the profile of the main variables. Despite no longer having to respond to external or fiscal crises, as in the recent past, the overall tax burden remains high and is increasing, which has in addition allowed public spending to grow and to therefore create the highest primary surplus in the last two decades. It was not by chance that public debt, conventionally measured by the concept of borrowing and which counts the central bank, atypically, as part of the public sector, fell to the point where it set off the accumulation of foreign reserves from the middle of the last decade. Since Brazil collects indicators for the whole public sector and includes the central bank, the reserves are deducted from the liabilities and thus foreign debt becomes negative, with a strong correlation between net borrowing and the exchange rate: paradoxically, incidents of maxi-depreciation reduce public debt drastically, while incidents of appreciation cause it to rise. It is an unusual situation and radically different from that of other countries.

Social policy has become active, and has gained central importance in the fiscal setting, which in the past was limited to a concern for generating sufficient economy to meet debt commitments, particularly foreign debt. In the nineties, the priority was for universal public services, with decentralisation of primary education and the healthcare system. Already in the past decade, the focus has shifted to benefits, both social security (benefitted by real increases in the minimum wage, which pays more than half of the pensioners in the general scheme), and welfare benefits – timely, incipient income transfer programs were consolidated in the family allowance (Serra & Afonso, 2007b).

With the necessary costing increased for management of these policies, social spending has more than doubled in two decades and today reaches levels much more comparable to the European welfare state than to emerging Asian or Latin American countries. Currently, calculating all the costs and the three spheres of government, it is close to 25% of GDP. It is interesting that in order to finance such high social spending, a high tax burden has become both inevitable and necessary. The most remarkable thing is that the national tax revenue grew in relation to GDP until the latter slowed down or declined (Fig. 2 shows this post-Real development).

Brazil takes advantage of its tax potential in a way that few other countries, including wealthy ones, do, partly because of its effectiveness in generating indirect tax revenues. With an economic organisation marked by a business concentration that is high

and still rising, the application of high value added tax rates on strategic inputs (such as fuel, energy and communications) and even taxes on bank transactions, Brazil is very efficient at reaping indirect taxes. This tax-collection success is also the result of long and sizable investments in the modernisation of tax administration, which today has recourse to technological resources on a par with those of the most advanced economies and with relatively reduced costs. For instance, 100% of income tax declarations, even of individuals, are filled out electronically and submitted online.

Advances in how tax collection is carried out have a rather damaging counterpart, namely a heavy reliance on regressive taxes in a society already marked by deep concentration of income and wealth before tax and which, after tax, becomes even more unequal. The collection impetus is not replicated in direct taxes, as is clearly shown by the fact that tax collection on urban real estate property (Imposto Predial e Territorial Urbano – IPTU) is less than a third of tax on car ownership (Imposto sobre veículo automotor IPVA), while no tax at all is collected on undeveloped land tax (ITR). The large concentration of government revenue in the central government is also a problem to be faced by the country. Local governments are dependent on transfers from the central government. Fig. 3 shows the historical distribution of these resources after carrying out transfers.

Even in the case of income tax it is difficult to reach the very rich and even many middle-class professionals, as they do not receive income as individuals (and are not, therefore, subject to the progressive table) but rather as individual firms (subject to a much lower burden and with an equal rate, regardless of income), a phenomenon prevalent in the Brazilian private sector more generally which is likely to intensify more than in other economies (and which is the result of applying an excessively high tax burden on work and in general). Despite these different examples, fiscal fairness is a subject ignored and even avoided in national debate, both political and even academic – strangely, it arouses more interest abroad, as Brazil is notorious for being one of the most unequal countries in the world (Rezende, Afonso, Gaiger, & Ferreira, 2013).

In the context of the accelerated economic growth experienced up to 2012, fiscal performance was the best in decades, and it was no surprise that the reform agenda lost priority. The original fiscal reform elements introduced during the eight years following the 1993 introduction of the Real Plan remained in place while the Lula and Rousseff administrations (2003 to the present day) accomplished little reform of their own.

However, since 2012, with the emergence of recession in Brazil amid a slump in global commodity prices, any room for complacency or policy inertia has been removed. Macroeconomic policy yielded undeniable and easy results in the short term, through the support and after the strong expansion of consumption, and managed to successfully transform recession accelerated growth, left, however, new traps without solving old challenges (like low investment rate of the economy and particularly of governments, and the high level of public debt, the international concept). Much of the credit recovery in the country after the crisis was led by public banks, but to do so, they needed to fundraise exceptionally with the National Treasury, which, in turn, made at the expense of expanding public debt; and this expansion was absorbed by the financial market who preferred to concentrate its investments in short-term (through so-called repurchase agreements). Thus, the first trap is the government's temptation to raise extraordinary new loans at the cost of higher debt whenever you encounter a greater difficulty to offer credit or even to generate revenue and meet the fiscal target. The worst of traps may be narrow fiscal space resulting from the reduction in interest rates because increasingly SELIC fails to express the average cost of federal government debt before

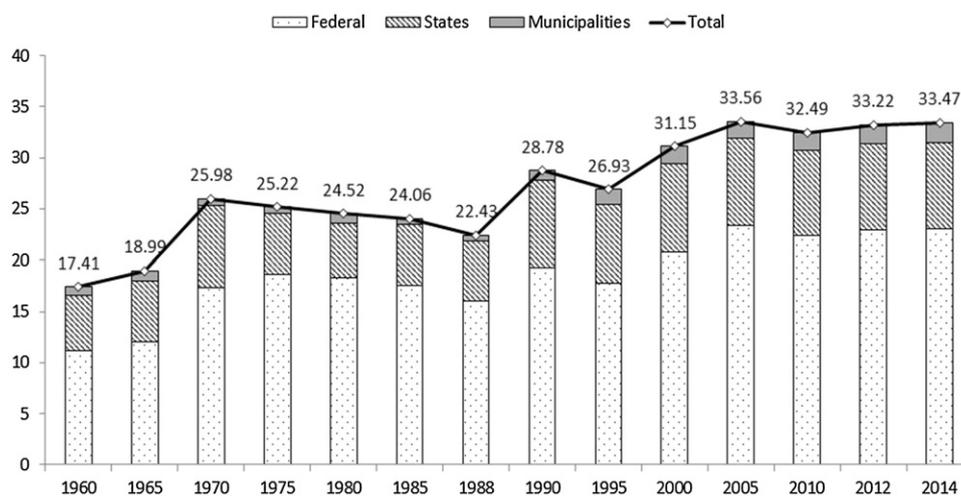


Fig. 3. Tax revenue appropriation after intergovernmental transfers.

Source: Secretariat of the Federal Revenue of Brazil.

increasing and huge stocks of assets and liabilities, with remuneration rates and maturities as diverse – as detailed in Afonso (2011).¹²

Bringing the discussion to a close we consider the prospects for a renewal of the reform process against this more challenging backdrop.

6. Concluding remarks

This analysis has sought to demonstrate the relevance of institutions as they have affected monetary and fiscal policy and the stabilisation of the Brazilian economy following the creation of the Real in the mid-1990s.

Despite the relative success achieved, it is important to bear in mind that the processes involved – from the formulation of the monetary and fiscal instruments mentioned, to their implementation and consolidation – did not result from prior appropriate strategic planning. The institutional reforms were, in general, carried out in response to a succession of internal and, principally, external crises. The need to face both economic and structural crises allowed different governments to approve important legislative changes in the National Congress, as well as amendments to the Constitution enacted shortly before in October 1988. The cycles of institutional reforms of monetary and public finance did not, therefore, result from an organised plan, country, or even government, but were imposed by dint of circumstances.

Perhaps surprisingly then, in the wake of the great global financial crisis of 2008–2009 Brazil broke with its historical tradition of facing a crisis with institutional reforms of its monetary and fiscal policy frameworks. Eschewing such reforms, the government set in motion expansionary fiscal policy, first to exit the global crisis, then to accelerate growth. The latter then stagnated and fell well behind the average for emerging countries. Current expenditure, in

particular social security and welfare benefits, continued to increase, ahead of the economy and tax collection (Almeida, 2013). The government also continued to supply credit to the rest of the economy through state-owned banks. Fiscal benefits rapidly multiplied, from tax waiver to credit subsidies (Afonso & Diniz, 2014).

By the start of 2015, following further poor growth performance and a surge in inflation, it had become evident that the freeze on fresh reform could not continue. With the appointment of a macroeconomically orthodox Finance Minister (Joaquim Levy) and the adoption of a more demanding primary surplus target the climate for change appears more propitious. Possibly the greatest challenge for the Brazilian economy today is to re-start precisely that process of institutional reform, last carried out at the end of the previous century, and which now serves as a benchmark for other emerging economies. There is no longer any doubt that sustained economic growth led by the growth of consumption has its limits, and the most it has achieved today is preventing an even deeper recession. A combination of increasing inflationary pressure (even after the rise in basic Real-dominated interest rates), the economy's worst external results in the post-war period, and a significant reduction in the public sector's primary surplus, suggest that the Brazilian macroeconomic tripod stands endangered.

The consensus that new institutional arrangements are necessary is growing, gradually. To start with, there is an increasingly pressing matter to deal with – a prerequisite, even – before reviewing individual policies. This relates to the fragile co-ordination of macroeconomic policies: there seems to be a lack of any organised set-up to improve interaction between the different economic authorities responsible for this. Practice has been marked by somewhat autonomous management by the institution responsible for each segment of economic policy (such as monetary policy, tax collection, management of expenditure and debt), without any formal process for integrating activities. A return to a concern with macroeconomic consistency is much needed within the policy arena, in official research studies, and within academia. In a government in which there is no lack of professional bodies for various fields of activity, it is strange that there is no official body tasked with bringing together, integrating and co-ordinating the authorities and the policies involved in Brazilian macroeconomic policymaking.

The more troubled the outlook for a vigorous fiscal agreement, the greater the possibility – or even the need – for agendas of reform of the fiscal institutions in Brazil to be taken up once again. There

¹² The gap between the revenues with extraordinary claims and the cost of the securities debt came to add to the effects of charging cost of international reserves and public debt management which, after pointing downward trend of the Selic, started to put more and more titles prefixed. Thus, the average rate SELIC dropped from 12.5 to 9.8 points between 2008 and 2010 and the reflection was almost nil on expenditures with nominal interest of the public sector (from 5.5% to 5.3% of GDP). Last year, the implicit rate of total net debt stood at 14.9 points, almost five points above the Selic rate, reflecting the mismatch between debt paying 10.1 points against credits that earn 4.3 points. See Afonso (2011, p. 14).

is no lack of opportunities, from the taxation system or budget system to the fiscal responsibility law itself (which has not yet been fully regulated). But the first change should be in the strategy of the federal government which, since the rise of the Workers' Party, has opted for a minimalist approach, fearing the reaction of parliament, despite the fact it has always enjoyed a broad and growing majority.

Paradoxically, Brazil's past experience, which could ultimately serve as a lesson for other emerging countries, must now become a point of reference for the country itself – a country which faces the enormous challenge of building a new macroeconomic policy framework fit for its future. For the outside world, the great question is: amidst this remarkable duality, will Brazil become a model in public finances, in monetary policy and even in federalism for other economies, in particular emerging or developing economies? Every case is different, but it is hoped that some lessons from Brazil's experience may be considered by other countries, not only in relation to what course of action to take, but in particular, what to avoid.

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References

- Afonso, J. R. (2010). *Responsabilidade Fiscal no Brasil: Uma Memória da Lei*. Rio de Janeiro: FGV Projetos. Available at: <http://bit.ly/d0C5cL>
- Afonso, J. R. (2011). *As Intrincadas Relações entre Política Fiscal e Creditícia no Brasil pós-2008*. Universidade Federal Fluminense (UFF). Revista Econômica. Niterói, v 13, n 2, dezembro de 2011. Available at: <http://bit.ly/MMRphn>
- Afonso, J. R., & Diniz, E. (2014). *Benefícios Fiscais Concedidos (e Mensurados) pelo Governo Federal*. FGV/IBRE. Texto para Discussão. Janeiro de 2014. Available at: <http://bit.ly/1gwObdh>
- Além, A. C., & Giambiagi, F. (2001). *Finanças Públicas Teoria e Prática no Brasil*. Rio de Janeiro: Editora Campus.
- Almeida, M. (2013). A política fiscal no Brasil e perspectivas para 2015/2018. In F. Giambiagi, & C. Porto (Eds.), *Propostas para o Governo 2015/2018 – Agenda para um País Próspero e Competitivo*. Elsevier.
- ARIDA, P. (1982). Reajuste Salarial e Inflação. *Pesquisa e Planejamento Econômico*, 12(abril (1)). Available at: <http://bit.ly/1icYtBf>
- Arida, P. (1986). *Neutralizar a Inflação: Uma Ideia Promissora*. Economia em Perspectiva. Conselho Regional de Economia de São Paulo, setembro 1984. [REGO, J.M. (Org.), (1986), *Inflação Inercial, Teorias sobre a Inflação e o Plano Cruzado*. Rio de Janeiro: Paz e Terra].
- Arida, P., & Lara-Resende, A. (1985a). *Recessão e Taxa de Juros: o Brasil nos Primórdios da Década de 1980*. Revista de Economia Política. Available at: <http://bit.ly/1gPyniV>
- Arida, P., & Lara-Resende, A. (1985b). *Inflação Inercial e Reforma Monetária no Brasil in ARIDA (org.), Inflação Zero – Brasil, Argentina e Israel*. Rio de Janeiro: Editora Paz Terra [Williamson (ed.), *Inflation and Indexation*, Washington: Institute for International Economics, 1985].
- Bacha, E. (1994). O fisco e a inflação: uma interpretação do caso brasileiro. *Revista de Economia Política, São Paulo*, 14(1). Available at: <http://bit.ly/1hm1biz>
- Barbosa Filho, N. (2006). *Inflation Targeting in Brazil: Is there an alternative?*. Political Economy Research Institute. Alternatives to Inflation Targeting, n. 6, September. Available in: <http://bit.ly/1Hedu4J>
- Bogdansky, J., Tombini, A. E., & Werlang, S. (2000). *Implementing Inflation Targeting in Brazil*. Banco Central do Brasil. Working Paper, n. 1, July. Available in: <http://bit.ly/1hm1t95>
- Bresser-Pereira, L. C. (1981). Inflação no Capitalismo de Estado e a Experiência Brasileira Recente. *Revista de Economia Política*, 1(2). Available at: <http://bit.ly/1rgsp5H>
- Bresser-Pereira, L. C., & Nakano, I. (1984a). Fatores aceleradores, Mantenedores e Sancionadores da Inflação. *Revista de Economia Política*, 4(janeiro (1)). Available at: <http://bit.ly/1iHCq5u>
- Bresser-Pereira, L. C., & Nakano, I. (1984b). Política Administrativa de Controle da Inflação. *Revista de Economia Política*, 14(3). Available at: <http://bit.ly/1fm9dlv>
- Carneiro, D., & Modiano, E. (1989). Ajuste externo e desequilíbrio interno: 1980–1984. In *A ordem do progresso: cem anos de política econômica republicana, 1889–1989* Abreu, M. P. (org.). Campus: Rio de Janeiro.
- Castro, L. (2011). Esperança, Frustração e Aprendizado: a História da Nova República (1985–1989). In F. Giambiagi, A. Villela, L. B. Castro, & J. Hermann (Eds.), *Economia Brasileira Contemporânea: 1945–2010*. Rio de Janeiro: Elsevier.
- Davidson, P. (1994). *Post Keynesian macroeconomic theory*. Aldershot: Edward Elgar.
- Dorn, J. (1987). The search for stable money: A historical perspective. In J. A. Dorn, & A. J. Schwartz (Eds.), *The search for stable money: Essay on monetary reform*. University of Chicago.
- Giambiagi, F. (2008). 18 Anos de Política Fiscal no Brasil: 1991/2008. *Economia Aplicada*, 12(Outubro/Dezembro (4)), 535–580. Available at: <http://bit.ly/gFTsa5>
- Giambiagi, F., & Ronci, M. (2004). *Fiscal policy and debt sustainability: Cardoso's Brazil, 1995–2002* Working Paper 04/156. Washington: IMF. Available at: <http://bit.ly/feO5vg>
- Grossman, P. J. (1988). Government and economic growth: A non-linear relationship. *in Public Choice*, 56, 193–200.
- IMF. (2013). *Brazil. Staff Report for the 2013 Article IV Consultation*. Washington, DC: International Monetary Fund. Country Report No. 13/312. July 2013. Available at: <http://bit.ly/1hiO80w>
- Ismael, R. (2013). *Governos Estaduais no Ambiente Federativo inaugurado pela Constituição de 1988: Aspectos Políticos e Institucionais de uma Atuação Constrangida*. IPEA. Texto para Discussão 1907. Rio de Janeiro, Dezembro de 2013. Available at: <http://bit.ly/1jwGVvU>
- Jaloretto, C. (2009). *Seis Décadas de Déficit Público no Brasil. Finanças Públicas–2009. Política Fiscal e Dívida Pública*. Available at: <http://bit.ly/1f0H92D>
- Kydland, F. E., & Prescott, E. C. (1977). Rules rather than discretion: The inconsistency of Optimal Plans. *Journal of Political Economy*, 85(3.).
- Lara-Resende, A. (1980). *Incompatibilidade Distributiva e Inflação Estrutural*. Estudos Econômicos.
- Lara-Resende, A. (1985). A Moeda Indexada: Uma Proposta para Eliminar a Inflação Inercial. *Revista de Economia Política*, 5(2), 1985. Available at: <http://bit.ly/1id1K4f>
- Lara-Resende, A. (1989). *Estabilização e Reforma: 1964–67*. ABREU, M.P. (org.) *A Ordem do Progresso: Cem anos de Política Econômica Republicana, 1889–1989*. pp. 1989. Rio de Janeiro: Campus.
- Lopes, F. (1976). Inflação, Correção Monetária e Controles de Preços. *Revista Brasileira de Economia*, out.-dez. Available at: <http://bit.ly/1mvWPe3>
- Lopes, F. (1986). *Choque Heterodoxo, Combate à Inflação e Reforma Monetária*. Rio de Janeiro, Campus.
- Lopreato, F. L. (2002). *Um olhar sobre a política fiscal recente*. Texto para Discussão. IE/UNICAMP n. 111, dez. 2002. Available at: <http://bit.ly/PrrvRs>
- Mendes, M. (2013). *Transformações e Impasses da Estrutura Fiscal e Tributária de 1988 a 2013*. Senado Federal. Núcleo de Estudos e Pesquisas da Consultoria Legislativa. Texto para Discussão n. 136. Brasília. Agosto 2013. Available at: <http://bit.ly/1hVvxhD>
- Modenesi, A. (2005). *Regimes Monetários: teoria e experiência do real*. Barueri: Manole.
- Modenesi, A., & Ferrari-Filho, F. (2011). Choque de oferta, indexação e política monetária: breves considerações sobre a aceleração inflacionária recente. *Economia & Tecnologia*, Ano 07, vol.26-Julho/Setembro de.
- Modenesi, A., & Modenesi, R. L. (2012). Quinze anos de política monetária no Brasil pós-Plano Real: Uma agenda de pesquisa. *Revista de Economia Política*, 32(3 (128)), 389–411, julho-setembro/2012. Available at: <http://bit.ly/1nmZcCx>
- Modiano, E. (1983). A Dinâmica de Salários e Preços na Economia Brasileira: 1966–1981. *Pesquisa e Planejamento Econômico*, 13(abril (1)).
- OECD. (2001). *Brazil. OECD Economic Surveys n. 15*. Paris: Organization for Economic Co-operation and Development. June 2001. Available at: <http://bit.ly/1heJGtC>
- Oliveira, F. (2009). *Economia e Política das Finanças Públicas no Brasil*. pp. 2009. São Paulo: Editora Hucitec.
- Oreiro, J. L., Paula, L. F., & Squeff, G. (2009). Flexibilização do regime de metas de inflação em países emergentes: uma abordagem pós-keynesiana. In *Política Monetária, Bancos Centrais e Metas de Inflação: teoria e experiência brasileira* Oreiro, J.L., Paula, L.F.E. Sobreira, R. (org.). Rio de Janeiro: FGV Editora.
- Pissarides, C. A. (1980). British Government Popularity and Economic Performance. *The Economic Journal*, 90.
- Rangel, I. (1963 [1974]). *A Inflação Brasileira*. Rio de Janeiro: Tempo Brasileiro.
- Rezende, F., Afonso, J. R., Gaiger, F., & Ferreira, J. (2013). *Fiscal equity: Distributional impacts of taxation and social spending in Brazil*. International Policy Centre for Inclusive Growth. Working Paper number 115, October 2013. Available in: <http://bit.ly/1jG0fs4>
- Simonsen, M. H. (1970). *Inflação: Gradualismo Versus Tratamento de Choque*. Rio de Janeiro.
- Serra, J., & Afonso, J. R. (2007). El Federalismo Fiscal en Brasil: Una Visión Panorámica. *Revista de la CEPAL*, 91(Abril), 29–52. Available at: <http://bit.ly/hKzcKU>
- Serra, J., & Afonso, J. R. (2007, Septiembre). *Tributación, Seguridad y Cohesión Social en Brasil. In Serie CEPAL Políticas Sociales n. 133*. Santiago do Chile: CEPAL. Available at: <http://bit.ly/hMkgM9>
- Sicsú, J. (2002). Expectativas Inflacionárias no Regime de Metas de Inflação: uma análise preliminar do caso brasileiro. *Economia Aplicada*, 6(4), 703–711.
- Sicsú, J. (2003). Políticas Não-Monetárias de Controle da Inflação: uma proposta póskeynesiana. *Análise Econômica*, 21(jan./mar (1)), 115–136.
- Silva, A., Carvalho, L., & Medeiros, O. (org.). (2009). *Dívida Pública: a Experiência Brasileira*. Brasília: STN., 502 pp. Available at: <http://bit.ly/i7rsy5>

- Tavares, M., Manoel, A., Afonso, J., Peres, S. (1999). *Princípios e Regras em Finanças Públicas: a Proposta da Lei de Responsabilidade Fiscal do Brasil*. Seminário CEPAL, Brasília.
- Ter-Minassian, T. (1997). Intergovernmental Fiscal Relations in a Macroeconomic Perspective: an Overview. In Teresa Ter-Minassian (Ed.), *Fiscal Federalism in Theory and Practice*. Washington: International Monetary Fund.
- Ter-Minassian, T. (2010). *A Lei de Responsabilidade Fiscal brasileira em uma perspectiva internacional*. Palestra em Seminário do BID. Washington: IADB., 09/08/2010. Available at: <http://bit.ly/cmPB1r>
- Varsano, R. (2003, April). *Tax Reform in Brazil: The Long Process in Progress*. Inter-American Development Bank. IDB. Available at: <http://bit.ly/1oq2RM0>
- World Bank. (2008, June). *Brazil: The Consolidation of Fiscal Federalism*. Washington: The World Bank.